





THE HISTORY OF THE COUNTY OF MIDDLESEX
BY JOHN COCKER

NATIONAL AGRICULTURAL SOCIETY.



Vol. II.—No. 13. [Recl. as a Newspaper.]

MELBOURNE, AUGUST 13TH, 1886.

GRATIS.

"If 'twere done when 't's done,
Then 'twere well done 'twere quickly done."

CATERER

CHARLES D. STRAKER,
Three Crowns Hotel,
WEST MELBOURNE.

Caterer for the Victorian Racing Club, The National Agricultural Society of Victoria, and the Victorian Coursing Club.

Orders for Banquets, Fets, Dinners, Weddings, Suppers, on the Shortest Notice in Town or Country.
N.B.—Tents and Caterer's Requisites on Hire.

WM. RADFORD,

Wholesale and Retail Tinsmith and Ironworker,
GALVANIZING, JAPANNING & COPPERSMITH,
9 POST OFFICE PLACE, MELBOURNE,
(Late Little Bourke Street East.)

Travellers' Scarborough & Dred Boxes, Baths, Tanks & Washing Coppers, Cheese Vats & Vats, Dairy Utensils, Colonial Ovens.

JOHN KING,
COOPER, &c.

20 ELIZABETH STREET NORTH, CARLTON, 20
Opposite the Meat Market, Melbourne.
Churns, Cheese Vats, and all kinds of Dairy Utensils on hand and made to order. Tallow Casks, Spirit Kegs, etc.

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Millers & Grain Merchants
AND
GENERAL COMMISSION AGENTS.

Subscribed Capital - £88,000.

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JAMES FRY, Managing Director.
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WM. W. FRASER. WM. MCRORIE.

HEAD OFFICES—

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Ballarat Flour Mills, Ballarat.
Wimmera Flour Mills, Horsham.
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GRAIN STORES at JUNG JUNG, AIL LUPECK,
NUMURKAH, DIMBOOLA, DONALD, and Agencies
at all the principal railway Stations.

Jas. Fry & Company's Celebrated 5 Stars Flour.

Consignors of Wool and other Produce and Advances
made thereon.

Every description of Agricultural Machinery and Implements,
by all the best Melbourne Manufacturers and
Importers on sale on favorable terms.
Town Agents for transaction of every description of Farmers
business requiring Confidential Care
and attention.

Advances on Grain at Current Rates of Interest.
STORAGE ON VERY PAYABLE TERMS.

J. F. & CO. Limited are prepared to ship Wheat if desired
on Farmers' account for sale in London on
advantageous terms.

£80 000 to Lend on Freehold or Leasehold Security

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SCOTCH PIE SHOP
NO. 36 BOURKE STREET EAST.

The Most Popular RESTAURANT in the CITY
of MELBOURNE.

Meals at all hours from 6.30 a.m. to 11.30 p.m.
SUNDAYS INCLUDED.

Bride Cakes and all kinds of Pastry made to Order. Balls,
Routs, Dinners, etc., Catered for in the Best Style.

Accommodation for 500. Special Dinners.
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PROPRIETORS.

THE OLD-ESTABLISHED
Bull & Mouth Hotel,
BOURKE STREET EAST.

FIRST-CLASS ACCOMMODATION FOR COUNTRY AND
INTERCOLONIAL VISITORS.

Wines and Spirits of the Finest Quality. Smoking,
Reading, and Billiard Rooms.

Luncheon at 1 p.m. Night Porter.

TELEPHONE No. 380. HOT AND COLD BATHS.

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J. McDUGALL, } Proprietors.

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Little's Dip.

(NON-POISONOUS.)

Why send Ticky Wool to market when Wool
dipped with this Fluid will realise fully
2d. per lb. more in the market.

It is the Best, Cheapest, and Safest Dip in
the Colonies.

PRICE—5/6 per gallon in 40 gallon casks,
and 6/- in drums. Orders under 5
gallons, 1/- per gallon extra.

SOLE AGENTS—

Edward Dombrain & Sons,
91 BOURKE ST. WEST, MELBOURNE,
And Christchurch, N.Z.

RYAN and HAMMOND, MELBOURNE.
STRACHAN, MURRAY, SHANNON, and Co., GEELONG.
JOHN GRICE and Co., KINGSTON, S.A.
GRIFFITHS and WEAVER, SYDNEY.

EASTWOOD BROS.
STEAM

Hydraulic Hay Pressers, Chaffcutters,

67 ELIZABETH ST. NORTH, MELBOURNE.

BUYERS OF COUNTRY HAY CHAFF.

Baths Hotel & Bathing Palace

26 BOURKE STREET, MELBOURNE.

Centrally Situated, with Accommodation for
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TURKISH, HOT OR COLD BATHS.

Best Beverages of the Very Best Brands in the Market, and
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Tailor, Practical Shirt Maker,
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Football, Cricket, Bicycle, Lacrosse Suits in stock or made to
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Instructions for Self-measurement on application.

THE NEW HIGH ARM
DAVIS
SEWING MACHINE.

GOLD MEDALS,

PHILADELPHIA, SYDNEY, MELBOURNE,
ADELAIDE, BRISBANE, & LONDON.

SURPASSES ALL OTHERS. A UNIVERSAL FAVORITE.

UNEQUALLED FOR RANGE OF WORK AND EASE OF
MANAGEMENT.

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HENRY BISHOP & CO.,
43 BOURKE ST. EAST, MELBOURNE,

AGENTS FOR RUDGE, HUMBER, MATCHLESS, and
SANSAPARIL BICYCLES and TRICYCLES. REVER-
SIBLE PREAMBULATORS, with Bicycle Wheels and
Rubber Tyres.

Catalogues Free on Application.

BUTTER AND CHEESE

J. BARTRAM & SON,

8 QUEEN STREET, MELBOURNE,
Are cash Buyers of all Dairy Produce at highest market rates
Consignments received.

Account Sales promptly rendered,
Advances if required.

Also, Sole Agents for

De Laval's Cream Separator

The Greatest of all Dairy Improve-
ments. From 15 to 26 per cent
more and better butter. Highest
market value. Great saving in
space, time, labor and the number
of utensils. The construction is
extremely simple, and requires no
mechanical knowledge to keep in
working order. The cost saved in
less than a year. Can be driven
by horse gear. Full particulars
post free on application.



The American Carriage Company.

SHOW ROOMS AND MANUFACTORY:

36, 38 & 40 BRUNSWICK STREET, FITZROY.

The Largest Manufacturers of Fine Light Vehicles in Australia.

We sell the Cheapest, Lightest, Strongest, Most Durable and Convenient Buggy in the Market.

A Large Quantity of thoroughly seasoned Second Growth American Ash and Hickory always kept in stock.



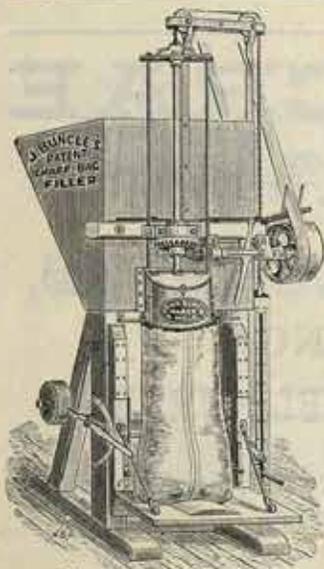
Every vehicle we manufacture is fully guaranteed to be as represented, material used throughout is the finest procurable and in every essential point it is unexcelled by even the highest priced vehicles.

Any conceivable style of Vehicle built to order at shortest notice.

Customers may depend upon having their orders turned out in a thoroughly workmanlike manner, and on the latest and most approved style, as none but the very best skilled workmen are employed on the premises.

N.B.—The Trade supplied on the Most Liberal Terms.

E. M. GILBERT, Manager.



BUNCLE'S Patent Chaff Bag Filler.

JOHN BUNCLE, in stating what is well known, viz., the great competition in the Hay, Corn, and Chaff Trade, begs at the same time to call attention to his endeavour to lighten the toil and increase the profits from such a business, by designing and manufacturing a machine for the above purpose, and one which cannot be approached by any other maker at present, or recommended to equal in **Simplicity, Durability, and thorough Adaptability and Cheapness** combined as in the above Machine. The **BAG FILLERS** are manufactured complete, ready to be sent to wherever ordered or in any of the colonies, either to fix in stores in connection with the fixed Chaffcutters, or to be attached to his well-known Travelling Chaffcutters previously supplied, and now supplied either with

or without Baggers. A few attempts have been made by some to supply such a want, but probably not having a theoretical as well as a practical knowledge of machines, have not been able to reduce the complicated movements in their machines, and which are perfectly unnecessary—as witness the Unique Simplicity and correctness in design, and the admirable working of **BUNCLE'S PATENT BAG FILLER** compared with the few others tried at work.

For the information and convenience of customers, a machine is kept constantly set up ready to show at work in **BUNCLE'S PARKSIDE IRONWORKS**, and many customers have witnessed **80 to 90 lbs.** of Chaff put in a bag in **15 seconds!!!** which, after making allowances for time removing the full bag and replacing an empty one, would easily on an average keep **Four of Buncle's No. 1 Chaffcutters**—well, if there is any doubt, say **Three Machines** clear of all the Chaff they cut (medium length.) Of course the Machines are arranged to put in as light weight as you like, or you can fill up and burst all your Bags—to pieces. As a trade requirement (in addition to filling bags) the necessity for a **Mixing Machine** is a long felt want, the laborious and unsatisfactory way at present adopted cannot much longer be endured, and there is no necessity for it!! as **J. Buncle** can arrange to "Blend" the worst and the best samples "To a Hair" at the least possible expense with the best results.

The season is now coming on when all those who intend having the latest improved Machines should forward their orders as early as possible, to prevent disappointment in the day of their need.

J. Buncle's Machines have, as usual, been awarded **First Prize** at all the leading shows wherever he exhibited last year (1885), and the many improvements introduced and constantly copied by other makers, is the best proof of the value of the continued consideration in all that affects the profits and welfare of his customers.

Chaffcutters with **14-in.** wide mouthpieces and **Newest Designs**, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

Sirs and Gentlemen, yours respectfully,

Parkside Iron Works, North Melbourne.

JOHN BUNCLE.

Catalogues Post Free on Application.

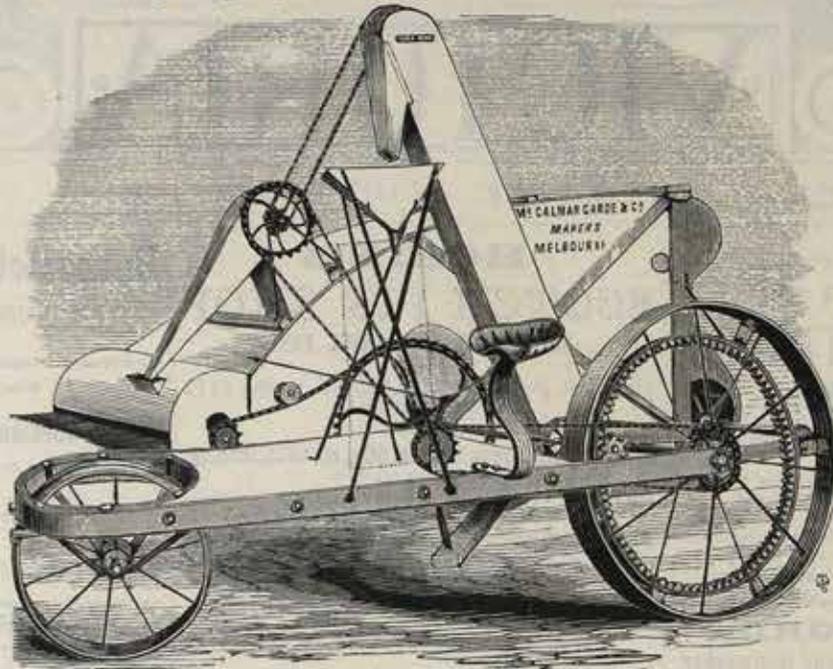
MCCALMAN, GARDE & CO.

MANUFACTURERS OF ALL KINDS OF

AGRICULTURAL IMPLEMENTS,

Beg to inform the Farming Community that they are the SOLE MAKERS of the

MCKAY'S PATENT COMBINED HARVESTER.



All Kinds of Implements kept in Stock to select from at their Manufactory.

BLACKWOOD STREET, NORTH MELBOURNE.

METEOROLOGY.

Farmer's Barometers, with Thermometers,
Guaranteed Instrument, 25/-

RAIN GAUGES, from 15s
Standard Instruments of all Kinds.

THOS. GAUNT,

Watchmaker, Jeweller and
Optician,

4 Bourke Street East,
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197, 299, 339 & 341,
George Street,
Sydney.

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GAUNT'S
ENGLISH
LEVER WATCHES

still hold their ground
against all competitors as
the most durable and trust-
worthy timekeepers in the world.

The favorable opinion formed of Gaunt's
watches by the Australian public has been
endorsed by the jurors of the several Exhibi-
tions in which he has competed, and his last
crowning success, the obtaining HIGHEST
AWARD FOR HOROLOGY at the Melbourne
International Exhibition, should convince the most dubious
that his watches cannot be excelled. Seven Gold and other
Medals. Price from £6 6s. to £10 10s. Get the opinion of any
of your friends who has one of my watches.

THOS. GAUNT, 14 BOURKE ST. EAST, ROYAL ARCADE.

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JAMES MUNDAY,

TANNER,

Currier and Belt Manufacturer,

TANNERY & BELT FACTORY, GEELONG.

MELBOURNE DEPOT & AGENCY—

C. ATKINS & CO., 120 FLINDERS LANE WEST.

Awarded Gold and Silver Medals, &c., at Melbourne, Christchurch,
Ballarat, Geelong, &c., &c.

PRICE LISTS POST FREE ON APPLICATION.

ROBERTSON & MOFFAT,

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Furnishing Warehouse

IN AUSTRALIA.

Furniture Showrooms—

16, 18, 20, 22, 24, 26, 28, 30, 32 POST OFFICE PLACE,

PRICE WILLIAMS,

FRANKLIN STREET, WEST MELBOURNE,

MANUFACTURER OF THE WELL-KNOWN

Williams' Rack & Pinion Wool Press

Rack and Gear Steel Press for the use of large stations.
Lever & Chain Press, with Folding Top Box, for the use of smaller stations
Lever and Chain Farmer's & Selector's Press. Price, £22 10s.

As the season for this latter kind is now approaching, those requiring them
should lose no time in sending their orders. Owing to the general satisfaction
given by those supplied for last season, orders are now freely coming in, and a
large demand is looked for. The following is a fair sample of a large number of
Testimonials to hand for those supplied last season:—

Mr. PRICE WILLIAMS—

HALLYROGAN, JAN. 23RD, 1885.

Dear Sir.—I have much pleasure in informing you that the Farmer's Wool Press I
purchased from you last October, gave me every satisfaction. We turned out very compact
small bales, about 34 cwt., but could have them heavier if we wished with once down. By
what the Wool Brokers tell me, they would clear themselves in two seasons to anyone having
twelve bales. Since done with the Wool, I have had it in constant use as a Cheese Press, and
I reckon it worth half its cost for that. We have weights on the levers. Any number of
Cheeses can be put in at once. It would make a good Press for Hay or Straw, and for Grapes
or Apples it is just the thing. I can highly recommend it as a most useful, substantial, and
cheap article. Yours truly,
HUGH GORDON.

HORSE AND CATTLE FOOD MANUFACTURING CO. LIMITED, CASTLEMAINE.

ROYAL AROMATIC HORSE & CATTLE FOOD.

Proved and Warranted to be
 Effectual for giving Health,
 Flesh and Condition
 to Horses, Cattle,
 Sheep, Pigs, Dogs, and
 POULTRY,
 and Warranted to
 Effectually Destroy Worms
 in Horses, Dogs, &c., &c.



Horses can be kept in Good
 Condition and Cattle Fat-
 tened at less cost than
 One Penny per day.
TESTIMONIALS
 from
 Prof. Sample,
 Cobb & Co., and
 other well-known colon-
 ists, including some of the
 the most Extensive Breeders.

THIS FOOD possesses extraordinary tonic, condition, alterative and feeding properties, far surpassing that of any Artificial Food yet discovered. It increases the appetite, assists digestion, assures thorough assimilation of food, enables the animal to eat provender of an inferior quality, which would otherwise be considered useless, and, by mildly stimulating the action of the Liver and Kidneys, imparts to the coats of the Horses a fine healthy and glossy appearance. For Worms in Horses, Urinary Complaints, Swollen Legs, Skin Diseases and Impurities of the Blood, this FOOD is a certain remedy, and is a valuable addition to the ordinary food of aged horses whose digestive powers are impaired. The value of this FOOD, which is an important discovery, appears evident from the fact that the best prevention to contagious or other diseases is to keep the animal in good health and condition, which is more readily and certainly effected by giving the ROYAL AROMATIC HORSE AND CATTLE FOOD than by any other means. One great advantage in giving this FOOD is that no alteration is required in the work of Horses or care of Cattle.

We are prepared to send on any quantity at COST PRICE, provided we have no local representatives, in that case we would ask you to obtain it from them, as we make it a rule not to supply customers direct in districts we have representatives appointed.

➤ Sold by all Stock Agents, Storekeepers & Chemists, &c., throughout the Colonies.
 ➤ Wholesale only from C. E. BROOME and CO., Grain Brokers and Agents,
 1 Queen Street, Melbourne.

KEMP & BOYCE,

LITHOGRAPHERS,

Printers and Manufacturing Stationers,

SOMERSET PLACE,

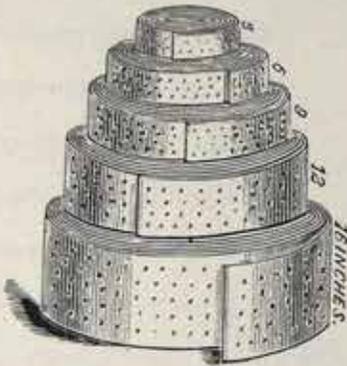
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MELBOURNE.

PUBLISHERS OF THIS JOURNAL.



DOUBLE OAK-TANNED
WELL-STRETCHED
MACHINE BELTING.



FRANK VIAL,

"UNIVERSAL"

LEATHER BELT FACTORY,

MACAULAY ROAD,
HOTHAM,

And at 59 MAIR STREET, BALLARAT.
TELEPHONE 659.

MANUFACTURERS OF

MACHINE BELTING

On the Most Approved

CONTINENTAL AND AMERICAN PRINCIPLES.

The "UNIVERSAL" BELTS are acknowledged by all who have used them to be the Best in the Market.

Special Lists for BELTS for IRRIGATION PURPOSES.

A Large Stock of the "PREMIER" BELT LUBRICANT, and Well-Seasoned BELT LACES, kept in Stock.

TESTIMONIAL—[COPY.]

UNION FLOUR MILLS,
Brunswick-street, Fitzroy,
March 17th, 1886.

Messrs. Frank Vial & Co.,
Macaulay Road, Hotham.

Gentlemen,—In reply to your enquiry respecting the (23") twenty-three inch double belt supplied by you to ourselves, we beg to state we have been working it for a period of seven months, and we find it to be all we could desire, as also is the other belting which we had from you.

We therefore feel great pleasure in recommending your belting to anyone requiring the same.

We are, Gentlemen, yours truly,
(Signed) W. S. KIMPTON & SONS.

Other Testimonials received too numerous to print, which, with Price Lists, can be had on application.



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EVERY FIELD TRIAL

IN VICTORIA

DURING SEASON

1885-1886,

IN WHICH
THEY HAVE
COMPETED.

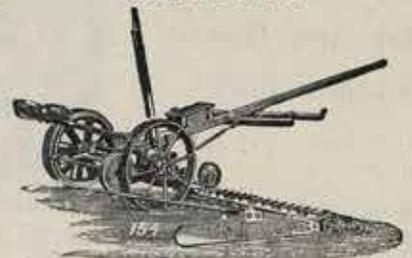


HORNSBY

MOWERS
AND
REAPERS.

PARAGON, CHALLENGE
DIAMOND, ENCLOSED GEAR

WINNERS OF THE ROYAL AGRICULTURAL
SOCIETY'S PRIZES.



I. G. FOSTER, SOLE AGENT FOR VICTORIA,
4 A'BECKET STREET, MELBOURNE.

AIRD & McCRAE

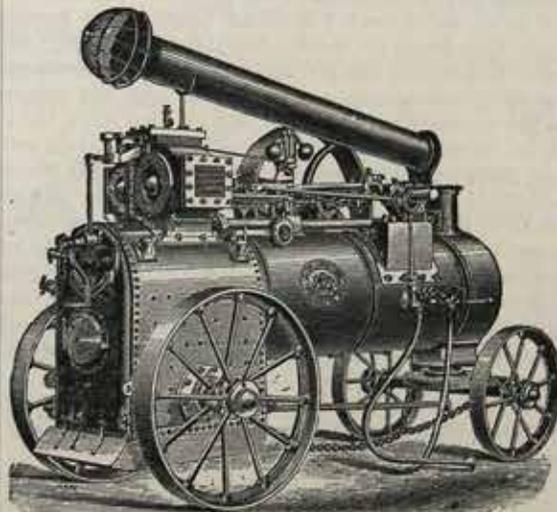
Stock & Station Agents,

MACHINERY MERCHANTS,

ROBB'S BUILDINGS,

COLLINS STREET WEST, MELBOURNE.

AGENTS FOR MESSRS. R. GARRETT & SONS,
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Compound Engines

Portable Engines

Semi-Portable or Fixed Engines

From 20 to 100 I.H.P.

Threshing Machines

Saw Benches

Pumps

Seed Drills, &c.

Messrs. GARRETT & SONS' ENGINES afford marvellous economy of fuel and water, and enormous power in proportion to their dimensions, and are strongly recommended in preference to the ordinary Double Cylinder.

AIRD & McCRAE, as Stock and Station Agents and Machinery Merchants, are prepared to supply Plant for Irrigation Works, and when necessary, obtain services of Eminent Engineers for the purpose of taking levels and advising generally.

G. F. PICKLES & SONS,

LIMITED,

5, 7, 9, 11 LATROBE STREET WEST, MELBOURNE;

And WILLIAMSON, MYERS & BULL STREETS, SANDHURST,

Manufacturers of High-class Buggies, Carriages, Phætons,
PLEASURE AND BUSINESS WAGGONS.

Half a Hundred Leading Styles to Choose from.



Thoroughly reliable in every respect. Absolute warranty on all grades.

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NORRIS'S SPICE

Is Unequalled for Giving LIFE, HEALTH, and Flesh to

Horses, Cattle, Pigs, Geese, Ducks,
Fowls, Pigeons, Dogs, &c.

Tried, Proved and Certified to be the Best Medicine for Horses ever discovered. Will coax the appetite when all other things have failed. Gives a bright eye to the Horse, makes his skin like velvet, his looks and temper good. Increases the quantity of milk in Cows, and enriches the quality. Fattens Pigs in half the usual time. Makes Geese, Turkeys, Ducks and Fowls as fat as butter, and double their value. Converts the commonest of Hay and Straw into a superior provender.



"WE GET THE GENUINE!"



"WE GET VILE IMITATIONS!"

Sold by all Druggists, Grocers, and Storekeepers, in Tins, 1s., 2s., 5s., 10s., and 20s.

T. W. NORRIS & CO. (S. M. DALTON), Chemists, Sole Proprietors & Manufacturers.
PRAHRAN, VICTORIA.

N.B.—Ask for and insist on having NORRIS'S SPICE. Spurious Imitations are sometimes offered, BEWARE OF THEM.

CULLIS HILL & Co.

For Substantial and Moderate Priced

FURNITURE, CARPETS, CURTAINS,
BEDSTEADS, BEDDING,

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WRITE FOR ILLUSTRATED CATALOGUES.

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Members are informed that
W. H. HUNTER
 SADDLER,
 15 POST OFFICE PLACE & 11 BOURKE ST. WEST,
 is the GOVERNMENT CONTRACTOR, and the Only Saddler
 Appointed for supplying the Regulation Riding
 Saddle, Bridles, Leggings, and Wallets.
 Any of the above will be supplied in any quantities to Members
 of RIFLE CLUBS at the Contract Prices. Apply early.

DANIEL TOPP,

Late J. J. Walker, Wholesale & Retail
SADDLE AND HARNESS MANUFACTURER,
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Manufacturer of every description of Saddles and Bridles; Gig,
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D. T. wishes to call particular attention to his Colonial-made
 Rough and Smooth Bullockside, Hogskin, Bush and Town,
 Saddles, which for Shape, Price, and Quality, cannot be equalled.

TRADE SUPPLIED.

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SAMPLES AND PRICES.

Grasses—Lucerne, White Clover, Red Clover,
 Mangolds, &c.

FORWARDED ON APPLICATION.

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(Late J. G. SACHS.)

Waggon & Lorry Builders,

WHEELWRIGHTS,

AND GENERAL BLACKSMITHS.

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LOANS NEGOTIATED.

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ADVANCES ON WOOL, GRAIN, ETC.

R. GOLDSBROUGH & CO. LIMITED

(In which are amalgamated the Australasian Agency and
 Banking Corporation Limited and R. Goldsbrough & Co.)

WOOLBROKERS,

Capital, £3,000,000.

HEAD OFFICE—MELBOURNE.

MAKE LIBERAL CASH ADVANCES on the ensuing CLIP
 of WOOL and on STATION SECURITIES.

They hold AUCTION SALES of WOOL twice each week
 during the season, and at frequent intervals during the
 winter months.

AUCTION SALES of TALLOW, HIDES, SHEEPSKINS,
 etc., are held three days each week throughout the year.

AUCTION SALES of WHEAT, OATS and FLOUR are held
 each Wednesday during the grain season.

Three Months' Free Storage allowed on Grain.

Liberal Advances made at bank rates on receipt of produce
 into warehouse.

Full rates of interest allowed on fixed deposits, current
 accounts, and financial business of all kinds conducted.

Branch in Sydney: No. 93 Pitt-street.

Branch in London: 150 and 159 Leadenhall-street.

GOLDSBROUGH'S WOOL WAREHOUSE,

BOURKE & WILLIAM STREETS, MELBOURNE.

Shamrock Hotel,

NUMURKAH.

W. G. SMITH, Proprietor.

FIRST-CLASS ACCOMMODATION.

Ales, Wines & Spirits best in the market.

GOOD STABLING.

PORTA & SONS,

Steam Bellows, Knife & Washboard Works,

152 & 154 LITTLE LONSDALE STREET EAST,

Near Spring Street,

MELBOURNE.

MR. WALTER BEILBY'S
HIGH-CLASS FOX TERRIERS.

The English Prize-winners, imported to strengthen my
 collection, are not equalled by all the kennels in Australia.

CHAMPION RICHMOND JACK.

THREE TIMES WINNER OF THE FIFTY-GUINEA GRAND CHALLENGE CUP.

CHAMPION DECKER.

This celebrated English winner, has sired more prize-takers,
 than any fox terrier in the colony. *Vide Nat. Ag. Soc. and Vic.
 P. and Dog Society's Prize Lists—1883, 1884, 1885.*

Satire (by Joker); **Sagacity** (by Spades); **Leaguer** (by
 Corinthian); **Daphne II.** (by Plunderer); **Melbourne**
Bill and **Dame Sans Merit** (by the Belgravian); **Arius**
 (by Tackler.)

The above lot are from the very best strains, direct male
 lines, and only equalled, by about six kennels in England.

THE COLONIAL-BRED STOCK ARE CHIEFLY FROM THE ABOVE.

MELBOURNE STEVEDORE (by Decker.)

A WINNER EVERY TIME EXHIBITED, PROVING HIMSELF THE BEST
 COLONIAL-BRED DOG IN THE COLONY. *Vide 1884,
 1885 Prize Lists.*

MELBOURNE JOKER (by Leaguer, ex Wilfrida,
 (imp.), by Rompe, by Brockenhurst Rally, ex Satire.

MELBOURNE RAGE (Brother to Melbourne Joker).
 Winner of three Prizes, Exhibition Building, 1885.

MELBOURNE NELL (by Diamond Jack, ex Alice.)

SHELFORD RUBY (by Decker, ex Shelford Fury).
 Guaranteed Pedigrees with young stock. Photos, 13d. stamps.

ADDRESS—9 DARLING STREET, SOUTH YARRA.

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Agricultural Society

OF VICTORIA.

PATRON: HIS EXCELLENCY SIR HENRY
 BROUGHAM LOCH, K.C.B.

GRAND

SPRING SHOW

To be held at the Grounds, Flemington, on

Wednesday, Thursday, Friday, and Saturday,

25th, 26th, 27th, and 28th August, 1886.

ENTRIES LARGER THAN EVER.

The Greatest Agricultural Exhibition ever
 held in Australia.

HOLIDAY EXCURSION TICKETS will
 be Issued on all the Railway Lines to Mel-
 bourne from the 20th to the 28th August,
 available for Return to 30th August.

THOMAS PATTERSON,

SECRETARY.

Kirk's Bazaar, Melbourne.

Notices.

All communications for the Editor to be
 addressed to the Society's Office, Kirk's Bazaar,
 Bourke Street West, Melbourne.

Business communications to the Publishers,
 Somerset Place, 5 Little Bourke Street West.

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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
 requested to forward to the editor the dates on
 which their respective exhibitions will be held,
 also copies of their prize schedules as soon as
 they are published.

AUGUST.

- 18, 19—Wimmera and Stawell.
- 17, 18, 19, 20.—National, Brisbane.
- 23 & 24.—Australian Sheepbreeders' Association,
 at Goldsbrough's, Bourke-street west.
- 24.—Rupanyup.
- 25, 26, 27, 28.—National, Melbourne.
- 26, 27—Murtoa.

SEPTEMBER.

- 1, 2, 3, 4.—Metropolitan, Sydney.
- 2.—Yarrowonga.
- 2, 3.—Champion Sheep Show, Ballarat.
- 3.—Warracknabeal.
- 7.—Chiltern.
- 8, 9.—Horsham.
- 8, 9.—Donald.
- 9, 10.—Ovens and Murray, Wangaratta.
- 14.—Mount Wycheproof.
- 15.—Ararat.
- 15, 16.—Albury, N.S.W.
- 16, 17, 18.—Royal, Adelaide.
- 16, 17.—Echuca.
- 16, 17.—Hamilton.
- 21.—Charlton.
- 22.—Nhill.
- 22.—Rupanyup.
- 23.—Kerang.
- 23.—Moir, Cashel.
- 24.—Korong, Wedderburn.
- 28.—North Western, Inglewood
- 28, 29.—Tatura.
- 29.—Kaniva.
- 30 and Oct. 1.—Benalla.

OCTOBER.

- 1.—Boort.
- 5.—Numurkah.
- 5, 6.—Euroa.
- 6.—Belfast.
- 6.—Elmore.
- 6.—St. Arnaud.
- 7.—Bacchus Marsh.
- 7.—Tungamah.
- 12, 13.—Rochester.
- 12, 13, 14.—Shepparton (National).
- 13.—St. Arnaud.
- 13, 14.—Villiers and Heytesbury.
- 13.—Warrnambool.
- 13, 14, 15.—Ballarat.
- 19.—Seymour.
- 20, 21.—Bendigo.
- 20, 21.—Camperdown.
- 21.—North-eastern, Murchison.
- 21.—Rutherglen.
- 26.—Koroit.
- 27.—Mount Alexander, Castlemaine.
- 28.—Sale.
- 28, 29.—Rochester.
- 28, 29.—Geelong.

NOVEMBER.

- 9, 10.—Clunes and Talbot, Clunes.
- 11.—Bairnsdale.
- 11.—Heathcote.
- 11, 12.—Smeaton.
- 18.—Traralgon.
- 25.—Kyneton.

The Journal

OF THE

National Agricultural Society

OF VICTORIA.

MELBOURNE, AUGUST 13th, 1886.

Ourselves.

The second year of our journal begins with this number. During the past twelve months, which have rapidly rolled away, we have endeavoured to fulfil the promises made in our first issue. We then stated that the journal was established "with the object of keeping the operations of the Society prominently before the public, and of giving attention to all matters affecting the common interests of kindred institutions." We also stated that it was intended "as a medium for the dissemination of practical and scientific information, relating to agricultural, pastoral, and associated pursuits." In carrying out this part of our programme, we have tried to make our matter as interesting and instructive as possible, and have endeavoured at the same time to induce discussion in our columns on the subjects brought forward. In this latter regard—thanks to our several correspondents, we have not been unsuccessful. In our first number, we further said, "By judicious selections from the publications at our disposal we shall no doubt be enabled to collect and supply our readers with much useful and instructive matter, to which they would not otherwise have access." In giving effect to this idea, our object has been to cull articles which have more than a passing value, and indeed throughout, our endeavour has been to make the journal worth keeping for reference. How far we have succeeded in our efforts is not for us to say, but we may quote from a notice in one of the leading metropolitan weeklies, which after giving a short résumé of the articles contained in our last issue concluded as follows.—"Altogether the number is an excellent one, being full of readable, interesting and instructive matter." We are aware that the quantity of reading matter is limited, but where the editorial staff consists of one individual, who has multifarious other duties to attend to, much is scarcely to be expected. Our printers and publishers, who have done their part exceedingly well, are thoroughly satisfied with the results of their undertaking. Advertisers patronise them readily, for they find the journal a vehicle for carrying their notices right into the hands of those they wish them to reach. When we are less rushed than happens to be the case at present, we may—with the concurrence of our printers—increase our matter by introducing one or two additional features we have in view. Meanwhile, we thank our many friends for their generous sympathy and support, and we promise to endeavour to continue to merit their good will.

The National Society's Show.

The entries for the Sixteenth Annual Exhibition of the National Agricultural Society of Victoria closed on Saturday last. As they far exceed in number those of any previous year, the show promises to be the most extensive ever held in Australia. Every year the totals are getting higher and higher in a rapidly increasing ratio, so that the Society may not inaptly adopt the motto, "Excelsior." Given fine weather—the great desideratum at out-door gatherings—the Show is bound to be a success, for the exhibits will be the finest ever brought together on an Australian show ground. Not only is Victoria represented by her choicest exhibits but the adjoining colonies are contributing largely to swell the entry, so that as a means of marking our progress and educating Australians up to a due appreciation of the magnitude of our agricultural, pastoral, and industrial resources this exhibition must take high rank. Since the last show much has been done for the accommodation of visitors. A splendid grand stand, capable of holding over 2000 people, has been erected, from which the hunters' contests and other items on the programme may be seen with comfort. From it also a lovely view of the surrounding country may be obtained. Underneath this stand there are spacious luncheon rooms and bars, as well as tea and coffee rooms and private apartments for ladies. Holiday tickets, at excursion fares, will be issued on the railways from the 20th to the 28th, available for return till the 30th August; and special trains will be run to the grounds from Melbourne at short intervals during the days of the show. At the solicitation of the Council the Government has proclaimed a public holiday on Thursday, the 26th inst., the day on which His Excellency the Governor will officially open the Exhibition. It will, therefore, be seen that no effort has been spared to afford the public every facility for visiting this show, for which the following splendid entries have been made:—160 draught horses, 13 thoroughbreds, 45 trotters, 34 hunters, 7 ladies' hunters, 45 hackneys and ponies, 35 carriage and buggy horses, 5 competitors for rough riding, 110 shorthorns, 29 Herefords, 6 polled Angus, 75 Ayrshires, 80 Jerseys, 4 Holsteins, 15 Brittanias, 20 dairy cows, 6 fat stock, and extras, 57 Merinos, 52 Lincolns, 19 Leicesters, 10 Downs, and fat sheep, 92 swine, 156 poultry, 76 dogs, 153 buggies, &c., 110 produce and 68 stands of machinery, implements, and all sorts of miscellaneous exhibits, making a grand total of close on 3000 entries.

The Draught Horse Sale.

The recent annual sale of draught horses in Melbourne has been anything but encouraging to breeders. The price of stallions has reached a very low ebb indeed, and has caused many an owner to regret that his animals had not been "added to the list." However, breeders have themselves very much to blame, for they persist in keeping entire, and feeding up animals of a class which if allowed to run on grass would scarcely make decent geldings. While this practice prevails it is very certain the

"stallion business" will be overdone." This year, however, there are causes other than this which have tended to increase the depression. First of all there is the tightness of the times through the dryness of the past season, and there is also the fact that numbers of horses have lately been sent here from New Zealand. There is, therefore, a combination of circumstances, which has made such a dull market that many owners have had to sell at prices which did not cover expenses and feeding, or else take their "beasties" home again. Although this is the case, breeders of a superior class of stock need not despair. There is no doubt horses will "come again." It is the way with everything in this colony, from cheese-making to "the land racket"—they all come and go. New Zealand is only turning the tables on us. Years ago we sent our draught horses there in large numbers. We remember one of our best breeders saying at that time, that New Zealand would never produce horses. But it was once said Victoria would never produce potatoes! Both predictions show the necessity of following Josh Billing's advice "never prophesy till you know." We don't pretend to know, but we believe this would be a good time to buy in; and we think the following extract from the *Sydney Mail* will support our contention:—

"Never was the truth of the well-known axiom 'history repeats itself' better illustrated than by a report concerning the scarcity of draught horses which appears in a recent issue of the *Canterbury Times*. A special reporter of that journal, who was instructed to discover the causes which was lessening the number of good horses brought forward to the bazaars for sale, says in reply—'Farmers are evidently becoming alive to the fact that while there are sufficient horses, and perhaps a surplus, in the country for the present slack demand, and possibly even to supply the want of farmers for ploughing as soon as the land becomes dry enough, yet any outside demand, or the commencement of any large public works requiring horse-labour, would find us with an insufficient supply, and prices would advance accordingly. It will surprise many to be informed that since the large exportations to Sydney set in some four years ago, no less than 12,000 horses have been sent thither from Lyttelton alone. Even this large number does not fully represent the loss of this colony, for many farmers who, in consequence of the low prices of grain, gave up cropping, also gave up breeding horses, and their brood mares went the way of their working teams—to Sydney. The Sydney buyers, in fact, took the very pick of our stock, both as regards age and quality; and the consequence is that now in about 130 horses which on an average pass through Tattersall's on a Saturday, not more than 10 good draught horses could be found, and sometimes not one. Prices have improved a good deal lately, and last Saturday the few good geldings offered sold at £22 to £26 each, and a good mare brought £29. In Dunedin, where a better class of horses remains, good draught geldings are worth £25 to £30, these figures showing a smart drop from those recently current.' These statements regarding the exports is thoroughly in accordance with figures which we published last year when commenting upon the immense proportions of the import trade of this colony. It is evident that the New Zealand breeders have been doing during the last four years what the breeders of this colony did 20 years ago. The high prices obtained in this market in 1882 caused a rush of stock. The New Zealanders could not resist the temptation, and parted with many of their best mares."

Silage as Food for Stock.

IN recent issues we have given prominence to the subject of Ensilage, and have endeavoured to afford as much information thereon as possible. In every case silage has been "cracked up" and pronounced a thoroughly nutritious and safe food. We therefore think it only fair to our readers to call attention to the recent deaths of horses at Coonong, in New South Wales, which are attributed to their having been fed exclusively on silage. The *Sydney Mail* says:—

"It would appear that wheat ensilage was the cause of the disease; the evidence is almost conclusive on this point. The outbreak took place amongst the horses that were supplied with this artificial fodder. That single fact establishes a connection between the ensilage and the disease. It was ascertained that in some cases the ensilage was mouldy when it was given to the horses. Taken into the system in this condition, the chances were that it would prove injurious. Sixteen valuable horses had died before the veterinary surgeons arrived at the station. There were others in a bad state, but happily the progress of the disease in these was arrested, and, with one exception, they are now in a fair way to recovery. The outbreak has involved the owner of the station in a heavy loss, for some of the horses were valuable animals; but it has taught the pastoralists and farmers a useful lesson with respect to ensilage. During the last few years a great deal of attention has been given to the preparation of this fodder, and there can be no doubt that it is destined to play an important part in connection with the management of stations. Two facts concerning it have been established by the recent inquiry; first, that ensilage should be served to the stock fresh from the silo—if kept for a couple of days, as was the case at Coonong, it develops fungus growths, and becomes a cause of serious disease; and, secondly, that horses which are required to work should not be dieted solely with this food. The report says, very sensibly, that change of food is as necessary for animals as it is for human beings, and horses need a change much more than the ruminating stock, such as sheep and cattle. It is to be remarked that the station people had timely warning of what was likely to happen. Although they gave plenty of ensilage to the horses, the animals constantly grew thinner, until at length many of them became too weak to work. If the diet had been changed when the falling away in flesh was first observed, there would probably have been no outbreak of disease. The best preservative against misfortune on a station, as elsewhere is common sense."

A correspondent to the same paper also says:—

"I have read the report of Mr. Veterinary-surgeon Stanley upon the recent outbreak of disease among horses at Coonong. Mr. Stanley states the cause of the mortality to have been from the feeding upon silage, which had been taken from the silo several days before it was consumed. I fear, from the general tenor of Mr. Stanley's report, many persons may become prejudiced against silage as a food for stock. In the case of mortality at Coonong, it is manifestly clear that the horses were kept upon silage alone without the addition of any other food. It would be interesting to know whether any animals other than horses were fed upon silage, and, if so, did Mr. Stanley observe the effect (if any) upon such animals of this particular kind of food.

In a letter written by me when in London, in August, 1884, and published in your columns (I believe about October, 1884), alluding to the feeding qualities of silage, I said,—“As regards the feeding qualities of silage, it is pretty generally conceded that the best results are obtained by using the silage with other food, such as chaff, bran, and ground grains. If fed alone, the silage has sometimes a laxative effect on animals. In several experiments made by dairy farmers it was found that silage increased the flow of milk. As to the exact quantity to be fed to each beast, that of course depends upon the age of the beast. In feeding, whether it be for fattening or milk-producing purposes, however, I think that at least half the quantity of food given should be hay, chaff, or food other than silage.”

From Mr. Stanley's report it is evident that little attention was paid to the effect the silage

had upon the horses, such as causing diarrhoea, loss of condition, profuse sweating, &c. Had these symptoms been duly regarded and a complete change of food resorted to, I have no doubt no evil results would have followed. The most ardent advocates of ensilage do not claim that silage can be used without the admixture of either hay, grains, or roots. I hope that the samples of silage brought by Mr. Stanley from Coonong may be subjected to chemical analysis."

The foregoing information will be useful to farmers, inasmuch as it will make them more careful in the way in which they feed silage to their stock, but we see nothing in it that need create a scare, or deter them from constructing silos with the object of making the most of their fodder.

The Late Mr. Lennon.

Through the death of Mr. Hugh Lennon which took place at his residence, Bothwell Villa, Royal Park, on the 22nd ult., the National Agricultural Society has lost an active supporter. For a number of years Mr. Lennon was a prominent member of the Council of that Institution, and during the year 1878 was its President. In addition to giving attention to his ordinary duties as a member, Mr. Lennon prepared and read before the Society several useful practical papers on agricultural subjects, and matters relating to exhibitions. He was a steady advocate of the single system of judging, in favour of which he argued strongly at a recent meeting of Council. In connection with his business as a maker of agricultural implements, Mr. Lennon was very widely known. He specially devoted himself to the production of ploughs, and succeeded so well in manufacturing implements adapted to colonial requirements, that his name has become a household word among farmers. He will be much missed in circles he was wont to frequent.

West Highland Cattle.

(A RECENT IMPORTATION.)

Mr. J. McFarlane has lately imported a bull and two heifers of the celebrated Poltallock strain of West Highlanders or Kyloes. As we had an opportunity of seeing these animals at Footscray, where they were temporarily located, we are enabled to make some remarks regarding them. They were taken to Sydney in September, 1885, where they were first placed on a hulk, and then on Shark Island for about three months, after which they were sent to the Zoological Gardens there. They were brought over here last month. They are very strange-looking animals, with coats of hair over six inches long right down to their hoofs, which resemble those of a sheep rather than of an ordinary cattle beast. They have great long cocked horns like those of the real old warrigals of the early days. Although they were as poor as crows—having been almost starved to death—one could not help noticing their straight lines and square frames, set on short legs; all of which went to show that, if in condition, they would make rare bodies of beef. As these cattle are entered as extras at the National Society's Show visitors will have an opportunity of interviewing them. There is no doubt much "gape seed" will be expended over them, for, although they are from Scotland, they are uncanny looking beasts.

Meetings.

An adjourned meeting of the Council of the National Agricultural Society of Victoria, was held on Monday, July 19th, 1886.

Present—Dr. Plummer, President, in the chair, with Messrs. C. Lynott, J. Finlay, J. G. Brisbane, F. Henty, J. M. Peck, J. Hearn, T. Brunton, D. Munro, and J. Garton.

CORRESPONDENCE.

Letters were read accepting the invitation of the Council to the Show, on behalf of His Excellency the Governor and Lady Loch, the Hon. Sir James and Lady MacBain, the Hon. the Premier, Hon. the Chief Secretary, the Hon. the Speaker, the Hon. Walter Madden, and the Hon. T. Bent. Received.

It was also resolved that Sir Bryan and Lady O'Loughlen be invited to the Show.

REPORTS.

The Parade Committee recommended with regard to the trial of engines, that Mr. Brunton be appointed steward, and that the arrangements be left to him. They also resolved that an owner might exhibit more than one engine, provided they were of different construction; also that exhibitors should find their own brake and indicator. Mr. Rees Davies, was appointed a steward with Mr. Brunton, and the report was adopted.

The Executive Committee reported that they had resolved to supply the proprietor of the De Laval Cream Separator with 100 gallons of milk per day, for the three last days of the show, on which condition he would exhibit; and separate the cream from the milk in the test for the best butter producing cow; also that the luncheon on the grounds should be at 1 p.m. on each day of the Show.

APPOINTMENT OF STEWARDS.

The following Stewards were appointed for the Show.

Class A, Draught Horses—J. G. Brisbane, J. Currie, J. Daniel, and J. D. Patterson.

Classes B and C, Thoroughbreds, Trotters, and Roadsters, and class D, Sections 4, 5, 6, 7, 8—T. Learmonth, J. Hearn, J. Garton, H. Griffiths.

Class D, Sections 1, 2, 3, Hunters and Ladies' Hunters, and Section 9 Rough Riding—J. M. Peck, J. Hearn, J. Garton, W. Fleming.

Class E, Carriage Horses, Buggy Horses, &c.—W. J. Lobb, W. Rose, Henry Hearn.

Class F, Shorthorns—J. M. Peck, C. Lynott, H. Peck, D. C. Morpeth.

Classes G and H, Herefords and Polled Angus—F. Peppin, J. Malcolm.

Classes J and L, Jerseys and Brittanies—D. R. McGregor, T. Harmer, H. Delahy.

Classes I and K, Ayshires and Holsteins—R. G. Stevenson, — Kennet, W. Thomson (Kyneton).

Classes N and S, Fat Cattle and Fat Sheep—J. M. Peck, C. Lynott.

Class M, Dairy Cattle—J. Hurst, J. McPhail, E. Baker.

Class O, Merino Sheep—R. Clarke, F. W. J. Plummer.

Classes P, Q, R, Lincolns, Leicesters, and Downs—A. Patterson, S. G. Staughton.

Class T, Swine—James Gibb, John Bond.

Class U, Poultry—W. Learmonth, John Robertson.

Class V, Dogs—H. Staughton, John Munday.

Class W, Carriages, Buggies, and Harness—T. McCaw, John Brunton.

Class X, Dairy Produce, Y and Y.A. Preserves and Manures—J. Buchanan, H. Hearn.

Class X, Grain, &c.—D. Munro, W. Thomson.

Class X, Wine—Dr. Plummer.

Class X, Hops and Malt—D. Munro, W. Thomson.

Class Z, Special Engines—T. Brunton, Rees Davis.

The meeting then adjourned *sine die*.

The ordinary monthly meeting of the Council of the National Agricultural Society of Victoria was held on Tuesday, August 10th, 1886.

Present—Dr. Plummer, president (in the chair), Messrs. F. Peppin, F. Henty, Robert Simson, D. R. McGregor, J. M. Peck, J. G. Brisbane, R. Clarke, J. Finlay, J. Garton, C. Lynott, J. Currie, T. Brunton, W. J. Lobb, and the Hons. C. Young and J. Buchanan.

The minutes of the previous meeting were read and confirmed.

The Finance Committee's report submitting the monthly statement of accounts, and recommending payments amounting to £1064 15s. was read.

Mr. Simson moved the adoption of the report, seconded by Mr. Currie and carried.

CORRESPONDENCE.

From the Commissioner of Customs, the Minister of Education, the Mayor of Melbourne, and the President of the Chamber of Commerce, accepting the Council's invitation to lunch at the show.—Received.

The Hon. C. Young moved that the Railway Commissioners, the Secretary, and the Traffic Manager be invited to lunch with the Council, seconded by Mr. Peck, and carried.

From M. Murphy, Secretary of the Canterbury Agricultural and Pastoral Association, New Zealand, stating that he was much interested in the report of a meeting published in the Society's Journal, in which was recorded a discussion which resulted in the motion "that the owner of the dam at the time an animal is born be held to be the breeder" being carried. He had held the opinion in common with Messrs. Hearn and Brisbane (as reported at that meeting) that the mater of the sire and dam was the breeder. He had written home to the Secretary of the Royal Society of England for an opinion on this interesting subject, which he would communicate to the Society when received.—Received.

From the Secretary to the Premier, stating that on the recommendation of the Hon. the Minister of Agriculture, the Premier had approved of Thursday the opening day of the Society's show, being proclaimed a public holiday, and had moved the Hon. the Chief Secretary, to

issue the necessary proclamation.—Received.

From J. Hedrick, referring to a mistake in relation to entries of hops, and asking to be allowed to make an additional entry. The President explained what had been done in this matter.

Mr. Simson moved that the action of the Secretary be upheld, and that the entry be refused; seconded by Mr. Peck and carried.

From G. M. Pickles and Son, stating the circumstances under which their entries had not been made in proper time and asking if they could now be received. They stated that they had specially prepared 27 carriages, buggies, &c. of distinct designs at a cost of close on £3000, and had also spent a considerable sum in advertising. They asked in the event of not being allowed to compete, if they could have space granted them for exhibition only.

Mr. Lobb moved, and Mr. McGregor seconded, that the Council agree to the latter proposal, but they had no supporters; the majority of the Council, while sympathising with the applicants, being strongly in favor of adhering to the rules.

From Dougharty, Son and Parker, expressing regret that through an unfortunate oversight they had omitted to enter six polled angus bulls on the water from New Zealand. They had advertised them for sale on the grounds, and had arranged to still more widely advertise them so that they would be a great draw.

Mr. Simson moved that the applicants be informed that as the entries had closed theirs could not be accepted, nor could the animals be admitted to the show grounds; seconded by Mr. Lobb, and carried.

The President stated that the next subject set down on the agenda was Mr. Lennon's death, which caused a vacancy in the Council.

Mr. Simson moved that a letter of condolence be sent to the widow and family of the late Mr. Lennon, expressing the Council's deep regret at the loss sustained through his death, seconded by Mr. F. Henty, supported by Mr. Lobb and the Hon. J. Buchanan, and carried unanimously.

The vacancy in the Council will be filled at the next monthly meeting.

APPOINTMENT OF ADDITIONAL JUDGES AND STEWARDS.

Mr. John Hastie was appointed a judge of Herefords. Messrs. W. Graham and R. Buchanan were appointed judges of swine. Mr. W. Glover was appointed a steward of poultry, and Messrs. W. V. Glover and A. Russell stewards for engines.

The Secretary reported that the entries for the show were the largest ever received by the Society. The horses and cattle entered were 120 in excess of number the stalls, so that that number of new ones would be required; also that 20 additional pens would be required for pigs, and 36 new pens for poultry.

Mr. Peck moved that the Council resolve that the necessary accommodation be provided, and refer the matter to the Works Committee, giving them power to go on with the buildings at once; seconded by Mr. Lynott, and carried.

The meeting then adjourned.

Correspondence.

Quality or Value—Judging at Shows.

(To the Editor of the Journal of the National Agricultural Society of Victoria).

SIR—In your last issue there was a letter headed, "Judging at Shows—Quality or Value." Although I agree with much of the letter and would like to see it carried out, I am in a sort of a fog with a part of it, and as I understand Mr. Crichton is a recognised authority he might help me out of my dilemma. The part that puzzles me is, how to judge a horse for value and disregard quality, or *vice versa*. Quality and value seem to have such an intimate relationship to each other that they cannot be separated. If Mr. Crichton would kindly give his ideas how to judge horses for value without considering quality, or quality without value, I am sure the information would be valuable; more especially to myself; a far awa cousin in the bush, who would be ever thankful for having his muddled head relieved. *Re* the appointment of judges for the Show, I hope Mr. Peppin will not abandon his defeated motion of appointing three judges—two to go into the ring and the third to act as umpire in the case of a disagreement. I would suggest that the two judges who go into the ring hand to a steward their decisions without in any way consulting each other; then you would be likely to find a wee (?) job for the third judge. In nearly every class, whatever may be said in favour of the one judge system, surely three separate and independent opinions would be better than one. However, the decision arrived at must be commendable, as it is evident the Council intend to be slow and cautious in accepting new systems until they think they have found a better than the old one with all its faults.—Yours, &c.,

NATIVE.

July 27.

Hints to Sheep-Farmers.

BY RICHARD BENNET.

It is now many years since I commenced endeavouring through the press to reduce sheep-breeding and management to something like a system among our small graziers, and it is with the desire to assist, so far as my experience will allow, that I purpose again contributing a few articles, hoping by periodically keeping the subject under discussion, something may come of it in the end, and that my efforts have not been thrown away.

I will commence by demonstrating that, as a bad sheep eats quite as much grass as a good one, his cost of keep is equal, while his yield in carcase and wool is greatly inferior. Two great mistakes have been made by our small graziers in particular—the first in not sufficiently studying the adaptability of certain breeds of sheep in their pasture and climate, and secondly indiscriminate crossing. To such an extent has this latter been carried, that it is utterly impossible for even the best judges of wool to pronounce what the bulk of the crossbred wool consists of. It is, to quote a familiar phrase, "neither fish, flesh, fowl, nor good red herring."

Australia, in common with all wool-growing countries, is, at the present time, suffering from a severe depression, not only in her staple wool, but likewise tallow, leather, and most other products of the soil. Whether this be permanent or temporary it is difficult to forecast. As I am not of the pessimist class, I trust it is only the latter, and that with the revival of trade generally in European countries and America, the woollen and kindred industries will participate.

Farmers and small pastoralists, are, I am aware, the most difficult class to effect beneficial changes among, and what has to be done must be a growth of time. One great fault with them is being too easily frightened at temporary depressions, and changing their flocks as the wind blows. Some fifteen years since the bulk of sheep reared on our rich coast pasture, both by the large land owners and farmers, were

Lincolns, Leicesters, and Cotswolds, pure of blood and rich in wool and carcase; both quality and weight. Well would it have been for them had they still continued these heavy breeds. They had such noted breeders as the Messrs. Rutledge, Knight and Lydiard, Urquhart, Dr. Browne, of Moorak, Mount Gambier, and others, from whom to replenish their flocks; men, some of whom had spent small fortunes in building up rare studs of their once princely flocks, of which but remnants now remain. And the cause of their dispersion—a decline *pro tem*, in the value of long stapled wool. Like the squatters, on the discovery of gold in Australia, they thought themselves ruined men if they stuck to the pure heavy breeds. They cleared them off their holdings, and commenced trying experiments, indiscriminate crossings, trying back from the Merino rams to the long-wooled ewes, the result of which has been no doubt a nice, fine, clean, light wool, called comeback, too light in weight, unfortunately for profit. Now, a man with a sheep that will shear a fleece of lustrous Lincoln wool, weighing, say, fourteen pounds, if he only receives sixpence per pound, is infinitely better off than his neighbour who shears four or five pounds of comeback, at one shilling per pound, besides leaving the heavier carcase for the butcher. Last year I attended a sale of pure Lincoln sheep at Werrongurt, the property of Mr. T. F. Rutledge, and was disgusted, as doubtless was the enterprising owner of them, at seeing splendid young ewes, without a blemish, sold for as many shillings as they would have realised guineas some five or six years since. Even now a re-action in favor of the heavy lustrous wools is setting in in Europe, and if, as is highly probable, they again become the fashionable staple, what an up-hill work our wool-growers will have to re-establish the pure breed as it formerly existed. Depressions, especially in the wool trade, are periodical. In 1868, a year of great depression in the wool trade, Messrs. Buxton and Hunter (wool-brokers, London) report: "The cause of the great fall in the value of wool must therefore be attributed almost entirely to the fact that the production of the article has reached a point where the consumption cannot keep pace with it; thus, we must look forward to a much lower range of prices for the future, or the production of wool must be largely reduced, and this latter alternative can only be the work of time. But we have little doubt that unremunerative prices will cause many tracts of country to be abandoned in Queensland and the River Plate." The *London Shipping Gazette*, of 1st October, 1868, reviewing the August sale and state of the wool market, says: "It is quite obvious that sheep farming in our colonies has been too widely extended, and as a consequence Europe is importing more wool than can be consumed, and that increased supplies must lead to further reduced rates."

Despite these gloomy forebodings, the supply of wool in the Australian colonies has steadily advanced, and some few years later its value in the world's markets rose to a pitch never previously realised. I may be asked by some possible pessimistic wool-growers, upon what assumption I base my prognostications that long lustre wool will resume its former leading position. The reply is very simple—Year after year the wool-growing counties in Great Britain are becoming more limited in their grazing areas, while in our colonies at least nine-tenths of the pasture are suited only to the finer description of wool. Where any attempt is made to acclimatise the English breeds it would result in failure, for two reasons, the first, the heavy carcassed sheep could not endure the fatigue of travelling several miles a day, over the dry, hot, scantily-herbaged plains of Queensland, Riverina, and South Australia, such as the lighter framed and woolled Merino does; secondly, the rich, heavy, lustrous wool requires moist luxuriant pasture, with abundance of water, such as our Western district and New Zealand afford, to enable it to maintain its character. Therefore, while the grazing area of the Merino is almost unlimited, that of the English long-wooled breeds is, even at the present time, almost wholly occupied. Consequently the increase in the production of long wool may be looked upon as insignificant, compared with the fine staples. History, it is said, repeats itself, and this is applicable to the wool trade as well as other things. Prices rise and fall and fashions change periodically, as do the tides, and the most successful wool-growers in the colonies, if not the world, may be found among those who have established a certain breed of sheep and stuck to that breed, without cross or intermixture, and I unhesitatingly affirm that those of our large breeders who have allowed their once splendid flocks to disperse, never made a greater mistake. —*Warrnambool Standard*.

The "Fruit" of the Potato.

MR. J. TORBITT, Belfast, informs us—yet a new thing under the sun—that "THE FRUIT OF THE POTATO IS EDIBLE." The yield is immense, being probably equal to the usual crop of tubers, and at the present prices of fruits and of tubers (1885) the money value of the fruit-crop cannot be less than quadruple that of the root-crop.

A photo-lithograph is sent for giving an exact representation of the fruit-produce of one young plant, the weight being 2½ lb., or at the rate of 10 tons per acre.

"Digest this fruit in sugar—boil it in cane-sugar, beet-root sugar, or by preference in grape-sugar, made from potato starch, and the result is the production of a conserve, preserve, or jam, second to none in the world. It is of delicious flavour, and perfectly innocuous, the action of the heat and of the sugar having decomposed *absolutely* the acrid, poisonous constituents of the raw berry. This fact I have ascertained and verified beyond all question, or possibility of doubt, and by the following means:—I ate a small quantity of it, watching carefully for unwholesome effects, and there were none whatever. I then gradually increased the doses until I ate a full meal on an empty stomach, and I found it to be a good nutritive food as well as an excellent jam.

"Again, alcohol has been obtained from this fruit—when men have happened to have it—and from the tubers, but never from the two combined, and I see no reason why the starch of the potato should not be converted into grape-sugar by the usual means and combined with the fruit, and I see no reason why the combined grape-sugar and fruit of the potato should not produce as good wine as does the grape-sugar-fruit of the vine. It will certainly give double or treble the amount of alcohol, which has ever yet been obtained upon a given surface, at one-half or one-third the cost, and I suspect, therefore, that on suitable soils and in suitable climates the potato will supplant the vine. And yet during three hundred years, man, all over the world, when he accidentally produced this fruit always threw it away.

"Turning then to the underground potato crop—the tubers—grow the plant from its seed, select the best, cross them, again select the best and re-cross them, and continue this cross-breeding year-after-year of the year-after-year selected best, and the result will be the production of disease-proof varieties, giving immense crops of fruit and of tubers. Knight found 34 tons per acre of tubers, and I have found often 12 or 14 tons of tubers and 4 or 5 tons of fruit, and several times 20 and 24 tons tubers, and 8 or 10 tons fruit. But all these new varieties become aged and weak in a few years, and like old animals they become unable to reproduce themselves, the flowers diminish in size, and the crop of fruit diminishes, and eventually disappears. Meantime the crop of tubers falls off gradually, and like the fruit, would also disappear entirely, only before that consummation is reached, the variety is thrown out of cultivation. Evidently, therefore, when any variety begins to fail in its crop of fruit, it ought to be discarded and replaced by a young fruit-bearing double-tuber-bearing disease-proof variety, which should have been produced for the purpose, and of such there should be continually being produced all over the world unlimited numbers, and of such I possess some hundreds of varieties. In fact, and after all, a variety is only a divided individual which dies on the expiration of its allotted term of life, which in the potato is only a few years.

"And there is no difficulty whatever in doubling the potato crop, and no expense, for the double crop of healthy fruit, and of healthy tubers, obtained from young varieties, costs exactly the same as does the half crop

of diseased tubers obtained from the old varieties, and if any landowners or others are willing to take the trouble to produce these abundant potato crops, I am able and willing to show them the way.—*The Agricultural Gazette*.

How to Distinguish Noxious and Useful Insects.

ALL engaged in the cultivation of the ground, whether in the farm, the garden, the forest, or the orchard, would doubtless find it serviceable to be able to decide whether those insects with which they meet are to be regarded as injurious or useful. But how may this be done in the colony of Victoria, seeing that the economic entomology of this country has not yet been fully worked out? And how, especially, can the hard worked farmer hope, in the midst of his numerous duties, to gain a practically useful knowledge of the varied forms and habits of these infinite multitudes? The answer to the first question will present itself when we consider that as a general rule all those insects which are nearly related to each other have similar habits. Thus, for instance, all known cock-chafers, all known click-beetles, all known saw-flies, and all known grasshoppers and locusts, are injurious to plants; while, on the other hand, all known tiger beetles, all known ladybirds, all known ichneumons, and all known dragonflies prey upon other insects. So that if the Victorian farmer should come across a cockchafer, a click-beetle, or a saw-fly, &c., he would be justified in considering it a destructive insect, although the particular species might never have been seen before, either by himself or anyone else; and should he meet with tiger beetles, ladybirds, ichneumons, &c., although they might be hitherto unknown forms, yet he would rightly regard them as valuable allies. The difficulty implied in the second question, although undoubtedly a real one, appears greater than it actually is; for, notwithstanding that insect forms are so exceedingly numerous and varied, there are certain broad rules of classification which are easily learnt, and which, with a little careful observation, can be successfully applied. Thus, for instance, all beetles which have four joints to their feet are destructive, whereas those which have only three joints, are protective. So, also, those insects which have four transparent wings, like those of a bee or wasp, and which have the abdomen joined on to the rest of the body by a narrow footstalk, are with very few exceptions to be regarded as protective. There is, indeed, no group of insects so distinctly useful, while those with the same kind of wings, but with the abdomen united with the rest of the body so as to form one mass, are destructive. Then, again, all butterflies and moths, although some of them may be useful as flower fertilisers, are to be classed as destructive; whereas, all those insects which have the veins of the wings formed into a fine lace or net-work, as in the dragonflies, are, with the exception of the white ants, to be regarded as either protective or non-economic. Thus, in many cases, the matter presents no great difficulty. There are, indeed, some groups of a mixed character, in certain of which the methods of distinction are complicated, or at least require a closer discrimination than can be ordinarily applied; but for most practical purposes general rules can be used.—*Argus*.

TO "BROWN" A NEW SADDLE.—The following is said to answer admirably in giving to a new saddle a nice dark brown colour:—Wash with a solution of soft soap, and when perfectly dry (atmospherically) rub in lightly horse's or bullock's blood; by these means a uniform brown color is produced, which is brought to a high varnish by the blood. The use of blood will be found very advantageous after a saddle and bridle have been exposed to rain, it having the property of softening the leather and keeping it in a high state of varnish.—*Farmers' Gazette*.

going beyond the province of ascertainable facts, into that of the great insoluble problems involved in life—"May the Lord confound all such dreary insolences of loquacious blockheadism, calling itself science"

Then the train stopped; and the ticket collector—like a lightning conductor—diverted again, into space where it was innocuous, the gathering storm.—Live Stock Journal.

New Industries.

The Fig.—Its Culture and Curing.

[CONTINUED.]

As my own crop this year has not been sufficient to place the same on the wholesale market, I have not pressed them as much as they otherwise should have been pressed, and my object was to keep the figs more intact.

As a guide, however, to those who now enter upon the fig culture, I will here state what I consider necessary appliances for packing figs. Thus, four things are necessary:

1. One box of wood to hold the figs.
2. An iron frame or box with bottom just large enough to slip outside of the fig box and hold it tightly.
3. An iron frame without bottom or top to fit snugly inside the fig box. This iron frame has two or three partitions inside, also of galvanized iron, running parallel to two opposite sides of the fig box. This iron frame with its partitions can be roughly compared to a brick mould made for three or four bricks at a time. In packing Erbelli or Loucoum figs this iron mould should also have cross partitions, and the whole then would resemble the partition used in our common egg boxes, only instead of holding eggs our mould would hold figs.
4. A press. The procedure of packing is now as follows:—First insert the mould just described in the wooden fig box. This box will now be found divided by the partitions of the mould in as many chambers, but open from the top. Pack the figs in each longitudinal chamber in the way Smyrna figs are packed. When done press lightly. Now withdraw the frame by pulling it up. Insert the fig box in the first described frame, and subject it to gradually increasing pressure.

I believe a press similar to which is now used by the Fresno and Los Angeles raisin packers would be the best for this purpose. This press is worked by levers, and can keep four or more boxes under pressure as long a time as required. When sufficiently pressed withdraw the fig box from the iron frame and nail on the cover. The figs are now ready for shipment. In case my description should not have been sufficiently clear, I may state that the iron frame, which slips outside the box, is simply to prevent the fig box bursting open, when subjected to pressure. The frame, again, which goes inside only serves to keep the figs in rows and separate the rows. Without this it is impossible to prevent the figs overlapping, which very much detracts from their appearance.

CAPRIFICATION.

I have so far not touched upon the practice indulged in in the countries round the Mediterranean, and there known as caprification. Before I enter further upon this most interesting subject, I will state as my opinion, founded upon my experience here, that, at least with the Adriatic fig, the caprification is not necessary, as this fig bears abundant and well-matured crops without the same. The caprification has been practiced by the Mediterranean fig-growers for 2000 years or more, or as long as any historical record can be traced back.

The Roman naturalist, Pliny, who lived 1800 years ago, described the same minutely, and as in his time, the same *modus operandi* is practiced to day. After him it has been seen and described by most travellers scientifically and otherwise. The following, in short, is the way the operation is performed:—When the figs to be used for drying are of the size of a hazel nut, generally in the middle of June, wild figs of a variety called the Capri fig are gathered. Five or six of these are strung on a string, and this again is hung or thrown over the cultivated fig tree. As the tree is increasing in size from year to year, more strings with figs are hung on the tree, but more than six strings, with altogether about 30 wild or Capri figs, are never hung on the largest tree at one and the same time. The figs are hung on the trees about one hour before sunrise, when the weather is fine, and no wind blowing. If too many figs are hung on the tree, it is said the figs will either fall off or become inferior. The same operation is repeated with the second crop figs. What effect has, then, this caprification on the fruit of the cultivated figs? This is a question which has been asked repeatedly, but though some very prominent scientific observers have investigated the subject, the same is not yet to this day fully explained. Some very interesting facts are, however, known, and these are of sufficient importance to be here considered. The fig itself is something more than a seed vessel of a flower. The fleshy part is a thickened, hollow receptacle, closed, except at the very narrow opening called the eye, situated at the top of the fig. This receptacle on its inner side contains numerous minute flowers, crowded together and covering the whole of the surface of the cavity. These flowers are male and female, or staminate and pistillate. The female flowers occupy by far the largest room, and all the lower part of the cavity. The male flowers, again, the more or less narrow zone, immediately surrounding the eye of the fig. In the cultivated or edible fig the male flowers are generally wanting or rather replaced by barren scale-like leaflets. In the different crops, the proportion between the male and female flowers is quite different. The figs of the first crop, or the *bocorre*, are those which carry the most male flowers. The second crop, or the "karmouse," carry few, and the third or last crop carry none but female flowers. As I said, except in the wild or Capri fig, the male flowers are seldom developed. In the figs grown in California, and which I have had opportunity to investigate, the male flowers were always replaced by scales, neither have they any developed seeds. The same has also been previously found to be the case in Italy, and Professor Arcangeli states that according to his own observations the two most generally cultivated figs around Pisa, the *Fico verdino* and the *Fico piombinese*, never have any perfect seeds developed, while the *Fico biancolino*, which is considered a semi-wild species, has, among numerous imperfect seeds, some which are easily germinated.

As an aid for those who are no botanists to distinguish between good and barren fig seeds, I will mention that if thrown in water the good ones will sink, but the barren or not fertile ones will float on top of the surface. If crushed the fertile ones will be found to contain an almond-like kernel. The barren ones will again be seen to be only empty shells, but of the same size and of nearly the same color as the good seed. From a prominent botanist in San Francisco I learn, however, that both Californian and Australian figs occasionally have developed male flowers, but they always develop much later than the female flowers of the same fig, and thus never can serve to fertilize those of the same fig, but only those of other figs. This fertilization, if it takes place, must therefore be made by the aid of insects. The part that these take in causing the maturing of certain figs was already observed by the ancients. They found that a small,

yes very minute, wasp infested the wild or Capri fig, and that when transferred to the cultivated figs they prevented the same from falling off, or at least hastened their ripening.

To understand this better we will describe the Capri fig. This fig contains no saccharine matter, is of much smaller size, and when reaching maturity it dries up and falls off. It produces three crops. The first crop, which hangs through winter and ripens in April, is called in Italy *mamme* (by the ancient Romans *cratitires*). This crop is followed in June by the second crop, or what is called the *profichi* (ancient *orni*), and lastly in September, the third crop is called the *mammoni* (ancient *forntis*). If we now closely examine the second crop, or the *profichi*, when fully ripe, we see here and there a black winged insect emerging from the orifice or eye at the top; its hairy body is dusted over with pollen grains from the male flowers, adhering to the hair when the insect crawled through the narrow male flower zone. And if we cut open one of those figs, we find inside a considerable number of similar insects, all striving to get out.

These insects, named already by Linnaeus, *Cynips isenes*, are partly winged partly wingless. The former, or winged ones, are females; the other, wingless, males. The winged females as soon as they leave *profichi* or second crop, visit the last or third crop, the *mammoni*, and deposit eggs in their female flowers. Similarly the winged females that develop in this crop, or *mammoni*, visit the yet young figs of the first crop, or the *mamme*, and deposit eggs in them. If now these Capri figs are hung in among the branches of the cultivated fig, the insects crawl out of the Capri figs and into the cultivated figs in mistake. Because, while the females with impunity can deposit their eggs in the Capri figs, they are ensnared into the cultivated figs and die in the attempt. The eggs of the *Cynips* are not deposited loosely on the female flowers, but by the aid of the tube or ovipositor inserted between the branches of the flower stigma into the integuments of the ovule of the female flower, else the *Cynips'* eggs are said not to develop. The fertility of these *Cynips* is astonishing, and a few of them is sufficient to pierce all the female flowers of a fig. This piercing of the flowers causes a kind of gall formation, which, while it does not prevent the development of the seed, causes the same and the whole fig receptacle to ripen prematurely. Perhaps in the same way as the wounds caused by the larvæ of the codlin moth hasten the ripening of the apple. That the caprification is practiced in Smyrna and in all the Mediterranean countries as well as in Portugal, is an established fact. The wild fig or Capri fig is in Portugal called *Figo do Toco* or *Chocho*. That the fig flowers can not be fertilised but from the pollen of the male flowers from other figs is fully established; be these flowers the male flowers of the cultivated figs or those of the Capri fig.

I mentioned before, that of all the California figs I have investigated, none bore fertile seeds; all resembled only glassy shells entirely empty.

In the very choicest Smyrna figs, however, I have found numerous fertile seeds, but also many ones empty. If these good seeds are hybridised by the pollen of the Capri fig, they certainly will not produce figs equal to those the seeds were taken from, but rather hybrids between the edible and the Capri fig. I have from the choicest *Eleme Eibeyli* and others raised several thousand seedlings, and the future will tell me if they produce hybrid fruit or not. Some botanists have advanced to me the theory that through long cultivation the highly cultivated figs showed similarly to the banana and the seedless grape and the melon pear, have become entirely barren, and both the female and male flowers lost their original functions. This, however, is contradicted through the

Are British Cattle Degenerating?

CO-OPERATIVE CRITICISM.

A DISCUSSION.—Scene: A railway carriage in train *ex London*, during week of the *Smithfield Club Show*. Interlocutors:—*Mr. Editor*, *Mr. Upright** (see note), *Mr. Downwright*, *Mr. Homespun*, and *Mr. Fitz-Cirencester*.

The usual formalities to a general conversation having been completed, the talk becomes special through the remark of *Mr. Homespun*, as follows:—

MR. H.: A wonderful show! What are we coming to? Who would have thought when I was a boy (*i.e.*, 50 years ago) of a bullock weighing 80 stone (14 lbs.) before he was two years old? Why—

MR. FITZ: Excuse my interrupting you! I have the highest authority for saying that the system, which produces these animals, is one which science emphatically condemns. ("Life on the Farm," p. 119.)

MR. U.: So much the worse for science. Why, hang it, you don't dispute the age, and you can't deny the weight! What is there to "condemn" in being able to turn out as much meat in two years as our fathers did in three?

MR. EDITOR: We know the advantages you have recently enjoyed, *Mr. Fitz-Cirencester*, in a thorough technical training at an agricultural college. It has been the occupation of my life to insist upon the all-importance of this for farmers, as for men of every other pursuit. We hope you will give us your reasons for this strong statement. As for myself I ask that I may be allowed to give the public the benefit of your explanation.

MR. FITZ: Oh, by all means! Out with your note-book! I say its all wrong. The Professor declares that such animals are instances of "The survival of the unfittest;" and *Mr. Slicer* of the *Smithfield Squeezer*, says the beef's beastly.

MR. DOWNWRIGHT: Oh, come! I am not a scientific man myself, and what the Professor meant, I am sure I don't know. I think there is more money to be made by studying the whims of my agent or my bank manager than those of any other live stock which I have to do with. Still, I *can* speak for the quality of the young beef; we had a baron of it the other day at the audit off the *Marquis's* first prize cross-bred, out of the two-year-old class at the *Loamshire Show*. It was as tender as a chicken; and a man, at all keen, could put himself outside of a couple of pounds of it, in very quick time, without any difficulty.

MR. H.: The beef's good enough, no doubt. There is nothing to be made out of that objection. If a man cannot be content with the meat of a nice young home-bred, well-fed, killed and cooked, he is a "no-account" man. We may dismiss that; the charge is not proven. But what surprises me is the size for age! the firmness! the level lines, without a hill or hole in them! and the quiet temper of the young *Shorthorns* and *Herefords* especially. Why! they stand chewing the cud among the crowd, the noise, and the gas, as quiet as if they were in my old hovel in the straw-yard at home. I don't let anyone except myself and the old chap that feeds the bullocks go into that hovel on any account. Yet my beasts are not quiet like these; a trifle puts them off their feed.

MR. U.: Why! Of course they are not! I suppose you'll admit that peculiarities of temper are hereditary as well as heads, and legs, and other ends beside. Why should not the fact that, as a rule, prize-winners

come of prize-winning families explain the amount which a show beast will endure without panic as well as the thickness of flesh upon his loins?

MR. FITZ: I tell you it is all a mistake. The professor (p. 120) assures us that "for the course of long years of steady effort, we have been wilfully groping in the dark, and that the sooner we retrace our steps the better it will be for everybody," and that "if we mean to continue to cultivate the live stock of the farm, we shall have to proceed in a direction as nearly as possible opposite to the one which we have taken for many years past."

MR. U.: Hoity Toity! That is indeed rather a large order for a man to give out of his own head. Why, for the last 50 years, foreigners of every part of the world have been coming to this country to buy our live stock. These all have been bred upon the lines, which we are now called on to abandon. Foreigners have done, and continue to do so, because the descendants of our sires—when they have used them—are found more serviceable than those begotten by their own sires. For 50 years the cattle brought to this country from Ireland, bred almost without exception from the most artificially reared sires in existence in Great Britain have been growing better and better, *i.e.*, more remunerative to the feeder, and more acceptable to the butcher. Are these facts—and similar records from Scotland—to go for nothing in comparison with the Professor's reasonings? These seem to me to be playing at intellectual cat's cradles, rather than sober attempts to arrive at the truth.

MR. EDITOR: Oh, really! We must not deery the services rendered to agriculture by science. What agriculture wants, above all things, is to sit reverently at the feet of science and learn—

MR. D. (interrupting): How to suck eggs. That is what I am always telling our agent. He comes and says, "Oh, *Downwright*, the *Marquis* has seen so and so in the paper; and he wishes you to try; he is sure it will be money into your pocket." I reply, "Oh, thank his lordship! Capital! I wonder I never thought of that before. How slow we country folk are to see our own interests." Then I go on just as I used to do; and a long time before the next audit he and my lord have forgotten all about it. Both have got some new crotchet into their heads instead; and I promise as much, and do as much, for that in turn. That is what I call treating science as agriculture should treat her.

MR. EDITOR: You cannot expect men like *Mr. Homespun* here, who farms his own land, or *Mr. Fitz-Cirencester*, who has a college training, to take your line. Surely you will allow that science has something to tell us about life which is worth engrafting upon ordinary farm practice

MR. U.: Well! So far as my observation goes, what science really points to, about life, is its infinite power of accommodating itself to changed conditions. There are forms now on land which seem to have been developed out of earlier existences, which led submarine lives. Animals which are now fleet and carnivorous are apparently descendant from predecessors which crawled and browsed. Why are our cattle, which have been made to suit the conditions, under which their lives in Great Britain must be spent, now to be called degenerate, because they have ceased to have some of the instincts and capacities of the wild bull, the wild sheep, the wild horse? They have not parted with one qualification without acquiring another. They have gained as well as lost. It is not degeneracy which—whether wittingly brought about or not—fits creatures for the lives they have actually to lead. Our men are breeding what they know they want; if not what theorists choose to tell them they *ought* to aim at breeding. I think our breeders likely to be the better informed of the two.

MR. FITZ (severely): The Professor says (p. 121), "This is our system. We breed from young immature sires or dams, often both. We shut the progeny up in sheds summer and winter. We cram them with rich food, load them with fat to an uncomfortable extent, &c., and—

MR. H. (interrupting): Why, God bless the man! He sees no difference between the way we manage the calves to be made steers which we mean for fattening, and those we mean to keep on for breeding. If he doesn't make a distinction, we do. He never lived a twelve-month round on a breeding farm in his life. There isn't a farmer in England who manages *all* his herd or flock as the Professor says. No doubt we do couple sires and dams earlier than we were used; but then we keep the young parents well and warm, and they are as forward at the age we couple them as they used to be at a later date. The Professor seems to think all our calves and lambs and foals are *FIRST* calves, first lambs, first foals. Doesn't he know dams breed more than once; and that we don't expect firstlings to ripen quickest? Let anybody ask how many *Hereford* winners have been by *Horace*, *Lord Wilton*, or *Grove 3rd*? How many *Devon* by *Nelson*, how many *Sussex* by *Goldsmith*, how many *Shorthorns* by *Alphonso* or *Cardinal*—*i.e.*, all by old bulls? He will find that almost always the progeny of mature parents is selected to run for a prize in a young class; and that the ordinary stock of the farm are treated quite differently from those which—for one or other reason, some good, some bad, some indifferent—are put into training for a show.

MR. EDITOR: I think, *Mr. Homespun*, you cannot expect to have your experience set against the Professor's, who is admitted to be the very greatest authority on his subject in Great Britain!

MR. H.: Experience! And, pray, why not! What is his against mine? What is all science but the classified results of practice? He has read a hundred books, and talked a thousand times to people who did not venture to tell him when they disagreed. I am a farmer, born on a farm, have lived there all my life, except when I take these outings, Christmas and Midsummer. I, and my father before me, have managed to make pretty nearly every calf, or lamb, or foal, into a fat beast, or sheep, or fine colt. People who come to buy them come again, because their bargains turn out well. If I make a mistake in management, my calves or lambs die, or fall away; and I am quickly corrected, and have to hark back till I get to sound practice again. Is the Professor guarded against error in the same way? Do you think I am going to forget the lessons my own experience has taught me to accept anything which I may find in print!

MR. U.: Upon my word, good neighbour, I never heard you say half so much before; and, as an outsider (for, as you know, I am now quite out of business), I am disposed to say, "Bravo, *Homespun*." Like you, I have read with surprise some of the statements which have been recently issued as the lessons of science. The number of men who breed, and go to professed bull, tup, and stallion breeders for their sires—instead of rearing their own—increases every day. They would not do this, did they not find it answer. And all bull, tup, and stallion-breeders feed high, treat artificially, and breed from parents themselves artificially bred and richly fed, so that not merely show animals, but all, or nearly all the commercial beasts and sheep are bred in the way the professor denounces.

MR. FITZ: No doubt this is so; but, then, you know, *Carlyle* has said, "In this country there are 30,000,000 people, mostly fools."

MR. UPRIGHT: Yes, I know that he said that; and I know, too, that he said—when some of the very greatest men in connection with Natural Science, were, as he thought,

* Judge, to intelligent bumpkin in witness box: "You say, my man, that defendant 'lives upright'; what do you mean by that?"

Intelligent bumpkin: "Why, my Lord, I mean he has something nice of his own coming in regular every quarter; and he needn't care nothing for nobody."

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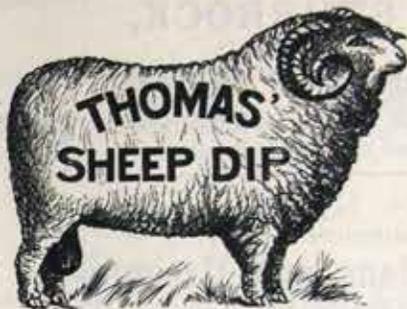
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SOUTH MELBOURNE.

seedlings I raised from these the finest figs.

In regard to the advisability of importing the Cynips or insect that fertilises the figs, I am told by a prominent entomologist of San Francisco that numerous other insects also visit the figs, and that we here in California have several varieties of insects which, so to say, would only be too happy to invest in our figs, provided we only are mutually accommodating to punish them with the Capri fig.

To sum up my ideas of the caprification: I believe that the same is not practiced solely for the purpose of fertilising the cultivated figs, or preventing them from falling off, as we have proved that we, without this process, here in California produce as fine, and perhaps larger, crops—but also, and perhaps principally to hasten the development of the figs, perhaps for the purpose of getting them dried and marketed before the rainy season commences. If this should be so, then the caprification should correspond with the methods used by the French—the oiling and puncturing methods described above, which we know are solely practiced to hasten the maturity of the fruit.

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INOCULATOR AND LYMPH sent on receipt of 20s., With Directions for Use.

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78, 79, 80, 81, 82, 83, 84, and 85. Also, THREE FIRST AWARDS
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NOTICE.—Referring to above, D. WHITE desires to inform his numerous Customers and the Public
generally that he has secured and completed EXTENSIVE ADDITIONS TO HIS COACH FACTORY,
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The new premises are in Stewart Street, immediately opposite the present Factory.
Patentee of the Improved Carriage and Buggy Hood Apparatus, for raising or lowering the Hood from the
inside. Every description of Vehicle built from the best imported Materials and Well-seasoned Timber.

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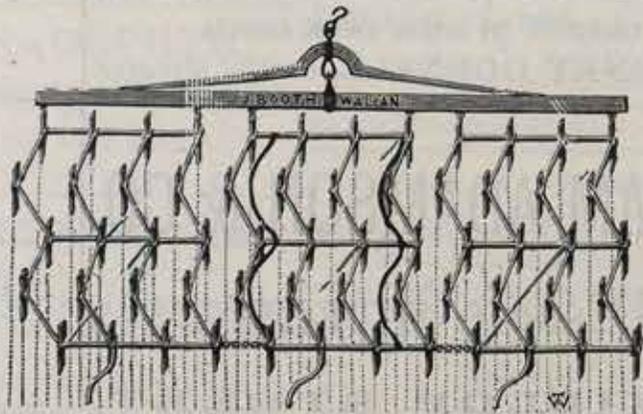
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cutting its own ground, and also reduces the draught to a minimum. During the season 1884
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secured 12 first and 2 second prizes out of 15 shows, thus proving their superiority.

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R. SMITH'S

PATENT

Giant Complete Harvester.

SOLE MANUFACTURERS:

HUMBLE & NICHOLSON,
VULCAN FOUNDRY, GEELONG.



The Patentee having thoroughly tested the efficiency of this Machine in the field for himself, has every confidence in recommending it to farmers generally, or those needing the use of such a Machine, as it will greatly expedite their harvesting operations, and effect a very great saving, as the following Testimonials will substantiate.

The Patentee has made arrangements with the Makers to manufacture a limited number for the incoming Season, so parties requiring such a Machine should apply early.

Orders may be sent to the Patentee, MR. R. SMITH, Beaufort, or to the Makers direct at the FOUNDRY.

TESTIMONIALS.

To MR. RUPERT SMITH.

Beaufort, February 3rd, 1885.

Sir—Having seen your Harvester at work on Mr. Sutherland's farm at Tatyoon, I must say that it far exceeded my expectations in the work it did in a crop so much broken down as it was, and you ought, in my opinion, to have got the prize; and no doubt would have done, if the owner of the other Machine from Adelaide had been there. Your Machine did its work in first-rate style, the sample being first-class. It will recommend itself.—Yours faithfully,

GEO. TOPPER, Farmer.

MR. R. SMITH.

Stock Yard Hill, June 24th, 1885.

Sir—In answer to your letter as to my opinion of your Harvester, I saw it working at C. Sutherland's, Esq., Tatyoon, where the crop was very tangled and blown about with weather, and very damp, but it threshed very clean and made beautiful samples. Mr. Sutherland was very pleased with the work it done; it worked much better than Mr. Bowman's Adelaide Harvester, as worked along side. The farmers that saw it spoke very highly of it. I think it the best labour saving Harvester out.—I am, yours obediently,

GEORGE EXELL.

MR. RUPERT SMITH.

Stock Yard Hill, April 20th, 1885.

Sir—I have much pleasure in testifying to the efficiency of your complete Harvester which I saw at work this season, and can say it did its work splendidly, taking it clean off the ground and bagging it ready for market; and in my opinion far superior to the South Australian Machine.—I am, yours respectfully,

ROBERT KIRKPATRICK, Farmer,
Stock Yard Hill.

MR. RUPERT SMITH, Beaufort.

Mount Jeffcott, January 29th, 1885.

Sir—In answer to your inquiry, how we are getting on with your Giant Complete Harvester, we beg to state that the Machine is doing its work quite to our satisfaction, it doing as much as two of our Strippers with four horses and two men, making a sample quite equal to our Winnowers. It is very light in draft, having no side drag, although it is so wide, 8 feet. We have taken off over 150 acres since its return from the Government trial, in a dirty low crop; it more than exceeds our expectations, separating large quantities of wild oats and other foreign matter. We can highly recommend it to any farmer who wants to get his crop off clean and quick.—Remaining, yours truly

TONKIN BROTHERS, Farmers, Mount Jeffcott.

MEMO. TO MR. RUPERT SMITH.

January 26th, 1885.

Sir—I have great pleasure in testifying to the general excellence of the work done by your improved Harvester, as worked upon the farm of Messrs. Tenkin Brothers (our neighbors.) In my opinion the crop was taken off quite as clean as with the ordinary Stripper, and the sample as shown in the bags was superior to many turned out by the usual method. The lightness of draft is a noticeable feature in your Machine; four horses threshing and cleaning from so wide a comb is, I consider, greatly in its favor. I have no hesitation in saying that your Giant Complete Harvester will shortly supersede all the old style in this district.—Yours, &c.,

F. DUE, Farmer,
Jeffcott.

The Grange, Tatyoon, February 21st, 1885

This is to certify that Mr. Rupert Smith worked his combined Harvester here to-day, in conjunction with Mr. W. Bowman's South Australian combined Harvester.

Mr. Smith's Machine made first-class work, was drawn by four horses; although it has a comb of 9 feet in width, and carried four bags to the end of the field, made an excellent sample of grain. Another feature of the Machine is that all unthreshed heads are returned to the drum or beaters, and were threshed out, a feature in the Machine not possessed by the Bowman Machine. Altogether I consider Mr. Smith's a perfect combined Harvester, and would be an acquisition on all large farms. I understand Mr. Smith is prepared to fit up any Stripper now in use with his improvements.

C. F. SUTHERLAND.

To MR. RUPERT SMITH.

Middle Creek, July 14th, 1885.

Sir—In answer to your enquiry asking my opinion of your Giant Complete Harvester, which I saw working at Tatyoon on Mr. Sutherland's farm last harvest, I may state that I was highly pleased with the work it did, making a splendid sample; and it did the stripping well considering the condition of the crop, being very much broken down. There can be no doubt that it is a great saving of labour, and must prove a great boon to the farmers in the up-country districts; your Machine, compared with Bowman's, is far in advance every way and I think there is a great future of success for your invention.

Remaining yours faithfully,
G. DAVIS.

FULTON'S Improved Patent Portable Wire Strainer.

AWARDS, 1883-4.

Highly Commended—Canterbury, New Zealand, 1883.
 Silver Medal—Tairi Agricultural Society, Mosgiel, New Zealand, 1883.
 First-class Certificate of Merit—Brisbane, 1884.
 Special Prize—Mudgee, New South Wales, 1884.
 Commended—National Agricultural Society of Victoria, Melbourne, 1884.
 Highly Recommended—Wangaratta, 1884.
 First Prize—Grand National Show, Echuca, 1884; Boort, 1884; Benalla, 1884; Nhill, 1884; Inglewood, 1884; Warrnambool, 1884; Tatura, 1884.
 Special Prize—Geelong 1884; Rochester, 1884; Sandhurst, 1884; Ballarat, 1884;

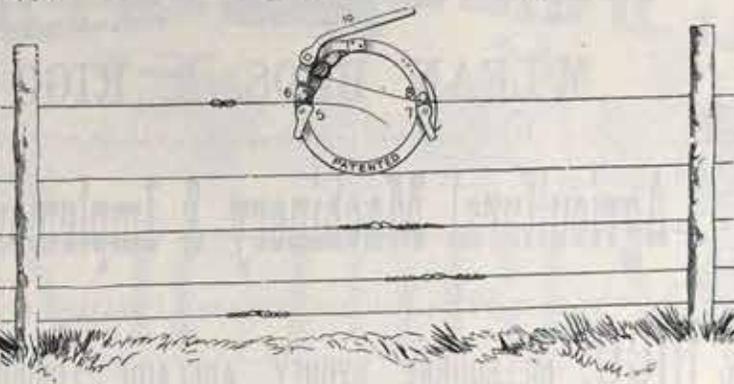


Diagram showing the Application of the Machine.

Rutherglen, 1884; Stawell, 1884; Numurkah, 1884; Clunes, 1884; Kyneton, 1884.
 Certificate of Merit—Shepparton, 1884.

AWARDS, 1885.

First Prize—Deniliquin, July 23rd; Horsham, Aug. 5th and 9th; Dimboola, Aug. 12th; Kerang, Aug. 27th; Donald, Sept. 2nd and 3rd; Yarrawonga, 3rd.
 Honourable Mention—Chariton, Sept. 16th.
 First Prize—Echuca, Sept. 17th and 18th; Shepparton, Sept. 22nd and 23rd; St. Arnaud, Sept. 23rd.
 Special Prize—Rochester, Sept. 30th.
 First Prize—Talbot, Grand National, Oct. 8th and 9th; Ballarat Oct. 14th, 15th and 16th.

THIS MACHINE IS MADE ENTIRELY OF STEEL, AND WEIGHS UNDER 5lbs.

The Advantages claimed for this Machine are:—The ease with which a broken wire can be strained and rejoined at the break, thus saving the usual loss of time in having to go to the straining post to untie the wire; and that it can be used in the middle of a panel without any post to strain against.

DIRECTIONS FOR WORKING MACHINE.

Standing with your left side to the fence, the left foot about 18 inches in front of the right, with the left hand grasp the Strainer between the windlass and grip (5 and 6). Catch the left-hand end of the wire in grip (5 and 6), about 9 inches from the end; this done, place the machine against the left thigh so as to keep the jaw (5) from opening (still holding as directed with the left hand). Now take the right-hand end of the wire and pass it under (8) and into the hole in the windlass. With the handle in the right hand wind up the slack wire by turning the windlass (do not turn the handle right round, but every time it touches the body take a fresh grip. As each half-turn is complete, with the left hand press the grip (7) against the wire, so as to hold all the slack brought up by the windlass. When the wire is tight enough, unwind the windlass, cut off the surplus wire, leaving about 9 inches for knotting, by taking the two loose ends and rolling them together by means of two small keys; this done, remove the Strainer by striking the tail of the left-hand grip with the handle.

ALSO,

FULTON'S NEW IMPROVED WIRE-CUTTING SNIPS.

JAMES M'EWAN & Co., SOLE AGENTS,

General Importers of All Classes of Ironmongery & Station Supplies, Galvanized Iron, Fencing Wire, Machinery, &c.

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Saddlers by Appointment to His Excellency Sir H. B. Loch, K.C.B.

MACHINE BELTING.

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Saddlers & Tanners,

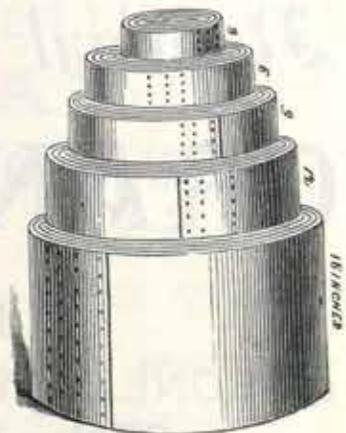
25 BOURKE STREET WEST.

Contractors for Machine Belting, Saddlery, &c., to the Government, War & Naval Departments of Victoria.

Prices and Samples posted free on application.



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Machinery supplied on Liberal Terms of Time-payment.



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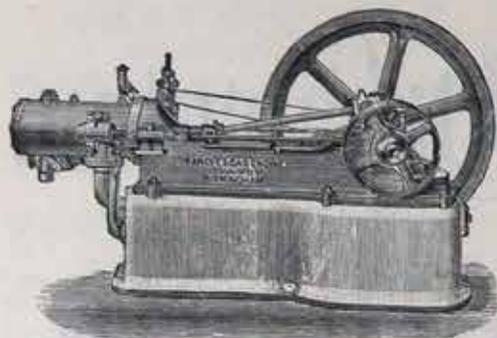
Importers of AGRICULTURAL, MILLING, MINING, SAWING, PUMPING, and WOOD-WORKING MACHINERY.

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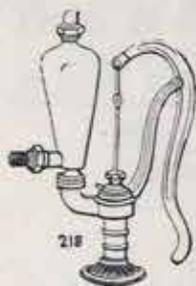
ENGINEERS AND IMPORTERS OF STEAM ENGINES,

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Gas Engines	Hydraulic Machinery	Crab Winches
Patent Lifting Blocks	Tangyes Steam Pumps	Saw Benches
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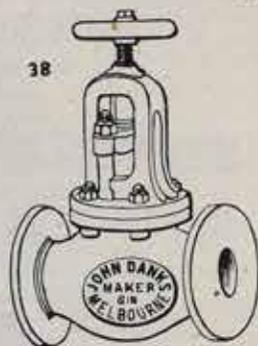
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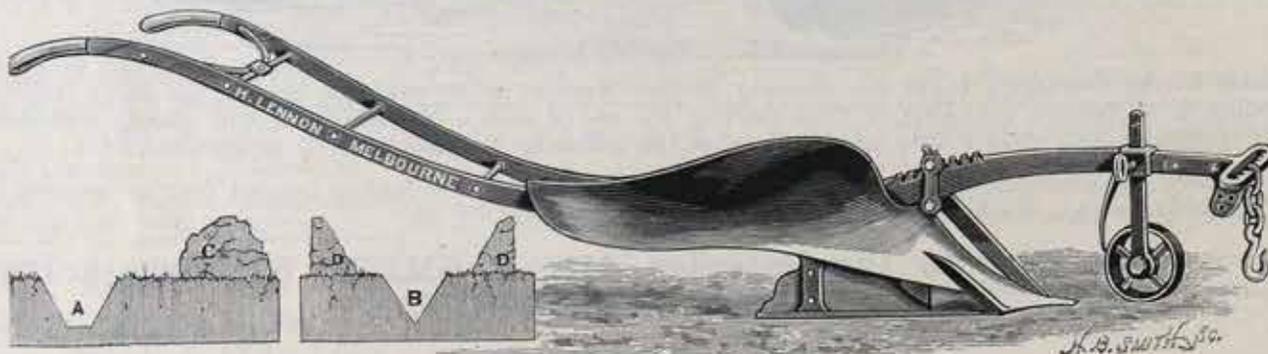
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PUMPS OF EVERY DESCRIPTION,

Fire Engines, Baths, Sanitary Ware, Gas Fittings,
Iron, Lead, and Compo. Pipes, Water Supply Goods.



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HUGH LENNON'S

World-famed Agricultural Field Implements and Harvesting Machinery

Have gained the HIGHEST AWARDS of MERIT ever given to Implements, after the most exhausting Field Trials.

There is no district in Victoria, according to public judgment in the hardest fought fields, that his celebrated Implements have not carried off First Honors for years and years in succession, from Gippsland to the South Australian border, and from the Murray to the South Pacific Ocean, New South Wales, Queensland and Tasmania for the past 20 years.

H. L. has always on hand samples of his

Single Furrow Ploughs, of all Sizes
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Squatters' Ploughs, for stations and dam sinking.

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Roadmaking Ploughs, for contractors and excavators
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2, 3 & 4 H.P.

Extra Large Firebox and
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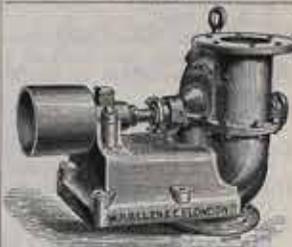
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Larger Sizes Imported Specially
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Have in stock or to arrive shortly, all kinds of

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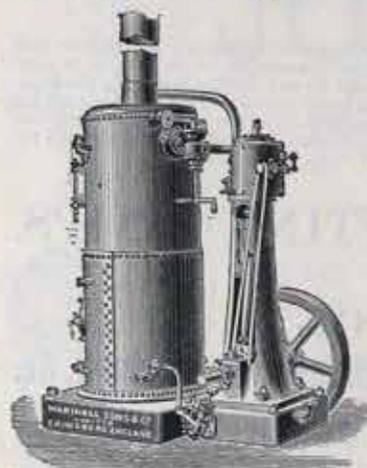
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Novelties in every description of Agricultural
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GRAND SPRING SHOW

TO BE HELD AT THE GROUNDS,

FLEMINGTON,

WEDNESDAY, THURSDAY, FRIDAY, AND SATURDAY,
25th, 26th, 27th, and 28th August, 1886.

MEMBER'S SUBSCRIPTION, £1 PER ANNUM.

THOMAS PATTERSON, Secretary.

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MELBOURNE SPORTS DEPÔT
62 ELIZABETH STREET, 64
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Send for Catalogue of Cricket Material for the ensuing Season.

H. STEWART BALE, Manager.

NATIONAL AGRICULTURAL SOCIETY.



Vol. II.—No. 14. [Reprinted as a Newspaper.]

MELBOURNE, SEPTEMBER 17TH, 1886.

GRATIS.

"If 'twere done when 't's a done,
Then 'twere well done 'twere quickly done."

CATERER

CHARLES D. STRAKER,
Three Crowns Hotel,
WEST MELBOURNE.

Caterer for the Victorian Racing Club, The National Agricultural Society of Victoria, and the Victorian Coursing Club.

Orders for Banquets, Fete, Dejeuners, Weddings, Suppers, on the Shortest Notice in Town or Country.

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Wholesale and Retail Tinsmith and Ironworker,
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Travellers' Scarborough & Deed Boxes, Baths, Tanks & Washing Coppers, Cheese Tubs & Vats, Dairy Utensils, Colonial Ovens.

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Opposite the Meat Market, Melbourne.

Churns, Cheese Vats, and all kinds of Dairy Utensils on hand and made to order. Tallow Casks, Spirit Kegs, etc.

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Every description of Agricultural Machinery and Implements, by all the best Melbourne Manufacturers and Importers on sale on favorable terms.

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Advances on Grain at Current Rates of Interest.
STORAGE ON VERY FAVORABLE TERMS.

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£60,000 to Lend on Freehold or Leasehold Security

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The Most Popular RESTAURANT in the CITY of MELBOURNE.

Meals at all hours from 6.30 a.m. to 11.30 p.m.
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Accommodation for 500. Special Dinners.
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FIRST-CLASS ACCOMMODATION FOR COUNTRY AND INTERCOLONIAL VISITORS.

Wines and Spirits of the Finest Quality. Smoking, Reading, and Billiard Rooms.

Luncheon at 1 p.m. Night Porter.

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BY ROYAL LETTERS PATENT.



(NON-POISONOUS.)

Why send Ticky Wool to market when Wool dipped with this Fluid will realise fully 2d. per lb. more in the market.

It is the Best, Cheapest, and Safest Dip in the Colonies.

PRICE—5/6 per gallon in 40 gallon casks, and 6/- in drums. Orders under 5 gallons, 1/- per gallon extra.

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THE NEW HIGH ARM
DAVIS
SEWING MACHINE.

GOLD MEDALS,

PHILADELPHIA, SYDNEY, MELBOURNE, ADELAIDE, BRISBANE, & LONDON.

SURPASSES ALL OTHERS. A UNIVERSAL FAVORITE.

UNEQUALLED FOR RANGE OF WORK AND EASE OF MANAGEMENT.

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J. BARTRAM & SON,
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Are cash Buyers of all Dairy Produce at highest market rates. Consignments received.

Account Sales promptly rendered. Advances if required.

Also, Sole Agents for
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The Greatest of all Dairy Improvements. From 15 to 20 per cent more and better butter. Highest market value. Great saving in space, time, labor and the number of utensils. The construction is extremely simple, and requires no mechanical knowledge to keep in working order. The cost saved in less than a year. Can be driven by horse gear. Full particulars post free on application.



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SHOW ROOMS AND MANUFACTORY:

36, 38 & 40 BRUNSWICK STREET, FITZROY.

The Largest Manufacturers of Fine Light Vehicles in Australia.

We sell the Cheapest, Lightest, Strongest, Most Durable and Convenient Buggy in the Market.

A Large Quantity of thoroughly seasoned Second Growth American Ash and Hickory always kept in stock.



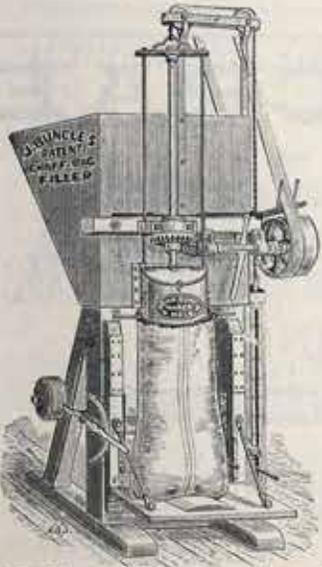
Every vehicle we manufacture is fully guaranteed to be as represented, material used throughout is the finest procurable, and in every essential point it is unexcelled by even the highest priced vehicles.

Any conceivable style of Vehicle built to order at shortest notice.

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N.B.—The Trade supplied on the Most Liberal Terms.

M. E. GILBERT, Manager.



BUNCLE'S Patent Chaff Bag Filler.

JOHN BUNCLE, in stating what is well known, viz., the great competition in the Hay, Corn, and Chaff Trade, begs at the same time to call attention to his endeavour to lighten the toil and increase the profits from such a business, by designing and manufacturing a machine for the above purpose, and one which cannot be approached by any other maker at present, or recommended to equal in **Simplicity, Durability, and thorough Adaptability and Cheapness** combined as in the above Machine. The **BAG FILLERS** are manufactured complete, ready to be sent to wherever ordered or in any of the colonies, either to fix in stores in connection with the fixed Chaffcutters, or to be attached to his well-known Travelling Chaffcutters previously supplied, and now supplied either with

or without Baggers. A few attempts have been made by some to supply such a want, but probably not having a theoretical as well as a practical knowledge of machines, have not been able to reduce the complicated movements in their machines, and which are perfectly unnecessary—as witness the Unique Simplicity and correctness in design, and the admirable working of **BUNCLE'S PATENT BAG FILLER** compared with the few others tried at work.

For the information and convenience of customers, a machine is kept constantly set up ready to show at work in **BUNCLE'S PARKSIDE IRONWORKS**, and many customers have witnessed **80 to 90 lbs.** of Chaff put in a bag in 15 seconds!!! which, after making allowances for time removing the full bag and replacing an empty one, would easily on an average keep **Four of Buncle's No. 1 Chaffcutters**—well, if there is any doubt, say Three Machines clear of all the Chaff they cut (medium length.) Of course the Machines are arranged to put in as light weight as you like, or you can fill up and burst all your Bags—to pieces. As a trade requirement (in addition to filling bags) the necessity for a **Mixing Machine** is a long felt want, the laborious and unsatisfactory way at present adopted cannot much longer be endured, and there is no necessity for it!! as **J. Buncle** can arrange to "Blend" the worst and the best samples "To a Hair" at the least possible expense with the best results.

The season is now coming on when all those who intend having the latest improved Machines should forward their orders as early as possible, to prevent disappointment in the day of their need.

J. Buncle's Machines have, as usual, been awarded First Prize at all the leading shows wherever he exhibited last year (1885), and the many improvements introduced and constantly copied by other makers, is the best proof of the value of the continued consideration in all that affects the profits and welfare of his customers.

Chaffcutters with 14-in. wide mouthpieces and Newest Designs, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

Sirs and Gentlemen, yours respectfully,

Parkside Iron Works, North Melbourne.

Catalogues Post Free on Application.

JOHN BUNCLE.

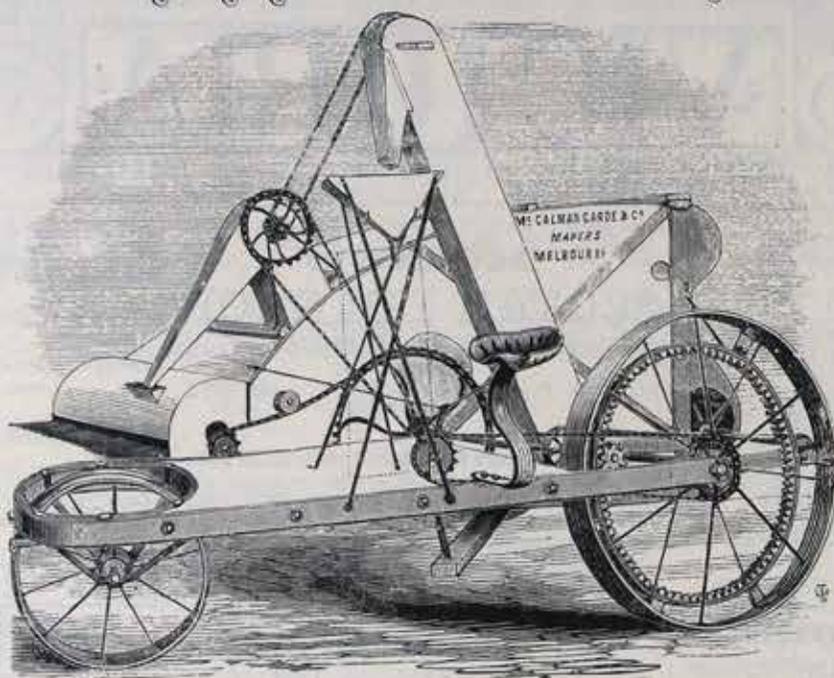
MCCALMAN, GARDE & CO.

MANUFACTURERS OF ALL KINDS OF

AGRICULTURAL IMPLEMENTS,

Beg to inform the Farming Community that they are the SOLE MAKERS of the

MCKAY'S PATENT COMBINED HARVESTER.



All Kinds of Implements kept in Stock to select from at their Manufactory.

BLACKWOOD STREET, NORTH MELBOURNE.

METEOROLOGY.

Farmer's Barometers, with Thermometers,
Guaranteed Instrument, 25/-

RAIN GAUGES, from 15s
Standard Instruments of all Kinds.

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Watchmaker, Jeweller and
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GAUNT'S ENGLISH LEVER WATCHES still hold their ground against all competitors as the most durable and trustworthy timekeepers in the world. The favorable opinion formed of Gaunt's watches by the Australian public has been endorsed by the jurors of the several Exhibitions in which he has competed, and his last crowning success, the obtaining HIGHEST AWARD FOR HOROLOGY at the Melbourne International Exhibition, should convince the most dubious that his watches cannot be excelled. Seven Gold and other Medals. Price from £6 6s. to £10 10s. Get the opinion of any of your friends who has one of my watches.

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LARGEST

Furnishing Warehouse

IN AUSTRALIA.

Furniture Showrooms—

16, 18, 20, 22, 24, 26, 28, 30, 32 POST OFFICE PLACE,

USED THROUGHOUT THE WORLD.

McDOUGALL'S SHEEP DIP.

PERFECT SAFETY, NON-POISONOUS.

A Dip with 20 Years' Record and Second to None in the Market.

As certain as arsenic in its effects in exterminating all insects, and without its danger. It is the only true specific for scab. Finely stimulates the growth of Wool.

Trial Once Made, Always Used.

PRICE, 5/6 PER GALLON, 5 GALLON DRUMS.

Direct Agents—

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NORMANBY BUILDINGS,

CHANCERY LANE MELBOURNE.

PRICE WILLIAMS,

FRANKLIN STREET, WEST MELBOURNE,

MANUFACTURER OF THE WELL-KNOWN

Williams' Rack & Pinion Wool Press

Rack and Gear Steel Press for the use of large stations,
Lever & Chain Press, with Folding Top Box, for the use of smaller stations
Lever and Chain Farmer's & Selector's Press. Price, £22 10s.

As the season for this latter kind is now approaching, those requiring them should lose no time in sending their orders. Owing to the general satisfaction given by those supplied for last season, orders are now freely coming in, and a large demand is looked for. The following is a fair sample of a large number of Testimonials to hand for those supplied last season:—

MR. PRICE WILLIAMS—
Dear Sir,—I have much pleasure in informing you that the Farmer's Wool Press I purchased from you last October, gave me every satisfaction. We turned out very compact small bales, about 3½ cwt., but could have them heavier if we wished with once down. By what the Wool Brokers tell me, they would clear themselves in two seasons to anyone having twelve bales. Since done with the Wool, I have had it in constant use as a Cheese Press, and I reckon it worth half its cost for that. We have weights on the levers. Any number of Cheeses can be put in at once. It would make a good Press for Hay or Straw, and for Grapes or Apples it is just the thing. I can highly recommend it as a most useful, substantial, and cheap article.—Yours truly,
HUGH GORDON.

McDougall's Sheep Dip

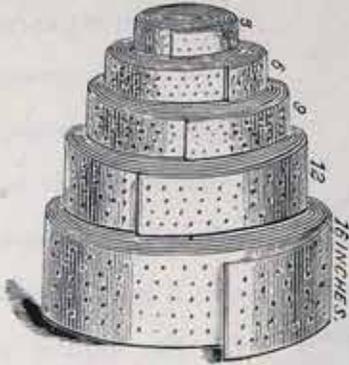
McDougall's Sheep Dip

GOLD MEDAL.

GOLD MEDAL.



DOUBLE OAK-TANNED
WELL-STRETCHED
MACHINE BELTING.



FRANK VIAL,
"UNIVERSAL"
LEATHER BELT FACTORY,
MACAULAY ROAD,

HOTHAM,

And at 59 MAIR STREET, BALLARAT.

TELEPHONE 659.

MANUFACTURERS OF

MACHINE BELTING

On the Most Approved

CONTINENTAL AND AMERICAN PRINCIPLES.

The "UNIVERSAL" BELTS are acknowledged by all who have used them to be the Best in the Market.

Special Lists for BELTS for IRRIGATION PURPOSES.

A Large Stock of the "PREMIER" BELT LUBRICANT, and Well-Seasoned BELT LACES, kept in Stock.

TESTIMONIAL.—[COPY.]

UNION FLOUR MILLS,
Brunswick-street, Fitzroy,
March 17th, 1886.

Messrs. Frank Vial & Co.,
Macaulay Road, Hotham.

Gentlemen,—In reply to your enquiry respecting the (23") twenty-three inch double belt supplied by you to ourselves, we beg to state we have been working it for a period of seven months, and we find it to be all we could desire, as also is the other belting which we had from you.

We therefore feel great pleasure in recommending your belting to anyone requiring the same.

We are, Gentlemen, yours truly,
(Signed) W. S. KIMPTON & SONS.

Other Testimonials received too numerous to print, which, with Price Lists, can be had on application

**REAPER & BINDERS**

WON
EVERY FIELD TRIAL

IN VICTORIA

DURING SEASON

1885-1886,

IN WHICH
THEY HAVE
COMPETED.



HORNSBY

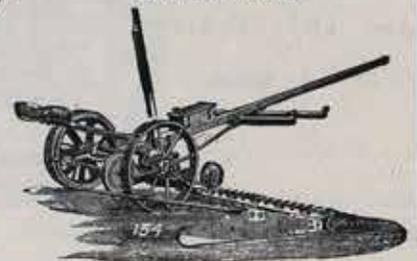
**MOWERS**

AND

REAPERS.

PARACCN, CHALLENGE
DIAMOND, ENCLOSED GEAR

WINNERS OF THE ROYAL AGRICULTURAL
SOCIETY'S PRIZES.



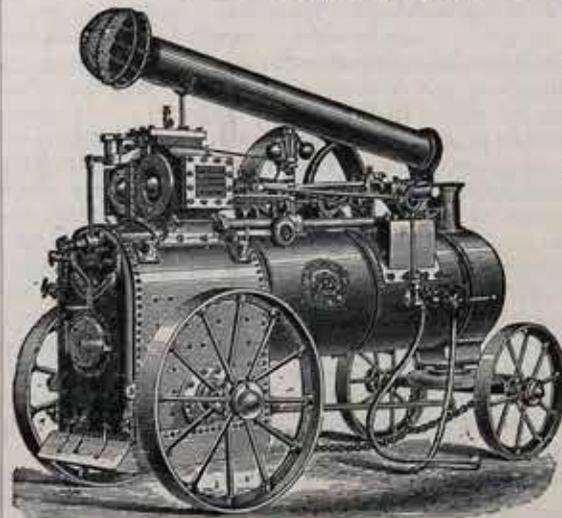
I. G. FOSTER, SOLE AGENT FOR VICTORIA,
4 A'BECKET STREET, MELBOURNE.

AIRD & McCRAE*Stock & Station Agents,***MACHINERY MERCHANTS,**

ROBB'S BUILDINGS,

COLLINS STREET WEST, MELBOURNE.

AGENTS FOR MESSRS. R. GARRETT & SONS,
Agricultural Engineers.



Compound Engines

Portable Engines

Semi-Portable or Fixed Engines

From 20 to 100 I.H.P.

Threshing Machines

Saw Benches

Pumps

Seed Drills, &c.

Messrs. GARRETT & SONS' ENGINES afford marvellous economy of fuel and water, and enormous power in proportion to their dimensions, and are strongly recommended in preference to the ordinary Double Cylinder.

AIRD & McCRAE, as Stock and Station Agents and Machinery Merchants, are prepared to supply Plant for Irrigation Works, and when necessary, obtain services of Eminent Engineers for the purpose of taking levels and advising generally.

DISPERSION of the BARBISTON HERD of AYRSHIRES.

RICHARD GIBSON & CO.

Have received instructions from the Trustees, Executors' and Agency Company Limited, as executors under the will of the late Richard Gibson, to SELL by AUCTION, without any reserve, at the farm, Tullamarine, on FRIDAY, the 6th OCTOBER next, immediately after the sale of Barbiston estate,

The whole of the justly celebrated

HERD OF PURE AYRSHIRES,

Consisting of

25 head of Imported Cows,
Heifers, Stud Bulls,
And their progeny.

This collection comprises the most remarkable specimens of their breed which have ever been imported into Australia, being selections out of the famous Drumlanrig herd, owned by the Duke of Buccleugh, K.G., some of the dams having been purchased by the late proprietor at great cost, viz., as high as 250 guineas each, and the only sires used have been either imported or descended from the Duke's stock. Some of the cattle now to be sold have never been beaten, either in the show yards of England or Australia, and the young stock bid fair to rival the distinction their ancestors have achieved, and from whom they inherit all the chief characteristics of this the leading dairy breed of stock. They are uniform in type, robust in constitution, and are deep milkers, with a long and rich flow.

It is impossible to overrate the impetus the dispersion of this grand herd should give to the breeding of Ayrshire cattle, and the sale should attract an amount of attention and competition amongst the breeders of these favourite dairy cattle such as has not been experienced in these colonies before. The whole of the above cattle are entered in the Ayrshire Herd Book of Scotland.

Catalogues can be obtained on application to the agents, 66 Queen-street, Melbourne.

S A L E

OF

A FIRST CLASS STUD FARM,

Horses, Household Furniture, Farming Plant, &c.

RICHARD GIBSON & CO.

have received instructions from the Trustees, Executors' and Agency Company Limited, as Executors under the will of the late Richard Gibson, to

Sell by Auction, on Friday, the 1st October next, AT TWELVE O'CLOCK SHARP,

The Stud Farm BARBISTON, consisting of 164 Acres, near TULLAMARINE,

having a frontage of a mile and a quarter to the Deep Creek, a permanent stream.

This valuable little estate is only 14 miles from Melbourne, and has been used only for the breeding of pure Ayrshire stud cattle by the late Richard Gibson, who spared no expense to make it a comfortable and model farm. It is all well fenced and subdivided into small paddocks, the greater portion being rich alluvial soil of limestone formation of the quickest fattening description, and would yield immense crops, whilst the flats and hillside afford shelter for stock. It is abundantly watered, for, in addition to the permanent supply of the creek, there are tanks in each paddock, besides open sheds for shelter. The homestead, which is picturesquely situated on the slopes, commands a view of the surrounding scenery, and is in good order. All the outbuildings, such as stables, coachhouse, men's rooms, and an extensive milking shed for cows, are of recent construction, and make the property most adaptable for a stud or dairy farm.

After the land, will be sold

The furniture, which is most complete and good, and comprises everything that is useful in a country cottage, including Piano

Farming Implements, Dairy Utensils, &c.

Horse Stock includes splendid buggy and light harness horses, Also,

Prize Poultry, about 80 head of the famous American white Leghorns, white Turkeys, white Peafowls, and English blue Rock Pigeons, all from imported stock.

GREAT SUBDIVISIONAL SALE AND LEASE OF A PORTION OF

Messrs. ROBERTSON BROS' ESTATE

At COLAC.

RICHARD GIBSON & CO.

have received instructions from Messrs. George P. and James Robertson (of Messrs. Robertson Bros., Colac), to Sell by Auction, at the Estate, about the end of October,

11,200 ACRES

OF THE RICHEST AGRICULTURAL AND GRAZING LAND IN VICTORIA,

5,770 ACRES of which will be sold in suitable lots on the most liberal terms.

And

5,430, will be let by auction on a lease of 3 years for agricultural, and 4 years for grazing purposes under most liberal conditions.

This is without exception the best block of Agricultural and Grazing Land in Australia; the soil being of a rich brown chocolate description, with a formation of volcanic ashes and lime exactly similar to that of the far famed Warrnambool Town Hill, Mt. Gambier and Laura country, which has proved the best Potato Land in the Colony, and for grazing purposes it is unsurpassed.

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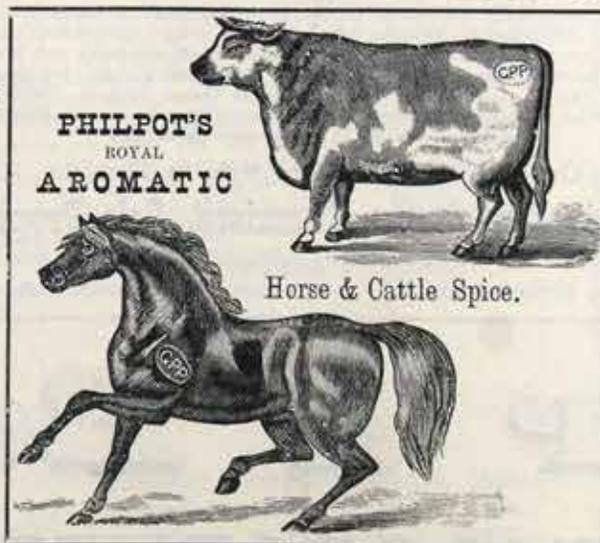
Plans are now being prepared, and the property will be open for inspection after the 1st October next.

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Proved and Warranted to be
Effectual for giving Health,
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Sheep, Pigs, Dogs, and
POULTRY,
and Warranted to
Effectually Destroy Worms
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Condition and Cattle Fat-
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One Penny per day.
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the most Extensive Breeders.

THIS FOOD possesses extraordinary tonic, condition, alterative and feeding properties, far surpassing that of any Artificial Food yet discovered. It increases the appetite, assists digestion, assures thorough assimilation of food, enables the animal to eat provender of an inferior quality, which would otherwise be considered useless, and, by mildly stimulating the action of the Liver and Kidneys, imparts to the coats of the Horses a fine healthy and glossy appearance. For Worms in Horses, Urinary Complaints, Swollen Legs, Skin Diseases and Impurities of the Blood, this FOOD is a certain remedy, and is a valuable addition to the ordinary food of aged horses whose digestive powers are impaired. The value of this FOOD, which is an important discovery, appears evident from the fact that the best prevention to contagious or other diseases is to keep the animal in good health and condition, which is more readily and certainly effected by giving the ROYAL AROMATIC HORSE AND CATTLE FOOD than by any other means. One great advantage in giving this FOOD is that no alteration is required in the work of Horses or care of Cattle.

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1885 Prize Lists.

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imp.), by Rompe, by Brockenhurst Rally, ex Satire.

MELBOURNE RAGE (Brother to Melbourne Joker).
Winner of three Prizes, Exhibition Building, 1885.

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SHELFORD RUBY (by Decker, ex Shelford Fury).

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Life Governor's Do.	-	£24.

The privilege of membership consists of
power to vote at the Election of all Office-
bearers, of free admission to the Library,
Reading Room, Lectures; and, with two
ladies, to the Society's Exhibitions and Grounds
at all times.

A copy of this Journal, which is published
monthly (on the Friday after the Council
Meeting), is also forwarded to each member.

Members' Tickets may be obtained on
application to the Secretary at the Office, or to
MR. JOHN HEDRICK, the Collector.

THOMAS PATTERSON,

SECRETARY.

Kirk's Bazaar, Melbourne.

NATIONAL

Agricultural Society of Victoria.

Shorthorn Derby Sweepstakes, 1889.	
Hereford do do 1889.	
Ayrshire do do 1889.	
Jersey (late Alderney) do do 1889.	

A Sweepstakes of £1 each (10s. at time of nomination,
and 10s. at date of general entry for Show), with
£5 added in each case for Heifers calved between 1st
July, 1886, and 1st July, 1887, to be divided and
awarded as 1st, 2nd, and 3rd Prizes, for three-year
olds, at the Society's Show, 1889.

Nomination of Calves of each breed respectively
will be received on payment of a nomination fee of
10s. each. Calves to be nominated within one month
of date of birth. Nominators to fully describe the
color of each calf entered, and to state the name of
the sire, dam, and sire of dam, together with the
date of calving. Entry forms on application.

THOMAS PATTERSON,

Kirk's Bazaar, Melbourne.

SECRETARY.

NATIONAL
Agricultural Society of Victoria.

Cash Prizes awarded at the late Show are
now payable on application. Certificates of
Merit are also available.

THOMAS PATTERSON,

Secretary.

Notices.

All communications for the Editor to be
addressed to the Society's Office, Kirk's Bazaar,
Bourke Street West, Melbourne.

Business communications to the Publishers,
Somerset Place, 6 Little Bourke Street West.

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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
requested to forward to the editor the dates on
which their respective exhibitions will be held,
also copies of their prize schedules as soon as
they are published.

SEPTEMBER.

- 21, 22.—Charlton.
- 22.—Nhill.
- 22.—Rupanyup.
- 23.—Kerang.
- 23.—Moir, Cashel.
- 24.—Korong, Wedderburn.
- 28.—North Western, Inglewood.
- 28, 29.—Tatura.
- 29.—Kaniva.
- 29.—Inglewood.
- 30 and Oct. 1.—Benalla.

OCTOBER.

- 1.—Boort.
- 5.—Whittlesea.
- 5.—Numurkah.
- 5, 6.—Euroa.
- 6.—Belfast.
- 6.—Elmore.
- 6.—St. Arnaud.
- 7.—Bacchus Marsh.
- 7.—Tungamah.
- 12, 13.—Rochester.
- 13.—St. Arnaud.
- 13, 14.—Villiers and Heytesbury.
- 13.—Warrnambool.
- 13, 14, 15.—Ballarat.
- 19.—Seymour.
- 20, 21.—Bendigo.
- 20, 21.—Camperdown.
- 21.—North-eastern, Murchison.
- 21.—Rutherglen.
- 26, 27, 28.—Shepparton.
- 26.—Koroit.
- 27.—Mount Alexander, Castlemaine.
- 28.—Sale.

NOVEMBER.

- 3, 4.—Geelong.
- 9, 10.—Clunes and Talbot, Clunes.
- 11.—Bairnsdale.
- 11.—Heathcote.
- 11, 12.—Smeaton.
- 18.—Haedie's Hill, Grenville.
- 18.—Traralgon.
- 25.—Kyneton.

able contests, in time to come, many a dashing competitor will regard the approving smiles of some lady fair as the highest prize to be won. Who shall say that knightly days are over. Who, that young Australia has no higher ambition than making money! Perish the thought. All that is wanting is opportunity. And opportunity will come.

The Grand Stand.

THE new Grand Stand on the Show Grounds was admittedly an object of admiration. Visitors on all hands were heard to pronounce it creditable to the enterprise of the Executive of the Society. It may also be said that it is creditable to the architects who designed it, and to the contractors who built it. The accommodation, both above and below, was a great boon, particularly to the ladies, who can now visit the grounds, under circumstances very much more conducive to their comfort than before the stand was put up. The show is no longer the "dreadful" place it used to be considered, when there was no possibility of getting a comfortable seat, or a decent cup of tea. Now, however, all that is changed. What is still wanted is another stand, possibly of lighter construction, capable of holding two or three thousand visitors, for we believe that, under favourable circumstances, the Society could get 5000 people to pay for admission at a charge of half-a-crown. Below this second stand there would be splendid accommodation for dairy and farm produce, which would supply a long felt want. In fact, it would provide such a great amount of covered space that there would be room to display economic products and industrial exhibits, as is done with such success at the Queensland Society's Show, in Brisbane. Ladies' fancy work, as well as works of art, could be added. These fresh departures would bring in an entirely new class of supporters to the Society, would broaden its basis, increase its usefulness, and add to its attractiveness to the general public. Any amount of room here for expansion.

The Rough-Riding Contest.

THIS celebrated contest, over which so much ink was spilt, came off after all, in spite of the said ink. Where was all the spoiling of horses, and the brutality so confidently predicted? We hear nothing of them now. Where are the accusers? The contest was undoubtedly a great attraction, for it was witnessed by His Excellency the Governor, and it was enjoyed by thousands. The fault to be found with it was, that, in consequence of the crowd, the horses had not enough room to show play. Of course, too much of this kind of thing is not good, but a little of it affords amusement, and gives townspeople a lesson, for it shows what has often to be encountered in horses before they are fit to be ridden. It teaches them that a horse does not grow up with a saddle and a man on its back, but that there is often a good deal of trouble and work before the horse will allow the saddle and the man to remain there. As our correspondent, "Fair

Play," expected, there were no colts taken to the show; so that no horses were spoilt. Only animals that had already turned out buck-jumpers, in spite of the best treatment, were ridden at the competition. We still adhere to the statement we made when the prize lists were issued—and we have seen all sorts of breakers, from those of the early days to Professor Sample—that, in spite of the best treatment some horses *will* buck.

A Draught Horse Stud Book.

THE work of compiling a draught horse stud book seems to hang fire. To compile a Clydesdale stud book is simply impossible, on account of the way in which that breed and the English Shire horse are mixed up here. To compile a draught horse stud book admitting both breeds, but distinguishing between them, is almost an impossibility. The only thing we see for it, after having given the matter a good deal of consideration, is to make an entirely new departure. Let a Victorian, or, better still, an Australian draught horse stud book be commenced on something the same principle as was adopted in the foundation stock of the Jersey Herd Book. Admit draught horses of both breeds alluded to, or of a mixture of the two breeds—if they can be called two breeds—insisting that all shall be up to a certain standard of merit, and perfectly sound. If animals have a good pedigree, so much the better; but admit nothing showing the slightest symptom of unsoundness, or not up to the required standard if its pedigree could be run back to the days of Noah. Let the Agricultural Societies be charged with the duty of carrying out the work, all sharing in the trouble and expense. If the idea is a right one, this is the time to put it in operation, for the temporary depression in prices in draught stock will in itself cause a weeding out of rubbish. What a grand thing it would be in this young country to start a foundation stock of a superior type of thoroughly sound draught horses from which to build up the future breed, all having their pedigrees fully recorded. We say all, for owners of "cast" stock would soon find that it would be unprofitable to breed from them. Why, the matter is worth the attention of the Legislature. But we don't want the Legislature to do everything. Surely the societies, with the Government assistance they get, should take up a work like this, which is truly of national importance. The active operation of the Federation scheme would be of immense assistance here. We think it only wants a commencement to insure the success of the idea. However, we shall be glad to hear the opinion of breeders on the subject, and to give space in our columns for the discussion.

Cattle Derbies.

We again call the attention of breeders to these competitions. When the Derbies were first established, we wrote an article in our December issue, explaining their purport, and giving full particulars regarding them. A number of these journals were kept, and, when applications were received for explanations, instead of writing, a

marked copy was sent, but so many applications were received that the papers almost ran out. However, the advertisement now appearing in our columns, will, we think, fully explain itself. We merely mention the subject here to more certainly ensure notice, and to say that we believe the advertisement now gives such minute details that there will be no difficulty in the greatest novice in breeding understanding it.

Meetings.

Council.

THE Ordinary Monthly Meeting of the Council of the National Agricultural Society of Victoria, was held on Tuesday, September 14th, 1886.

PRESENT.—Dr. Plummer (President) in the chair, with Messrs. D. R. McGregor, T. Brunton, J. M. Peck, J. G. Brisbane, J. Gibb, R. Clarke, J. Garton, C. Lynott, W. Learmonth, A. Patterson, F. Henty, S. G. Staughton, J. Hearn, W. Thomson, D. Munro, J. Currie, F. Peppin, and J. Finlay.

The minutes of the previous ordinary, and two special meetings were confirmed.

Mr. Thomson moved that the business of the special meetings be confirmed. Seconded by Mr. Peck, and carried.

Election of member of Council, vice H. Lennon deceased.

Mr. Brisbane moved that Mr. John Bond, of Broadmeadows, be elected. Seconded by Mr. Clarke, and carried.

FINANCE.

The Finance Committee submitted the monthly statement of accounts, and recommended payments amounting to £4,176 5s. 8d., which with £949 18s. 9d. passed by a special-meeting of the Committee, made a total of £5,126 4s. 5d.

The bank overdraft at the end of last month was shown to be £5,492 2s. 5d.

Mr. Lynott moved that the report be adopted. Seconded by Mr. Munro, and carried.

The balance sheet of the Spring Show was submitted, showing the revenue to be £6,457 1s. 4d., and the expenditure £2,774 7s. 9d., leaving a profit of £3,682 13s. 7d.

The President congratulated the Society on this very satisfactory statement. He then said that there were many further improvements necessary before the Show Yards could be considered complete. Better accommodation was required for sheep and swine, while for the proper display of dairy and farm produce suitable provision was urgently required. The Council should not lose sight of the importance of these works.

He considered, however, that as President it was his duty to look after those who worked for the Society, and in this respect the burden of the Show had been borne by Mr. Patterson, the secretary. He had done an enormous amount of work, often of a somewhat unpleasant character. He (the president) would leave the matter of suitably recognising Mr. Patterson's services in the hands of the Council.

The Secretary was then asked to withdraw.

The Journal
OF THE
National Agricultural Society
OF VICTORIA.

MELBOURNE, SEPTEMBER 17th, 1886.

The National Society's Show.

THE exhibition of the National Agricultural Society of Victoria, held last month at Flemington, was undoubtedly a brilliant success. Last year's Show was a wonderful advance on the previous one, but in point of attendance, and in general comprehensiveness, this year's fairly eclipsed it. So much might have been expected. In our September number, after the Show of 1885, we wrote:—"Great, however, as was the success achieved by the Society on this occasion, the event must only be regarded as the precursor of still greater successes in time to come. People do not seem to realise the possibilities of this institution, which must advance as the colony progresses, and which, no doubt, will advance so rapidly that the most sanguine expectations regarding it will be more than realised hereafter." We are well aware that in some quarters these remarks were said to savour of that "undesirable enthusiasm" which is so often misleading; but we knew we were on the right track. The late exhibition has amply justified all that was then said. Not only so, but it has also suggested that "still there's more to follow." The society has now such an impetus given to it that it will be driven ahead by the very force of its own momentum. Its advance within the last few years has certainly been very rapid. Yet it was not unanticipated. When the present secretary was elected to office in 1880, he published a letter as an address to the members of the society, in which, after dealing with the importance of agriculture, he said, "Look at the Victoria Racing Club, the representative institution of horse racing! What gigantic proportions it has assumed! No valid reason can be advanced that the National Agricultural Society—the representative institution of the agricultural and pastoral interests—should not assume almost like proportions. These interests have even a more sound basis on which to work. Their representative society, with the influential and intelligent body of men which constitutes its executive, should be able by determined exertion to extend its operations to an almost unlimited range, and to make it an institution, the power and influence of which would be acknowledged and appreciated throughout the whole of the Australian colonies." Read in the light of to-day these words appear prophetic. When they were written the society occupied a comparatively small area of land on the St. Kilda-road. Now, it has a magnificent site in close proximity to the far-famed Flemington Racecourse. Its Annual Show draws exhibits from far and near. Not only is Victoria represented, but the other colonies contribute largely to swell the entry. Indeed, it is an Australian exhibition. Its opening day is a public holiday. Melbourne is crowded during Show week. People flock to the grounds in thousands. Colonists are proud of the event. Prominent

citizens conduct visitors from other lands round the yards, pointing to the magnificent display as an evidence of the material progress of the colonies, and of the magnitude of their agricultural and pastoral resources. These are facts, and facts are stubborn things. Where are now those who said the Show could not exist apart from the Melbourne Cup? We always held that the exhibition was a big thing, over-shadowed, not assisted by, the greater event. When a man cannot be great himself, the next best thing for him is to get under the wing of a great man. The same thing applies to an institution. But when an institution has the elements of greatness within itself it should stand on its own bottom. The wisdom of this procedure is seen in the case under consideration. And the whole thing has come about quite recently. Everything comes to those who wait—and work. We firmly believe that if one wants anything to succeed he must put work into it. Much work has already been done for this Society, more, indeed, than outsiders have any idea of. Much remains to be done. Encouraged by the grand results of their previous work, the executive will, no doubt, redouble their exertions, so that these may be commensurate with the requirements of the progressive institution, the destinies of which they are called on to control.

The Butter Test and Milking.

THE test of the best butter-producing cow which was carried out in the yards, was an interesting feature in the late show. The production of superior dairy cattle and the improvement of dairy appliances, are matters of much moment, so that every encouragement should be given to them. It was with the former of these objects that the valuable prize was offered by Mr Syme, and it was with a view to both that the Society went to a very considerable trouble, and a great deal of expense in carrying out the trial, and in arranging for the Laval Cream Separator to be shown at work on the grounds. Following up the subject, we give, in another column, an article on the best dairy cow. What is wanted however, is a greater observance of cleanliness in taking the milk from the cows, and what is specially wanted in this colony where labour is dear, is an effective milking machine. With regard to cleanliness, the immortal Shakespeare in *The Two Gentlemen of Verona* makes Launce say "Item, 'she can milk' look you; a sweet virtue in a maid with clean hands." There is more philosophy in these words than most people are aware of. Having been brought up principally in the country, and knowing all about milking, we have dreadful thoughts as we see suburban cows pass down the streets in the early morning. These have been milked during the night in indifferent light after they have been lying down in places anything but clean or dry, as is often very apparent, for they carry the brand on their sides, udders and flanks. Fancy milk taken from cows under these conditions! We often think its whiteness covers many sins. The subject is not a savoury one, but the thing requires probing to the root. Our authorities should really see to it. Milking machines would certainly be cleaner than hand work as usually done.

Oh! were milk only clear like water then people would know more than they do at present. In the country where everything although not positively clean, is at any rate wholesome, a good deal may be winked at, but about towns where cows are fed on all sorts of rubbish, and housed in all sorts of places, and milked under circumstances above alluded to, the milk (!) must, in many cases, be simply awful. Again we say let the authorities see to it.

The Hunters' Trials.

THE Hunters' Trials again proved a great attraction. They were, however, marred by the sad accident which resulted in the death of poor Tommy Lawless. Having known Lawless since he was a boy, it can readily be understood that on that account we specially regret his death. Still, we feel called on to point out that the nature of the course and the position of the jump over which the horse he was riding fell, were in no way accountable for the accident, except in so far as that any fence on any course might be the cause of a similar or equally disastrous fall. It was said in a morning paper, that the fence was a singularly "trappy" one, placed right in the sharp curve by the carriage paddock. Now, we regret having to cavil, but we do think it would have been well if the writer had taken a little trouble to ascertain facts before he sat down to pen this sub-leader. The fence is not a trappy one, it is a good four-foot three-rail fence, three full-length panels wide, with two panels of wings on each side. It is not in a curve at the carriage paddock, but alongside a straight line of fencing, with a clear, straight run to and from it. In fact, it is the best positioned fence on the ground. It was selected two years ago on that account, as the one for the high jump; that is, the one on which to put the bar to be raised as required. Last year, on the second day, it was the second of a double, the judges having suggested that an extra fence should be put up one chain from it, which was done. This year, that fence was removed entirely, so that this part of the course was really less difficult than it was last year. A correspondent to the same paper also wrote of racing horses over "trappy" (this is where the word came from) fences on ground as hard as adamant. Well, the ground was not as hard as adamant, for (as the writer must surely have known) it had a thorough soaking with heavy rain a week before the show. Independently of this, however, the ground was covered with a good coat of tan for 15 feet on the landing side of every jump. But why protest so much. When gentlemen like Messrs. Lewis Clarke, R. Grice, T. Watson, and others, who are experienced huntsmen, ride their own horses over the course again and again, there cannot be anything very objectionable in it. Of course, a better barrier than a rope run through posts at intervals might be found for keeping the people off on the inside. However, everything cannot be perfected in a day. Evolution is necessary even here. Something very superior is in contemplation for next year, something which will be quite satisfactory. Then to the fullest advantage will our young gallants be able to disport themselves in the lists below, while fair ladies admire them from the stand. Doubtless, at these fashion-

The following report of what took place during his absence, is from *The Age*.

"Mr. Currie proposed in favour of a bonus and also an increase in salary being given to the secretary.

Mr. D. Munro seconded the motion. He thought a man occupying Mr. Patterson's position was worth £500 a year—(hear, hear)—and he (Mr. Munro) hoped the day would come when Mr. Patterson would get it. However, the Society must be just before it was generous, and other matters required settlement.

Mr. W. Thomson pointed out that such an important step as increase of salary should not be taken without notice, as there was not a majority of the Council present. He would support the proposal to vote Mr. Patterson a bonus.

Mr. M'Gregor said that the balance sheet would have been very different if the Show had been held a week earlier. He was in favor of a bonus being voted to the Secretary, but thought if his salary was to be raised it should be done in the usual business way.

Mr. Brunton suggested that a bonus of 100 guineas be voted to Mr. Patterson.

Mr. Gibb said the question, together with the whole matter of how improvements in the Show might best be made, should be remitted to a committee of the principal stewards who had acted at the late Show, and who would be aware of defects which could be remedied.

After further discussion it was agreed to vote Mr. Patterson a bonus of £50."

POSTPONED BUSINESS.

Protest read from Messrs. Ochiltree & Bryants, against J. C. Hutton, being awarded grand champion prize for cheese, on the ground that he was not the maker of the cheese.

Letter read, in reply, from Mr. Hutton, stating he did not claim the prize.

Mr. Peck moved that the prize be awarded to Mr. Bryants. Seconded by Mr. Brisbane, and carried.

Protest read from A. Davidson, re award in dogs. The protest was dismissed, and the deposit returned.

CORRESPONDENCE.

From J. Booth, protesting against not having the same piece of ground that he occupied last year.

It was explained that exhibitors had no vested right in any site, and that Mr. Booth had not applied for space, as per general regulations, clause 7.

Mr. Thomson moved that Mr. Booth be informed accordingly. Seconded by Mr. Munro, and carried.

During the discussion, the Council expressed the opinion that the whole question of the allotment of sites should be reviewed, as much more revenue should be derived from this source.

From J. McFarlane, asking that a special prize might be given for his West Highland cattle, exhibited at the Show.

A certificate of merit was granted.

From Grant Bros., applying for a prize for a spring cart, for which no prize had been given by the judges. The action of the judges was upheld.

From P. Henry, in relation to Flax, exhibited by him.

Mr. Henry to be informed that his exhibit had been forwarded to the Secretary of the vegetable products Commission.

Correspondence was read which had been going on between Messrs. Aird and McCrae, and the Society.

Mr. Gibb moved that the action of the Finance Committee be approved, and

that they be authorised to deal further with the matter if necessary. Seconded by Mr. Peck, and carried.

From J. Bethel, requesting the Society to take action with regard to having a refund allowed on exhibits returned from the Show when some of their number had been sold. Left to President and Secretary.

Mr. Finlay moved that a letter of thanks be forwarded to the Traffic Manager of the Railways for the efficient way in which he and his officials had conducted the passenger traffic during the Show. Seconded by Mr. Henty, and carried.

Mr. Gibb moved that a vote of thanks be passed to the press for the very creditable way in which the Show had been reported, and that a letter be sent in these terms to the editors of the Melbourne daily and weekly papers. Seconded by Mr. Munro, and carried.

Mr. Staughton moved that a vote of thanks be passed to the police for their efficient service during the Show. Seconded by Mr. McGregor, and carried.

From D. Munro & Co., suggesting an additional water supply.—Received with thanks.—The matter to be dealt with by a Committee.

From Bendigo Agricultural Society, asking the Council to nominate a judge of draught horses for their Show. Mr. W. Thomson was nominated.

No tenders for medals were received.

Mr. Gibb moved that the time for receiving tenders be extended for a fortnight, and that the Finance Committee be empowered to deal with them. Seconded by Mr. Peck, and carried.

Mr. Peck moved that a letter be sent to each judge and steward, asking them for any suggestion which occurred to them which would in any way improve the Show, or the arrangements thereof. Seconded by Mr. Patterson, and carried.

Mr. McGregor moved, that in the case of any exhibitor who removed his stock, against the rules, his prize or prizes be forfeited. Seconded by Mr. Munro, and carried.

NOTICES OF MOTION.

MR. PECK.—"If any office-bearer, with the exception of the Trustees, shall be absent from three consecutive monthly meetings of the Council, without leave having been obtained, his seat shall be declared vacant."

MR. BRUNTON.—"That all the words in rule 9 of the Society (relating to the retirement of members of Council) after the word 'but' be omitted, and the following be inserted:—The four who are lowest on the poll at their election shall not be eligible as candidates for re-election for one year."

The meeting then closed.

Correspondence.

New Industries and Labour.

(To the Editor of the Journal of the National Agricultural Society of Victoria).

Sir,—I have been reading with interest the articles appearing lately in your useful Journal re the culture and curing of figs. In your contemporaries there are articles and letters con-

tinually appearing advising farmers to cultivate products and start other industries, which all necessitate a great amount of labour in sowing or planting, gathering in, and manipulating, before they can be put on the market. The Vegetable Products Commission, now sitting, hears a great amount of evidence on the subject of the introduction of products and new industries all requiring labour. Now, Sir, I would like some of your correspondents, or numerous readers, to explain where this labour is procurable. Even if procurable at the present exorbitant rate of wages, how is the producer in this country capable of placing his produce on the markets of the world in competition with the present producers? At the last meeting of the Yea Shire Council, a councillor remarked (and it might be said at any council table throughout the country districts), that he hoped in making out returns for the Government it would be pointed out how great was the difficulty experienced by agriculturists in that shire in obtaining suitable labour; it was impossible to obtain men for farm labour, notwithstanding the farmers paid a high rate of wages. This has been the case for a long period, and is a great deterrent to progress in agricultural pursuits. Again, a few weeks ago a farmer in Gippsland wanted eight labourers, and offered £1 a week to some men, but the offer was refused.

Yours, &c.,
T.G.W.

September 8.

Judging at Shows—Quality or Value.

In your last issue appears a letter signed "Native" stating he is puzzled to know how I judge a horse for Value and disregard Quality and *vice versa*. I fail to see why he should call upon me to answer the question, as I did not make the assertion he implies, and beg leave to refer him to my former letter in your issue of July. However, to explain my views more fully, I think Value includes all the good qualities animals are possessed of, Quality does not. Value includes quality, soundness, action, size, age, and condition. Quality includes form, hair and color, only it should include action, but I think it is seldom so. Those are my reasons for having advocated Value, as the basis likely to give most satisfaction in awarding prizes at Shows. That and the one judge system would I think be two considerable reforms in Show rules. If the present system of three or more judges is to be continued, I think each one's opinion should be made known to the public immediately after the decisions. "Native" is in favour of the present system, and thinks three separate and independent opinions would be better than one. But what is the result of those separate opinions when they all disagree, which is the case in almost every class, and at every show, simply this—two opinions have to give way to one so as to get through the work. People differ more with regard to the comparative merit of animals than in any other thing I know. The only way to progression is by experimenting, and I fail to see why any society could err much in trying one judge in each class for a year, and, if they wish to be very cautious, try it in one class only—Yours truly,

A. CRICHTON.

Gembrook, Sept. 11th.

Farmers often think too little of themselves and their occupation, which is one of the most respectable and, of all, the most useful. President Jackson, in a message to Congress, said: "The wealth and strength of a country are its population; and the best part of that population are the cultivators of the soil. Independent farmers are everywhere the basis of society, and true friends of liberty."

Veterinarian.

UNDER this heading our Veterinary officer, Mr. Graham Mitchell, F.R.C.V.S., will give Stockowners and Farmers useful information on the nature, prevention, and treatment of the diseases of domestic animals, and answer correspondents who may desire advice on particular cases of general interest; the symptoms should be fully described, and when a fatal case occurs, a *post mortem* examination should be made, and a small portion of any diseased organs forwarded. These, or any morbid specimens suitable for the Veterinary Museum, may be dry salted, and parasites, &c., should be placed in spirits. The name and address of correspondents must accompany all communications; not necessarily for publication, but as a guarantee of good faith.

Goats as Disinfectants.

In "Racing and Steeplechasing," one of the volumes of the Badminton Library, on p. 124, speaking of the treatment of thoroughbred yearlings when they enter the trainer's stables, the author has the following statement, which we slightly compress. He points out the absolute necessity there is for absolute purity of air and water, and warns us as to the liability of the young horses brought from spacious breeding paddocks into a crowd to catch from each other any infectious disorder which one may introduce. He then adds, "There is yet another sanitary arrangement or sanitary possibility, as we will term it out of deference to those who sit in the seat of the scornful. In days of yore, when some hundred horses were wont to stand in one posting stable, ready to be called out at all hours, goats were frequently kept as disinfectors; and they have lately been employed with success in several modern racing establishments, notwithstanding the number of artificial disinfectants which have been patented during the last half century. When a horse goes out of his box or stall the goat is allowed to go into it, and picks up any remnants of food which may be found, sometimes jumping into the manger and pulling down any hay there may be left in the rack. The smell of the goat is an antiseptic, apparently by no means disagreeable to horses. And during the spring months, when our climate is so variable, and influenza, or other epidemics, not unfrequent, a strong disinfectant is necessary to prevent any outbreak from rushing through the stable. Where forty horses are kept, two or three goats should be about the place; the horses like them; and when illness does occur, the danger of its spreading is quickly diminished, to say nothing of the well-known principle that prevention is better than cure. The billygoat himself will be the first to teach that he should not run loose like the she-goats and kids. It is advisable to keep him tethered in the yard or paddock. It is curious to read how modern science has found herself baffled "for all her know," and has been obliged to ward off disease by resorting to a favourite nostrum of antiseptic and disinfectant in the case of a human crowd!"

Tuberculosis in Cattle.

A valuable report has been presented to the Parliament of Victoria by a "Board appointed to inquire relative to the existence and extent in Victoria of the disease in cattle known as tuberculosis, whether its existence is likely to be detrimental to the public health, and what preventive measures should be adopted." The report is fully exhaustive of the subject, comprising sections upon the prevalence of tuberculosis, its communicability, the doctrine of the bacillus, and Koch's investigations concerning it, with statements in support of and opposed to

Koch's views, the question whether tuberculosis is a contagious disease, the limited nature of its infective power, the hereditary tendency to tuberculosis and hereditary transmission, the identity of human and bovine tuberculosis, and the question whether the flesh of tuberculous cattle or the milk of tuberculous cows is fit for food. The opinions at which the Board arrived are given in a summary, which, as the result of a prolonged and painstaking inquiry, is instructive and important, besides placing the question in a clear and definite light.

Bovine tuberculosis and human tuberculosis, though differently widely in the general appearance of the lesions which they present after death, and through differing also in a less degree in their history during life, are yet essentially allied to each other; they are produced by the action of the same low vegetable organism, the *bacillus tuberculosis*, which is found in all forms of tubercle, in whatever animal developed. These organisms may be cultivated in a pure state, generation after generation; if such pure cultures, far removed from their original source, be inoculated into susceptible animals, such as rabbits and guinea-pigs, disseminated tuberculosis is set up in the various organs and tissues of the animals operated upon; and in the tubercles so produced similar organisms are again found. These results are invariable; whether the pure cultures are introduced beneath the skin, into the abdominal cavity, or into the anterior chamber of the eye, tuberculosis follows with certainty in all susceptible animals; and even with animals usually insusceptible like results are obtained if a larger number of organisms be introduced, so as to overcome the resistance of the tissues. Moreover, when animals are fed with tubercular matter, whether derived from human or from bovine tuberculosis, a large proportion become tuberculous, and this result is not prevented if the animals be well housed and otherwise well fed. There is also evidence of no slight weight tending to prove that the milk of tuberculous animals, even when the udder is not affected, may induce tuberculosis in other animals to whom it is administered as food; and this, too, although abundance of sound milk or other suitable food is given at the same time. Other evidence, not quite so conclusive, but sufficiently cogent, indicates that the flesh of animals suffering from advanced and widespread tuberculosis may induce tuberculosis in animals fed upon it unless the flesh be thoroughly cooked. It has also been found that if tuberculous matter containing the specific vegetable organisms be suspended in water and repeatedly sprayed into the atmosphere in a chamber in which comparatively insusceptible animals, such as dogs, are kept, tubercles develop in the lungs and sometimes in other organs. Furthermore, when a large number of animals are kept in the same room, but in different cages, some being artificially infected with tuberculosis, and others being similarly kept as "control" animals for the purpose of comparison, cases of apparently spontaneous tuberculosis appear from time to time among the "control" animals. The greater the number of tuberculous animals in the room, the more numerous will be the cases of spontaneous tuberculosis; but no "control" animal has been known to become tuberculous until it has been for some months in the infected apartment. The spontaneous tuberculosis so induced affects chiefly the lungs and bronchial glands, and bears a close resemblance to the ordinary phthisis of man.

The specific organisms, or bacilli of tubercle, are present in the sputa of phthisical patients, sometimes in great abundance; and they have been collected from the air issuing from wards containing large numbers of consumptive patients. Phthisical sputa may be dried and powdered and kept in this state for months without destroying the vitality of the bacilli.

Numerous cases are on record in which tuberculosis has apparently been communicated from one animal to another, and from one human being to another when living in close relations with each other. The insidious commencement and the long course of the disease renders it difficult to trace such communication. But while the possibility of such direct communication has been sufficiently established, it is also true that exposure to contagion, even for considerable periods, is comparatively seldom followed by the development of tuberculosis. This fact is explained in two ways: Firstly, the specific organisms multiply very slowly, and only when protected from much mechanical disturbance; and they cannot, unless in very exceptional circumstances, multiply at all outside the living body, owing to the narrow limits of temperature within which they flourish. Secondly, they cannot with equal certainty attack all varieties of animals, or even all individuals of

the same variety without distinction; thus, guinea-pigs and rabbits are very susceptible, ruminants and men are moderately susceptible, while dogs are comparatively insusceptible. The moderately susceptible animals appear to be secure against the inroads of small numbers of the bacilli unless they are specially predisposed. This predisposition may be general or local; a general predisposition consisting in some frailty of constitution, often inherited, and a local predisposition generally produced by the effects of inflammation in some organ, weakening its vitality and leaving within it some stagnant or semi-stagnant exudations or secretions, in which the bacilli find a congenial soil for their development. Above all, the occurrence of repeated catarrhal inflammations of the lungs appears to create the special predisposition which is necessary to enable the bacilli to maintain themselves and multiply within the body.

Lastly, heredity certainly plays a most important part in the propagation of this disease. Tuberculous parents often bequeath to their offspring an original frailty of constitution which renders them liable to be infected by the bacilli; and, in the second place, though the truth of this is not well established, it is impossible that the germs of the disease may themselves be transmitted from parent to offspring, and, after lying latent in the system for a variable time, may subsequently, under favouring circumstances, wake into new activity.

Numerous experiments have proved that tuberculosis may be transmitted from man to lower animals, and from one lower animal to another. In the necessary absence of experiment, the evidence in favor of its transmission from lower animals to man may appear less cogent; but in the opinion of this Board the evidence is amply sufficient to justify legislative precautions.

These precautions, as embodied in the recommendations of the Board, include the declaration of tuberculosis as a contagious disease, and its introduction into the schedule of the Diseases of Stock Act, so that tuberculous animals may be seized and slaughtered; but it is not proposed to introduce any quarantine regulations. No compensation is to be allowed to owners for the compulsory slaughter of tuberculous cattle; and it is further recommended that a circular letter be addressed to owners of stock, requesting their active co-operation with the Government, so as to limit the prevalence of tuberculosis, and indicating the measures most effective to this end. Further recommendations are made respecting tuberculosis in reference to meat-supply, and dairies, which it is proposed to inspect. There can be no question that the Board have gone to the root of the matter, and it remains to be seen how far it is possible to carry their recommendations into effect in view of the great prevalence of bovine tuberculosis. —*The Lancet*.

The Best Dairy Cow.

CO-OPERATIVE CRITICISM.

Scene: *A carriage in a train on the Shoddon and North Loamshire Railway.* Interlocutors:—*Mr. Editor, Mr. Upright* (see note), Mr. Downright, Mr. Homespun, and Mr. Fitz-Circencester.*

MR. UP.: It really seems as if we were coming back to patriarchal times; and as if the wealth of any man, or district, would come to be estimated very much upon the number of cows which could be produced at call. We shall have five-hundred-cow-fortunes, just as we now talk of a ten thousand pounder. Nations, like their youngest members, will once more be devotees of the teat.

MR. ED.: Yes; and we shall soon have the yearly council meetings of our agricultural societies posed with the question, "What is the worth of a cow?" just as we have seen the Imperial Parliament bothered by being called on to define "But what is a pound?" Knowledge, like the atmosphere, has its halcyon periods, just as it has its terms of cyclone. And fads of all kinds—like the depressions which foretell change of weather—ought to be wired as being on their way across the Atlantic before they give any trouble to these shores. U.S.A. is the foster-mother—or, at least, monthly nurse—of every "burning question."

MR. DOWN.: How much does all that come to? The farm-talk of these days wholly passes my comprehension. Cows are a tough subject anyhow. Our only Representative was accustomed to teach that "Farmers could not afford to keep cows!" If we are to have the ordinary

being cambric. Again, in the case of hops, they have been sold on the poles, in Kent, for £200 per acre; cob-nuts, again, are said to yield an extraordinary value, amounting to hundreds of pounds sterling. Contrast this with the wealth derived from grazing, where it may take seven acres to feed one bullock for one year; it is very evident such an industry cannot yield much to the wealth of a country. With the experience of other and older countries before us, and the climate and soil we possess, I would place the vine in the van of special products. In our mountain region, north of Briagolong, not only have we a country abounding in gold and minerals, but also one that can and will yield a wealth of vegetable production, in my opinion, greater than all the wealth at present derived from the rich plains of Gippsland. In many parts of this country the vine will flourish as well as on the hilly districts of the Rhine; probably, even better. The populations of Southern Europe would consider that with a few acres of such land their independence was secured for life. I hope to see the time when blooming vineyards will gladden the sight, as well as appease the appetite, on the hill sides in our locality. In France it is the one industry that produces the most wealth to the country; here we have equally favorable conditions for its growth and development. It is said that it was the wealth derived from the vineyard and mulberry plantations of France that principally assisted in paying off the heavy war indemnity levied by Germany. At all events, even with the decreased value, owing to the spread of the phylloxera, it figures third highest on the list of French exports, being of the value of over two hundred million francs, nearly eight and a half millions of pounds sterling. This would simply point out the vast wealth to other countries, not more favourably situated than we are, of such an industry. In France, the value of the silk industry is even greater than that of the vine, and our colony is equally or better adapted to that purpose; it only lacks the requisite skill and the hands to carry out the operations. The labour required in this line is principally of a light character, and would afford remunerative employment to our females young and old, as also juveniles who would receive an industrial training fitting them for the duties of life. The olive also may be made a source of wealth—the Spaniards define an olive plantation as a mine of wealth above ground. What an extensive mine we might develop in that direction here. Planted round our fences in waste corners, in a few years it would return more wealth than is derived from the produce of an ordinary farm at the present time. Flax is also one of these special productions that yields a large return even in the unmanufactured state, simply prepared as flax. Probably in that way one acre of flax would yield as much as twenty acres of wheat. Improved machinery and appliances lessens the manual labour employed and consequently the cost of production. There is no reason why we should not export flax as well as wool. Further, there is every reason why we should produce an article worth eight pence or ten pence per pound instead of sending away wheat worth only about three farthings. It is easy to see that the latter never can make the producer wealthy, or add much to the material prosperity of the colony. The freight and charges are as much on the article worth the eight pence or ten pence per pound. It has come to this, that at the distance we are from the great European centres of population, and the necessary cost of getting our produce there, we must export much value in little weight and compass. This can only be done by turning our attention to production called special. The fact is we are too much given to follow the beaten tracks, there are too few explorers in the field of industry in our ranks; because we have seen wheat, oats, barley, and potatoes, grow in the cold northern regions of Europe, we must follow the same routine here. We overlook the fact that we are in a different geographical position. The climatic conditions are totally unlike. We have all the conditions for producing plants of a temperate and warm zone; we have been accustomed to produce only those of a northern latitude. Either we must alter the climatic conditions under which we live, which I think will be rather a difficult matter, or we must alter our practice to suit those conditions. The latter is practicable and possible, the former is impracticable and impossible. Therefore, let us set to work and meet the position in which we are placed. Let us find out what the civilized world produces under similar climatic conditions to our own. Go to the south of France, to the south of Germany, to Italy, to Spain and Portugal, to the Southern States of North America, to the Pacific Slope as it is called. I am glad to see that we have an organ of that

region, *The Pacific Rural Press*. I am bound to say we can get more information from that paper in reference to the development of our industrial and agricultural resources in one year than if we were to read the press of England, Ireland, and Scotland for a life time. I only hope we may get similar organs of information to lay before our people to instruct and inform ourselves on industrial subjects. Following out these lines, I think we may make ourselves worthy of the country we possess; the bounties of nature are spread around us, all that can increase our material prosperity, all that can satisfy our requirements, giving us comfort and happiness are here within our reach. I do not consider I have drawn a picture too high flown, I believe what I have stated will yet be our position. Let us, then, only hasten the day, and partake of the bounties nature has provided us.

"Scatter the germs of the beautiful,
By the wayside let them fall,
That the rose may spring by the cottage gate,
And the vine on the garden wall."

We will go back to the particular subject under consideration. Some say that we are too much governed. Perhaps that may be true in some directions—but I am not aware of it—but in the subject under consideration I say we are not governed enough. Is the industrial and technical education of our people a subject of such little consideration that the State does not bestow any attention upon it? What can place us in the front van of our colonial neighbours but the intelligent direction of our industrial efforts? Is the so-called Minister of Agriculture always asleep that we never hear of him? Is there no subject in regard to the agricultural development of the colony upon which he could profitably bestow his attention? Either there is not or he or his subordinates are not fit to direct their intelligence in that direction. I am afraid that is what's the matter. We require a Minister of Agriculture with more than the name; we want one to direct heart and soul and mind to the development of our grand agricultural resources. In my opinion it should not be a political position at all; it requires a man with special capacities, a special direction of his energies and intelligence. Such a man is not to be found haphazard, in the manner they form Cabinets through political exigencies. In France they do things better; there they have public instructors in the art and practice of the agriculture, horticulture, and market-gardening, teaching these branches on a scientific basis, and not by rule of thumb. Here we have to grope along with only the instruction derived from reading, which we seldom practice; there they have the guidance of the most advanced and scientific operator, whose business it is to give instructions and advice. Why have we here not a school of horticulture for our young, to fit them, as I have before said, for the climatic conditions in which they are placed? Why have we not public instructors of the same science? I say, in the public interests, we should, and it is a perfect disgrace to us that nothing has been done in this direction. Before I leave this part of the subject, I may be allowed to express how much we owe, as agricultural settlers, to the proprietors of the *Leader* and *Australasian* newspapers for their enterprise in procuring for us such valuable reports of the progress and development of the varied industrial resources of the United States of America. We really owe to them more than we do to a Department of Agriculture that has cost us hundreds of thousands of pounds sterling, and as its greatest effort has produced "a Dookie." (I would almost say a duck egg). Especially is it to be noted the wonderful talented election the before-named proprietors made in their respective appointments. Had they searched the colonies through they could not have found gentlemen better qualified or fitted for the duties they undertook, and the colony at large has been the gainers. I have been astonished at the wealth of information conveyed in these letters of all that has been done in the vast industrial development of America. In reading those letters we may glean what has been accomplished under very similar conditions to our own, where a farm of ten acres, under some of those special products I allude to, affords, not only a living and a competency, but, after paying all expenses, the proprietors save money from it. To be sure, we find in the same country the biggest effort in the way of special products the world has ever seen. On the ranche or farm of Mr Stouford, on the Sacramento Valley, is a vineyard, planted within two years, and counting 2,500 acres! Comparing such enterprises as this with what we effect in this country, under the same conditions of climate, is it any wonder that we do not progress? The most favourable criticism of our American friends who visit us, and

wish to speak kindly of us, is that "the people of Australia are very nice, but the country is real slow." I am afraid then that "real slow" is the motto most applicable to most of our citizens, and that the greatest industrial effort we can put forth is to produce the fattest bullocks and heaviest horses. I mean nothing disparaging to such or any efforts, but just to point out the difference in the industrial ambition of citizens of both countries. Why, an American, with his mental and speculative organization, could no more sit down and allow things to remain as they are without improving and developing, than could an eagle unconfined fix itself to one spot, with the broad, blue expanse around it, through which to wing its glorious flight. Here we have such a magnificent domain, a glorious climate, and, to a large extent we are content to let it remain as it remained with our predecessors—in a state of nature. The production of fruit has become a big industry throughout America and the world. Astonishing that the consumption of fruit has increased with its production, until it has become one of the necessities of the world. Even at home, as we call it, where the infamous land laws in existence prevented a man, when he planted a tree in the soil of his farm, from removing it, or in any way claiming it as his own, fruit-growing is extended. You may depend that in a country where there was no security for the man who planted, fruit-growing was not much indulged in by the tenant farmers of England, Ireland, or Scotland. To this fact may be largely attributed the habits of our settlers, the effects of any wrong reaching far beyond its immediate cause. In the county of Middlesex fruit orchards are let at an annual rental of ten pounds per acre. A Brentford jam-maker has succeeded in getting 500 acres on Lord Dudeley's estate near Cheltenham, and planted it with fruit trees. The number of apples, damsons, and plums planted amounted to 60,000, black currants 167,000, gooseberries 93,000, besides raspberries in great quantities. The eyes of the landed proprietors of England are being opened to the wealth there is in this line from the vast import of American fruit, which is something enormous. What do we find here? Why, that preserved fruit is being sent here from France and sold here in the shape of what is called French prunes at 2s. per lb. Surely then there is wealth in special industries. Our markets are supplied largely with preserved fruits from America and other countries at a large price—seldom less than 7d. or 8d. a lb., unless damaged. This is in our country, where all these fruits will grow like the hawthorn in the old country. Yet we can grow wheat and export it at 0½d. per lb. Is it any wonder then that the farmer does not grow rich? I find I have not reached the most important part of this subject, which, if you desire, I will conclude on a future occasion.

Insects are troublesome to both man, beast and fowl at this season of the year, and any method that will get rid of these pests will be welcome. In an exchange we find the following recommended:—Invest in a packet of tobacco seed, and a dozen plants raised from the same will furnish all the insect powder needed in a year. Sow in a seed bed early in the spring, and when the plants are a few inches high, transplant into rows, four or five feet apart in a row, and cultivate as corn. Save the leaves, dry them, and when the hens are set, place a few under each. This is said to be an entire preventive of insects, who refuse to dwell where the leaves are.

Grazing and cultivation should always accompany each other. They are not two interests but one, and should be carried on conjointly. Husbandry is very incomplete when they are separated; for while animals enrich the soil for cultivation, tillage increases very materially the carrying capacity of the land.

Farmers should plough their lands a trifle deeper every time they are worked, to thereby secure more of its dormant fertility. The deeper the land is ploughed the more productive it will be.

Chickens afflicted with diarrhoea may be cured by giving them boiled milk, thickened with corn meal while boiling; when nearly cold give it them. A pinch of red pepper will improve it.

cow-house "shop" eked out, with bits from the City article or the Meteorological Reports from the *Times*, I had as soon attend a lecture of Professor Jiffy's at our Board School, at once.

MR. FITZ: What, don't you like lectures? I take to 'em kindly enough when I have nothing better to do. You pick up such a lot of phrases there, which come useful when you have to do a talk yourself. Nothing shuts up a clod like a good bit of lecture second-hand: "giving 'em cold steel," I call it.

MR. HOME: Well. But is "shutting up the clods," as you term it, the best way to master country business? I have been a learner all my life, and hope to be one to my dying day. No one's conversation to me is more instructive, either for what it contains or what it withholds, than is the talk of people whom I suppose you call clods. But perhaps you young college geniuses will include me among the clods.

MR. FITZ: Don't you remember the picture in *Punch*, Mr. Homespun—the bewigged, beetle-browed judge pressing a much-bothered witness to repeat in court the very words he had heard: "The man couldn't have said to you, 'He stole the pig'; he must have said, 'I stole the pig.'" Don't you remember the shocked witness's rejoinder, "Oh, my lord, he never could have accused *you!*" Clod, indeed? I say you are a crusher! I find it sometimes difficult to keep the toes of my arm-in-arm friends "Practice with Science" safe out of your reach.

MR. ED.: I think Mr. Fitz-Cirencester is even with you, Mr. Homespun. But I really should like to know what you think of this modern pretension of the paramount importance of the dairy. I have more books sent for review, on dairy practice, in one shape or other, than upon all the other departments of the farm put together. Do you believe that there can be so much still to learn about one of the oldest employments of mankind, *i.e.*, how to collect, preserve, and make the most of, the produce of milch cattle?

MR. HOME: Indeed I do. I am not myself experienced in dairy management. I have always kept a beef-breed, and devoted the milk mainly to the rearing of the calves. Yet it is plain to me that the difference in the value of butter and cheese is enormous; and, therefore, I suppose there is a very wide range of difference between the values of gallons of milk.

MR. DOWNS: I don't exactly see that that follows. Butter and cheese are at different prices because this is well made and that is not. The management makes the difference, just as the merit of every cow "goes in at the mouth."

MR. HOME: I have no wish to dispute the importance of skill in handling the milk after it comes into the dairy, nor yet the immense advantage a well-cared-for cow has above another which has to shift for itself; yet I do not admit that even good management in making and keeping has more to do with the distinctive character of dairy produce, or even with that of the contents of the milk-pail, than have other factors, of which the most pervading is "breed."

MR. DOWNS: There you go! You can't talk about a plain thing in a plain way. "Distinctive character," "factors," &c., &c. Milk is milk! and, as for butter and cheese, it is like the old jest about wine—Some wine is better than other wine, but none is bad; or at least, not so bad as having no wine at all.

MR. HOME: I think the comparison of milks to wines excellent. Genuine milks do vary as much as genuine wines; and for the same reasons. In neither case can you keep clear of the influence of soil. In neither case can you keep clear of the influence of *variety*. You cannot make the must of the Muscat or the Riesling grapes to be identical; nor can you make the milk of a Kerry or West Highland cow to be an exact equivalent to that of a Holstein. Butter and cheese come into comparison with wines, after the effects of fermentation, racking, bottling, and storage have been developed. It remains true with both; that you must start with the *right* variety to get the desired result.

MR. UP.: "The desired result" is, I fancy, something which is in regular demand, and at top price. Is it your contention that in order to produce butter and cheese of the highest quality, the *breed* of the cows is of appreciable importance?

MR. HOME: Certainly; I entirely disbelieve in what has been termed "the general purposes

cow," or "the dairy factories," as being steps in advance towards any really scientific stock-breeding, or any such dairy management. They may save individual labour; and, in some respects, economise production, but they will never be the means of developing special excellence. All that the general purposes cow and all that factory methods will do will be to produce a good, perhaps a high, average cheese and butter, *i.e.*, something which will after all come into competition with the produce of half the globe, and be liable to be depressed below the cost of production in consequence. To produce butter and cheese which, like the choicer vintages, shall always be in greater demand than supply, cows not only of special breed, but specially bred within the limits of a breed, will, in my judgment, be required.

MR. FITZ: The Professor never said anything about that. Indeed, he always warned us "what we wanted to insist on most emphatically is that the system"—*i.e.*, of producing improved breeds—"has nothing to do with agriculture."

MR. DOWNS: I am sick of "agriculture." I know what farming means—carrying on a farm so as to get a good living by it. I know that to do that requires a man to be wide-awake and able to hold his own with landlord, banker, merchant, dealer, tradesman, and labourers. I have been able to do this pretty well all my life, and I never bothered my head about pedigrees and herd-books, and I don't mean to begin now. Buy when cheap and sell dear! That is what you have to do. Bargain for every shilling as if you were fighting for your life.

MR. UP.: Many a poor fellow has *tried* that simple road to competence; and found that there is only one objection to it, and that is that—except occasionally, and to persons advantageously circumstanced in some way or other—it is never to be depended on to *ac* when it is most wanted. Whether Mr. Homespun's method of seeking to produce what is most in demand—and to do this by endeavouring to ascertain the distinctive qualities which gain favour in supplying these—is more trustworthy I cannot say. At all events, it has not been tried and failed. Your maxims, Mr. Downright, have. But we don't want nowadays to insist that "Farming upon commercial principles," and "go-ahead" methods have of late been a little discredited. The old woman's advice to the young wife (who asked how to keep her husband's affection) was—if plain spoken, not without pertinence to any farmer who wishes to keep John Bull's custom—"Feed the brute as he likes to be fed."

MR. ED.: Feed the brute, as he likes to be fed—John Bull aforementioned—sounds a safe tip. We never yet have cultivated the palate, or developed any genius for cookery. But we are certainly making advance in both directions. High-flavoured cheeses and delicate-flavoured butter are (and certainly will continue to be) in great request. Do you think, Mr. Homespun, "*haut gout*" in the former and daintiness in the latter can be promoted by paying attention to peculiarities of breed?

MR. HOME: I cannot doubt it. Anybody with a taste can distinguish the butter from Channel Island cows for example. I do not know whether cheese flavours can, as yet, be assigned with equal directness to breed. But as it seems to me this is a field much deserving of cultivation; *i.e.*, how far special excellence can be conferred upon articles of food in general demand by attention to points which have hitherto been disregarded, and to breed among these.

MR. UP.: I think I can tell you a story which is not without an application; and is certainly not without facts to rest on. A relative of mine fifty years ago was living in a district famous for producing Talavera wheat of great excellence. He told me that for years together he sold his entire crop to a West-end purveyor, who had a high reputation for some special biscuits. Many cooks, confectioners, &c., got the same recipe, but failed to produce biscuits with the same lightness and delicacy of flavour. The real secret was the original maker used only Talavera wheat, grown upon a soil specially adapted to it. He used to select the sample of wheat himself; to seal up every sack in the barn of the grower; and to have the sealed sacks carried to a mill of his own, and ground and dressed without any admixture. The produce made his fortune. He left his business to his successor, who soon determined that old Mr. So-and-So's ways were not quite scientific. He thought that two wheats, which showed the same analysis, were the same thing for his purpose. He ceased to buy Talavera; and he allowed other makers to rival, and at last to surpass him; and the business fell to pieces. What that man did in

biscuits, others may do in butter and cheese—*i.e.*, get the very variety of raw material which is best suited; get it under the best auspices; and *then* you may get a name, keep it, and win by it. John Bull is never a bad paymaster to those who give him what he likes to eat and drink: "the brute" fed to his fancy is tractable enough.

MR. HOME: But we are getting away from the point about breed of cows. I accept Mr. Upright's story as an illustration of what I meant. No doubt there may be peculiarities in flour from special varieties of wheat, which even the skill of the chemist cannot detect. I am sure that there are in milk. I could, I think, always recognise by my own palate whether a Channel Island cow had contributed even a part of the cream put within the churn. I like the flavour when the dairy contains one Jersey to three or four Shorthorns. If the proportion of Jersey milk be greater than this, the flavour of the butter has a repulsive effect to me. Now, I don't suppose, even at Rothamsted, the chemist can detect flavour.

MR. EDITOR: I submit that, when one comes to questions of likes and dislikes, one gets to the region within which, as Mr. Fitz-Cirencester quotes, "it has nothing to do with agriculture."

MR. HOME: I submit that it has. I submit that everything which has a shilling in it has to do with agriculture. Even accepting Mr. Downright's inference that agriculture means farming, and the farming means paying your way, it must be sound practice to produce what sells most readily, and at the highest price. If very choice butter and cheese is to be made, I believe that animals specially bred for the peculiarities necessary to give the butter and cheese the qualities which make them choice, must be employed. So that, after all, a knowledge of the breeders' art must even precede the application of the knowledge acquired by the skilled manager of a dairy. And it follows that we have still a wide field for inquiry before we farmers and agriculturists have exhausted the subject, "Which is the best dairy cow?"

MR. DOWNS: Well if you have not exhausted the subject, you have exhausted me. When I was young we didn't bother our heads about such fallals, and I don't mean to begin now; so I am not sorry we have got to Barchester.

MR. FITZ: Nor am I. This is quite unscientific.

MR. HOME: As I believe someone said before, "So much the worse for what claims to be agricultural science."

[There the train stopped, and the company separated.]—*Live Stock Journal*.

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[BY MICHAEL LANDY, BRIDGOLONG.]

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* Learned Judge, to intelligent bumpkin in witness-box: "You say, my man, that the defendant 'lives upright'; what did you mean by that?" LB: "Why, my lord, I meant that he have got something nice, of his own, coming in regular every quarter. He don't want to work; and needn't care nothing for nobody."

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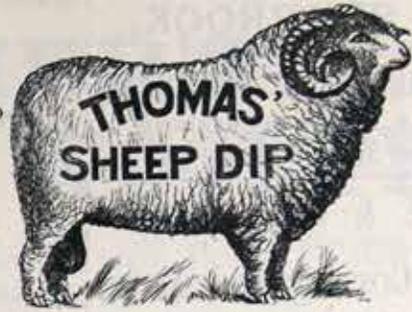
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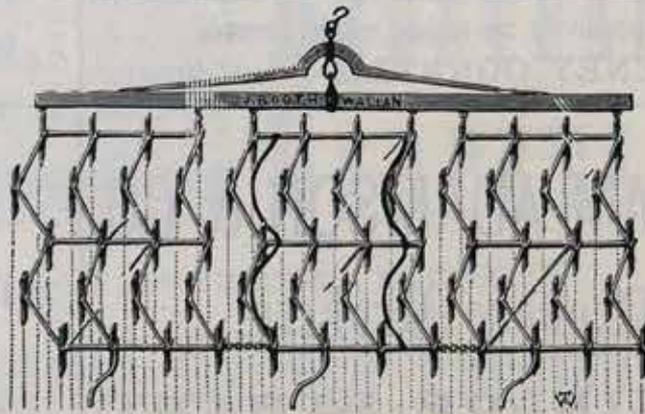
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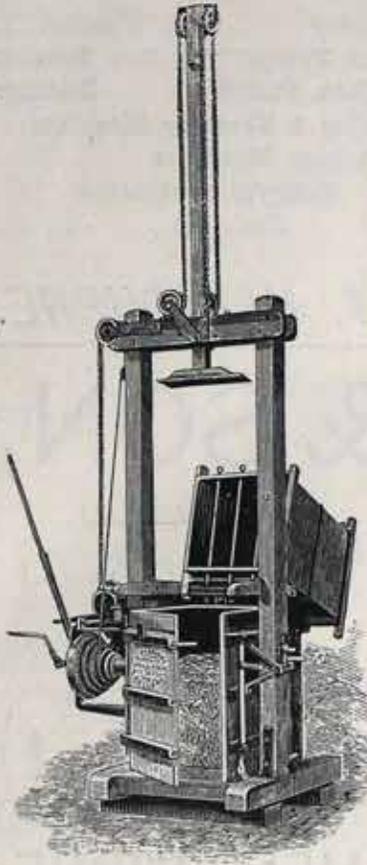
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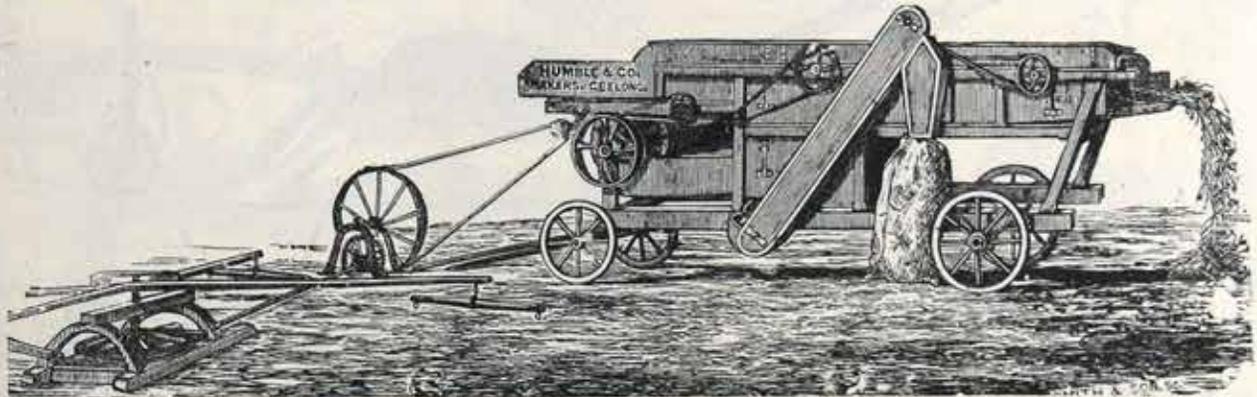
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We have been making these Machines for the last seventeen years, and have been awarded a large number of prizes at the different Shows, including the National Show at Melbourne and other places. The above is strongly made with Wrought Iron Drum, Steel Spindle; all bearings of the best material, no time or expense being spared to turn them out in a substantial manner.

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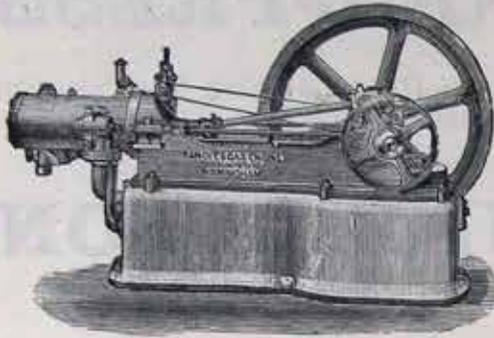
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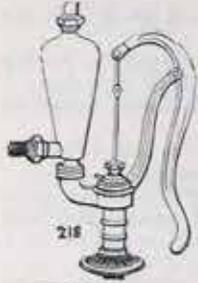
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CORNWALL HOUSE, COLLINS STREET WEST, MELBOURNE.



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Engineers & Brass Founders,

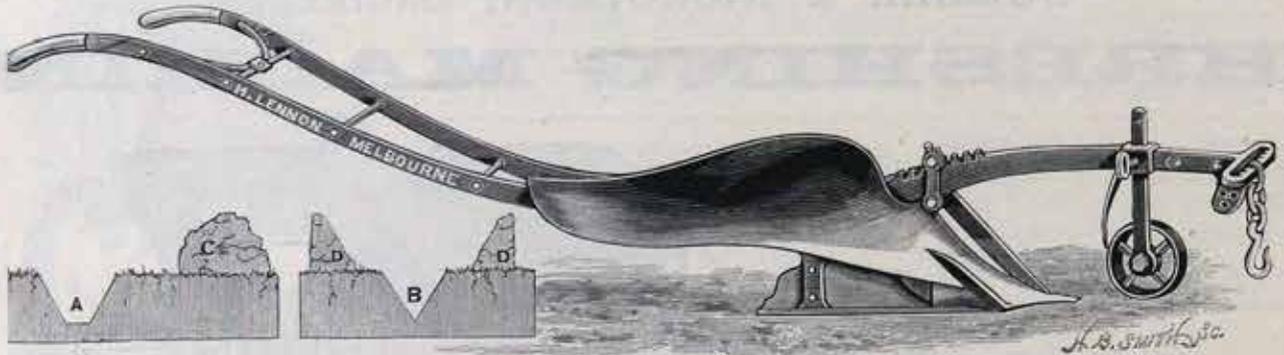
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PUMPS OF EVERY DESCRIPTION,

Fire Engines, Baths, Sanitary Ware, Gas Fittings,
Iron, Lead, and Compo. Pipes, Water Supply Goods.



42 BOURKE STREET WEST, MELBOURNE.



HUGH LENNON'S

World-famed Agricultural Field Implements and Harvesting Machinery

Have gained the HIGHEST AWARDS of MERIT ever given to Implements, after the most exhausting Field Trials.

There is no district in Victoria, according to public judgment in the hardest fought fields, that his celebrated Implements have not carried off First Honors for years and years in succession, from Gippsland to the South Australian border, and from the Murray to the South Pacific Ocean, New South Wales, Queensland and Tasmania for the past 20 years.

H. L. has always on hand samples of his

- Single Furrow Ploughs, of all Sizes
- Three and Four Furrow Ploughs.
- Squatters' Ploughs, for stations and dam sinking.

- Double Furrow Ploughs, of all Sizes.
- Roadmaking Ploughs, for contractors and excavators
- Drain Ploughs, for irrigation purposes.
- Vineyard Ploughs,

All fitted with H. L.'s Patent Wrought Iron Shares. A clear saving of 50 per cent.

ALL KINDS OF HARVESTING MACHINERY IN STOCK.

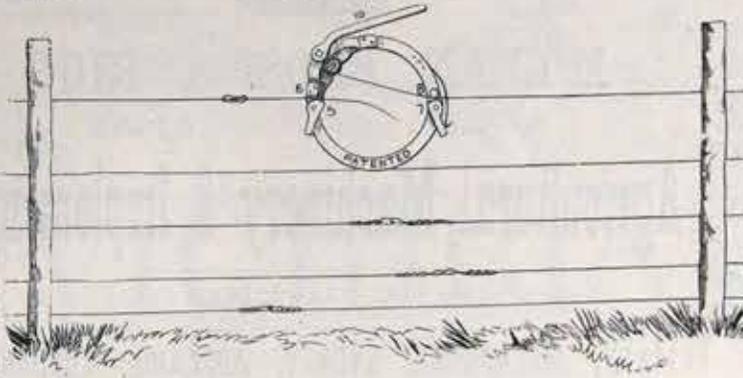
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Manufactory and Show Rooms: Opposite North Melbourne Railway Station.

FULTON'S Improved Patent Portable Wire Strainer.

AWARDS, 1883-4.

Highly Commended—Canterbury, New Zealand, 1883.
 Silver Medal—Tairi Agricultural Society, Mosgiel, New Zealand, 1883.
 First-class Certificate of Merit—Brisbane, 1884.
 Special Prize—Mudgee, New South Wales, 1884.
 Commended—National Agricultural Society of Victoria, Melbourne, 1884.
 Highly Recommended—Wangaratta, 1884.
 First Prize—Grand National Show, Echuca, 1884; Boort, 1884; Benalla, 1884; Nhill, 1884; Inglewood, 1884; Warrnambool, 1884; Tatura, 1884.
 Special Prize—Geelong 1884; Rochester, 1884; Sandhurst, 1884; Ballarat, 1884;



Rutherglen, 1884; Stawell, 1884; Numurkah, 1884; Clunes, 1884; Kyneton, 1884.
 Certificate of Merit—Shepparton, 1884.

AWARDS, 1885.

First Prize—Deniliquin, July 23rd; Horsham, Aug. 5th and 6th; Dimboola, Aug. 12th; Kerang, Aug. 27th; Donald, Sept. 2nd and 3rd; Yarrawonga, 3rd.
 Honourable Mention—Charlton, Sept. 16th.
 First Prize—Echuca, Sept. 17th and 18th; Shepparton, Sept. 22nd and 23rd; St. Arnaud, Sept. 23rd.
 Special Prize—Rochester, Sept. 30th.
 First Prize—Talbot, Grand National, Oct. 8th and 9th; Ballarat Oct. 14th, 15th and 16th.

Diagram showing the Application of the Machine.

THIS MACHINE IS MADE ENTIRELY OF STEEL, AND WEIGHS UNDER 5lbs.

The Advantages claimed for this Machine are:—The ease with which a broken wire can be strained and rejoined at the break, thus saving the usual loss of time in having to go to the straining post to untie the wire; and that it can be used in the middle of a panel without any post to strain against.

DIRECTIONS FOR WORKING MACHINE.

Standing with your left side to the fence, the left foot about 18 inches in front of the right, with the left hand grasp the Strainer between the windlass and grip (5 and 6). Catch the left-hand end of the wire in grip (5 and 6), about 9 inches from the end; this done, place the machine against the left thigh so as to keep the jaw (5) from opening (still holding as directed with the left hand). Now take the right-hand end of the wire and pass it under (8) and into the hole in the windlass. With the handle in the right hand wind up the slack wire by turning the windlass (do not turn the handle right round, but every time it touches the body take a fresh grip. As each half-turn is complete, with the left hand press the grip (7) against the wire, so as to hold all the slack brought up by the windlass. When the wire is tight enough, unwind the windlass, cut off the surplus wire, leaving about 9 inches for knotting, by taking the two loose ends and rolling them together by means of two small keys; this done, remove the Strainer by striking the tail of the left-hand grip with the handle.

ALSO,

FULTON'S NEW IMPROVED WIRE - CUTTING SNIPS.

JAMES M'EWAN & Co., Sole Agents,

General Importers of All Classes of Ironmongery & Station Supplies, Galvanized Iron, Fencing Wire, Machinery, &c.
 79, 81, 83, AND 319 ELIZABETH ST., AND 4, 6, AND 10 LITTLE COLLINS ST., MELBOURNE.

MACHINE BELTING.

Saddlers by Appointment to His Excellency Sir H. B. Loch, K.C.B.

MACHINE BELTING.



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FACTORY:
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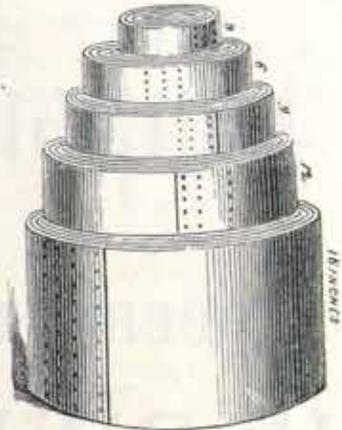
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Contractors for Machine Belting, Saddlery, &c., to the Government, War & Naval Departments of Victoria.

Prices and Samples posted free on application.



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WELCH, PERRIN & CO.

Machinery supplied on
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 of Time-payment.



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**The M'CORMICK
REAPER & BINDER**

Has been Awarded
105 FIRST PRIZES

In Australasia.

THE 1886 MACHINE IS UNRIVALLED.



**RANSOMES'
VERTICAL ENGINES**

2, 3 & 4 H.P.

Extra Large Firebox and
Boiler.



**RANSOMES'
PORTABLE ENGINES**

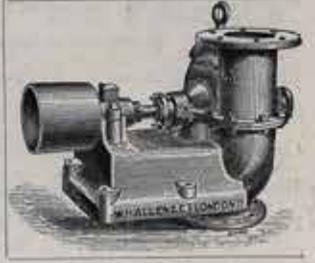
6, 8, 10, 12 & 14 H.P.

The Most Suitable Engine for
Irrigation Purposes.

**ALLEN'S
Centrifugal Pumps**

8, 9, 10, 12 and 15 inch.

Larger Sizes Imported Specially
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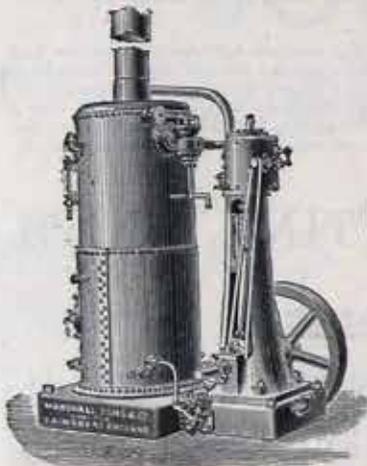
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Novelties in every description of Agricultural
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H. BRINSMEAD, TEBBY & CO.,

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THE

MELBOURNE SPORTS DEPOT

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MELBOURNE.

Send for Catalogue of Cricket Material for the ensuing Season.

H. STEWART BALE, Manager.

NATIONAL AGRICULTURAL SOCIETY.



VICTORIA

VOL II.—No. 15. [Read as a Newspaper.]

MELBOURNE, OCTOBER 15TH, 1886.

GRATIS.

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Then 'twere well done 'twere quickly done."

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CHARLES D. STRAKER,
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Caterer for the Victorian Racing Club, The National Agricultural Society of Victoria, and the Victorian Coursing Club.
Orders for Banquets, Feats, Dresseurs, Weddings, Suppers, on the Shortest Notice in Town or Country.
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Opposite the Meat Market, Melbourne.
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Meals at all hours from 6.30 a.m. to 11.30 p.m. SUNDAYS INCLUDED.
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(NON-POISONOUS.)

Why send Ticky Wool to market when Wool dipped with this Fluid will realise fully 2d. per lb. more in the market.

It is the Best, Cheapest, and Safest Dip in the Colonies.

PRICE—5/6 per gallon in 40 gallon casks, and 6/- in drums. Orders under 5 gallons, 1/- per gallon extra.

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GOLD MEDALS,

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Account Sales promptly rendered. Advances if required.

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The Greatest of all Dairy Improvements. From 15 to 25 per cent more and better butter. Highest market value. Great saving in space, time, labor and the number of utensils. The construction is extremely simple, and requires no mechanical knowledge to keep in working order. The cost saved in less than a year. Can be driven by horse gear. Full particulars post free on application.



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Single, Double, and Treble Ploughs.

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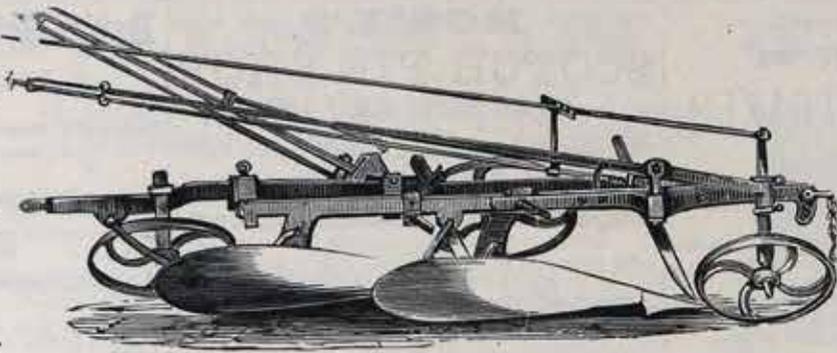
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For dam sinking.

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For road making.

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Made to any design.

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against all competitors as
the most durable and trust-
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PRICE WILLIAMS,

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MANUFACTURER OF THE WELL-KNOWN

Williams' Rack & Pinion Wool Press

Rack and Gear Steel Press for the use of large stations.
Lever & Chain Press, with Folding Top Box, for the use of smaller stations
Lever and Chain Farmer's & Selector's Press. Price, £22 10s.

As the season for this latter kind is now approaching, those requiring them
should lose no time in sending their orders. Owing to the general satisfaction
given by those supplied for last season, orders are now freely coming in, and a
large demand is looked for. The following is a fair sample of a large number of
Testimonials to hand for those supplied last season:—

MR. PRICE WILLIAMS—

BALLYROGAN, JAN. 23RD, 1885.

Dear Sir.—I have much pleasure in informing you that the Farmer's Wool Press I
purchased from you last October, gave me every satisfaction. We turned out very compact
small bales, about 3½ cwt., but could have them heavier if we wished with once down. By
what the Wool Brokers tell me, they would clear themselves in two seasons to anyone having
twelve bales. Since done with the Wool, I have had it in constant use as a Cheese Press, and
I reckon it worth half its cost for that. We have weights on the levers. Any number of
Cheeses can be put in at once. It would make a good Press for Hay or Straw, and for Grapes
or Apples it is just the thing. I can highly recommend it as a most useful, substantial, and
cheap article.—Yours truly,
HUGH GORDON.

McDougall's Sheep Dip

USED THROUGHOUT THE WORLD.

McDOUGALL'S SHEEP DIP.

PERFECT SAFETY, NON-POISONOUS.

A Dip with 20 Years' Record and Second to None in the
Market.

As certain as arsenic in its effects in exterminating all insects, and
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Finely stimulates the growth of Wool.

Trial Once Made, Always Used.

PRICE, 5/6 PER GALLON, 5 GALLON DRUMS.

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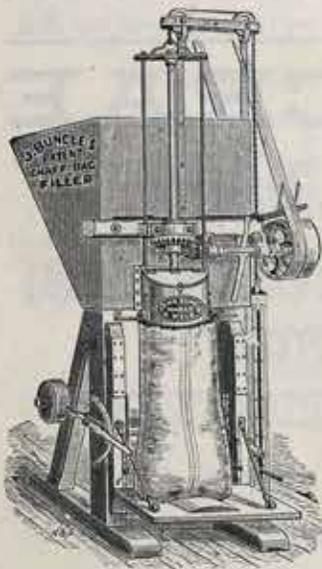
Every vehicle we manufacture is fully guaranteed to be as represented, material used throughout is the finest procurable, and in every essential point it is unexcelled by even the highest priced vehicles.

Any conceivable style of Vehicle built to order at shortest notice.

Customers may depend upon having their orders turned out in a thoroughly workmanlike manner, and on the latest and most approved style, as none but the very best skilled workmen are employed on the premises.

N.B.—The Trade supplied on the Most Liberal Terms.

M. E. GILBERT, Manager.



BUNCLE'S Patent Chaff Bag Filler.

JOHN BUNCLE, in stating what is well known, viz., the great competition in the Hay, Corn, and Chaff Trade, begs at the same time to call attention to his endeavour to lighten the toil and increase the profits from such a business, by designing and manufacturing a machine for the above purpose, and one which cannot be approached by any other maker at present, or recommended to equal in **Simplicity, Durability**, and thorough **Adaptability** and **Cheapness** combined as in the above Machine. The **BAG FILLERS** are manufactured complete, ready to be sent to wherever ordered or in any of the colonies, either to fix in stores in connection with the fixed Chaffcutters, or to be attached to his well-known Travelling Chaffcutters previously supplied, and now supplied either with

or without Baggers. A few attempts have been made by some to supply such a want, but probably not having a theoretical as well as a practical knowledge of machines, have not been able to reduce the complicated movements in their machines, and which are perfectly unnecessary—as witness the Unique Simplicity and correctness in design, and the admirable working of **BUNCLE'S PATENT BAG FILLER** compared with the few others tried at work.

For the information and convenience of customers, a machine is kept constantly set up ready to show at work in **BUNCLE'S PARKSIDE IRONWORKS**, and many customers have witnessed **80 to 90 lbs.** of Chaff put in a bag in **15 seconds!!!** which, after making allowances for time removing the full bag and replacing an empty one, would easily on an average keep **Four of Buncle's No. 1 Chaffcutters**—well, if there is any doubt, say **Three Machines** clear of all the Chaff they cut (medium length.) Of course the Machines are arranged to put in as light weight as you like, or you can fill up and burst all your Bags—to pieces. As a trade requirement (in addition to filling bags) the necessity for a **Mixing Machine** is a long felt want, the laborious and unsatisfactory way at present adopted cannot much longer be endured, and there is no necessity for it!! as **J. Buncle** can arrange to "Blend" the worst and the best samples "To a Hair" at the least possible expense with the best results.

The season is now coming on when all those who intend having the latest improved Machines should forward their orders as early as possible, to prevent disappointment in the day of their need.

J. Buncle's Machines have, as usual, been awarded **First Prize** at all the leading shows wherever he exhibited last year (1885), and the many improvements introduced and constantly copied by other makers, is the best proof of the value of the continued consideration in all that affects the profits and welfare of his customers.

Chaffcutters with **14-in.** wide mouthpieces and **Newest Designs**, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

Sirs and Gentlemen, yours respectfully.

Parkside Iron Works, North Melbourne.

Catalogues Post Free on Application.

JOHN BUNCLE.

VICTORIAN RIFLE CLUBS.

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DANIEL TOPP,

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SADDLE AND HARNESS MANUFACTURER,
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Manufacturer of every description of Saddles and Bridles; Gig,
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Scotch Tandem, Leader and Outrigger Harness.

D. T. wishes to call particular attention to his Colonial-made
Rough and Smooth Bullockhide, Hogskin, Bush and Town,
Saddles, which for Shape, Price, and Quality, cannot be equalled.

TRADE SUPPLIED.

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SAMPLES AND PRICES.

Grasses—Lucerne, White Clover, Red Clover,
Mangold, &c.

FORWARDED ON APPLICATION.

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R. GOLDSBROUGH & CO. LIMITED

(In which are amalgamated the Australasian Agency and
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WOOLBROKERS,

Capital, £3,000,000.

HEAD OFFICE—MELBOURNE,

MAKE LIBERAL CASH ADVANCES on the ensuing CLIP
of WOOL and on STATION SECURITIES.

They hold AUCTION SALES of WOOL twice each week
during the season, and at frequent intervals during the
winter months.

AUCTION SALES of TALLOW, HIDES, SHEEPSKINS,
etc., are held three days each week throughout the year.

AUCTION SALES of WHEAT, OATS and FLOUR are held
each Wednesday during the grain season.

Three Months' Free Storage allowed on Grain.

Liberal Advances made at bank rates on receipt of produce
into warehouse.

Full rates of interest allowed on fixed deposits, current
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NUMURKAH.

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Business communications to the Publishers,
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Contents.

Table with 2 columns: Item and Page Number. Includes Dates of Forthcoming Shows, The Stock Conference and Importation, Progress of the National Society, etc.

Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
requested to forward to the editor the dates on
which their respective exhibitions will be held,
also copies of their prize schedules as soon as
they are published.

OCTOBER.

- 19.—Seymour.
20, 21.—Bendigo.
20, 21.—Camperdown.
21.—North-eastern, Murchison.
21.—Rutherglen.
26, 27, 28.—Shepparton.
26.—Koroit.
27.—Mount Alexander, Castlemaine.
28.—Sale.

NOVEMBER.

- 3, 4.—Geelong.
9, 10.—Clunes and Talbot, Clunes.
11.—Bairnsdale.
11.—Heathcote.
11, 12.—Smeaton.
18.—Hardie's Hill, Grenville.
18.—Traralgon.
25.—Kyneton.

DECEMBER.

- 9.—Kilmore.

FEBRUARY, 1887.

- 3.—Dandenong.

GOLD MEDAL.



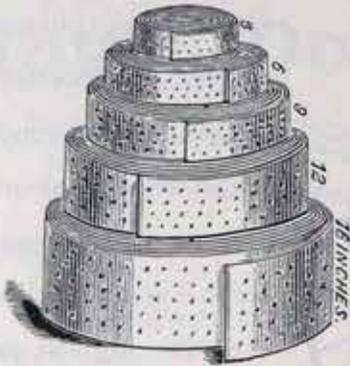
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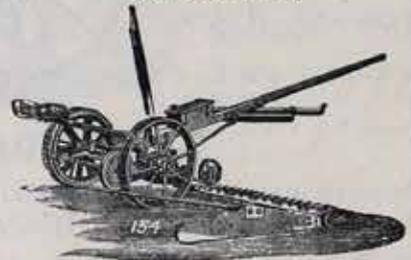
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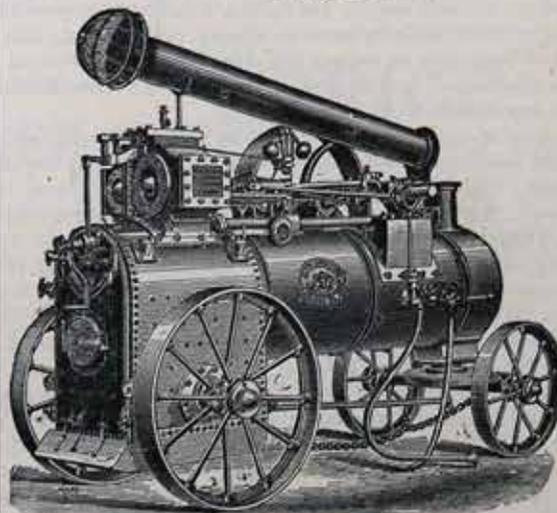
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The Journal
OF THE
National Agricultural Society
OF VICTORIA.

MELBOURNE, OCTOBER 15th, 1886.

The Stock Conference and Importation.

THE physical power of an idea is seen in the fact of the Intercolonial Stock Conference having been at length held. In 1883, the Council of the National Agricultural Society of Victoria appointed a Committee to deal with the question of the assimilation of the quarantine regulations of the various colonies, with a view to making the introduction or the prohibition of stock a national policy; and to consider other matters. The Committee directed the Secretary to write to the Chief Inspectors of Stock, asking their opinion on the subject. This was done, and replies were received containing some valuable information, and approving of a conference being held. The Committee then recommended that a conference of the Chief Inspectors of Stock, together with representatives of the various National Agricultural Associations, should be held, and the Council of the Society appointed a deputation to wait on the Chief Secretary to inform him of the action taken by the Society, as well as to lay before him the opinions and information received, and ask him at that stage to take the matter up, and call such a conference. The Chief Secretary (the present Agent-General), however, declined to comply with the request; but as the gentleman who introduced the deputation (the present member for Mornington), was like the proverbial red rag to a bull to the Minister, this was not to be wondered at. Subsequent action was taken by the Society through the Minister of Agriculture, but it only resulted in correspondence. The idea, however, has not been lost sight of, and a conference has at length come off. We notice that the question of importation of stock has been discussed, with the result that a majority was in favour of it under strict quarantine regulations. Our Chief Inspector, Mr. Curr, read his last year's report, which we commented on in our last October number thus:—"We take exception to Mr. Curr's statement 'that the importation of the primest sheep or cattle from Great Britain, Germany or other countries, in which the conditions of nature differ widely from those of Australia, is injurious instead of beneficial to our stock, and *per se* an evil.' Facts are against Mr. Curr, who goes on to say—"My second objection to importation is that under our circumstances it is a proceeding at variance with the laws of breeding. In this you will notice I entirely disagree with Mr. Bruce, who sets out in his memo. that the quality of our animals has been, and must continue to be, kept up by means of imported sires. In my remarks on this point I shall (the fundamental laws of breeding extending to all animals, and the conditions of nature in Australia being favourable alike to sheep,

cattle and horses) illustrate what I have to say by reference to the merino sheep.' Perhaps the merino of late years owes nothing to importations, but Mr. Curr was careful to take the exception to try to prove a rule which will not apply to other stock. Take, for instance, shorthorn cattle. The Duke of Brunswick (imported) has made a greater mark on the herds of the colonies than any colonial bull, and his stock have a wonderful show yard record. The Western District breeders use imported bulls: and the leading Booth breeder, although a prohibitionist, yet uses imported sires. In thoroughbred horses the stock of St. Albans (imported) carried everything before them last year, and this year a son of Musket (imported) has won the A.J.C. Derby and other big races. In draught horses, again, the Grand Draught Horse Produce Stakes has been won in the case of both the colts and the fillies for the last three years by yearlings by imported sires. In the face of these facts, how can it be argued that our stock owes nothing to recent importations?" Fresh facts may now be cited. At the late Mr. Richard Gibson's sale the other day, an imported Ayrshire cow was bought for one of the best and oldest herds; while one of her heifers (a yearling) brought 105 guineas. We admitted that *perhaps* the merino sheep owed nothing to recent importations. Recent events, however, show that Mr. Curr was astray even here. At the last exhibition of the Australian Sheep-breeders' Association, a "three-quarters bred Vermont sheep" won the first prize in his class, the special prize, and the championship. The *Argus*, in a sub-leader, said—"The success of the Messrs. McFarland is assuredly a blow to the breeders who have persisted with Mr. Curr, the Victorian Inspector of Stock, in affirming that nothing is to be gained by crossing the Australian stock, and that the importation of stud animals should be strictly prohibited." We are aware that it is just possible this sheep was an exceptional animal, and that, as some breeders contend, further crosses may not prove so successful, but, as the *Argus* further said, "It is good for Australia, presumedly, that the Messrs. McFarland should breed such a ram as that which has won the championship, and should have a number of its kindred for sale; but if Mr. Curr and the prohibitionists had had their way, this successful cross would have been unknown here." The autocrat of the agricultural department of the *Australasian* with that unsearchable wisdom peculiarly his own, in an article in June last, on the prohibition of stock, supported Mr. Curr's policy, and even "went one better," but he is hopelessly beaten all down the lines. We remember when we deemed it treason to differ from the dictum of this great "I am," but now alas, "our idol is shattered, our earth-star fled." Surely we in Australia are not going to become a lot of narrow-minded bigots arrogating to ourselves, the attribute of omniscience, and thinking that neither we nor our stock, nor anything else can be improved from outside sources. Let us rather adopt the system of the celebrated writer of the *Anatomy of Melancholy*, in the widest sense, and enrich our productions from every available source. We sincerely trust that in the importation of stock such judicious measures will be adopted

as will prevent the possibility of the introduction of new diseases by infection or contagion to our flocks and herds, for we are as anxious as can be, if even from no higher motives than personal interest to avoid unnecessary risk. But, nathless, we cannot see the sense of persisting in theory that has been beaten all round. As well continue to believe in the pre-Copernican system of the universe.

Progress of the National Society.

Seven years is a period of time in which great changes are supposed to be made in individuals. The same thing applies to institutions. At any rate, the following figures show that a great change has come over the National Society in that time. It may be as well to say that there is nothing "rapturous" here—simply a statement of facts. In 1879, the members' subscriptions amounted to £390. In 1886 they reach £736. Premiums for privileges, 1879, £286 4s. 6d.; 1886, £568 12s. Donations, 1879, £241 18s.; 1886, £886 8s. Admissions during show, 1879, £734 17s. 9d.; 1886, £3265 1s. 3d. Entry fees, &c., 1879, £53; 1886, £270 16s. 6d. Grand Draught Horse Produce Stakes, 1879, £60; 1886, £150. Number of exhibitors, 1879, 307; 1886, 479. Prizes awarded, 1879, £702 8s.; 1886, £1992 3s. Total revenue, 1879, £1933 6s.; 1886 (to date), £7132 4s. 5d.

An Interesting Item.

The following is an extract from a letter we have received from an ex-President of the National Agricultural Society of Victoria, who is at present in England:—"I am just thinking this is the first time, during half a lifetime, that I have been absent from Melbourne Show. I am trying to console myself a little by going to all the shows I can in the old country. I should have liked Mr. — to be with me at the Bath and West of England. The Dairy Class was the best I ever saw. The Jerseys and Guernseys were in great force, and a beautiful lot they were, but it took an Ayrshire cow to lower the standard of them all in the Champion Class, open to all breeds. She was one of the old breed, as we call them, like Mr. Grant's and Mr. McNab's, a dark-brown spotted cow, with black nose, and as fine on the top as a race horse, giving 24 quarts of very rich milk each day of the Show. I noticed that not one in all the Dairy Classes was mentioned, that had the slightest pretension to a thick top. After having been at a great number of Shows I feel quite proud of our yards; there is nothing like them in all England."

The Echuca Show.

The Echuca show held last month was scarcely up to the standard a visitor would expect at a place where the National Show had been held. The surrounding country, however, after the fine rainfall, looked delightful. The view across the northern

plains, covered with rich, green pasture, to the tortuous Campaspe, fringed with quaint old gums, was very refreshing. The draught horses exhibited were not numerous, but there were a few good animals, the same remark applying to the blood stock. Cattle were very poorly represented. The sheep were of superior quality, there being some high class exhibits, although the entries were not so numerous as in some previous years. The whole of the stock was in backward condition, which seemed to be quite anomalous, considering the state of the country; but it appears that before the late rains the season had been very severe. There was an interesting display of dairy produce, some of the trophies of fancy butter being marvels of skill, but it seemed a pity that so much labour should be expended on such perishable materials. The machinery and implements and buggies and carriages did not form a very extensive section, but many excellent exhibits were shown. The day was bright and fine, and there was a very good attendance of people. Visitors enjoyed themselves, for they were well treated, and things passed off pleasantly.

Bacchus Marsh Show.

THE second Show of the Bacchus Marsh Society which came off this month, was to a great extent a success, being an improvement on that of last year. The weather, however, was again unfavourable, driving showers sweeping across the grounds at intervals. Still, it too, was better than that of the previous year. It is a pity, when, as was the case here, great efforts are made to have the arrangements as perfect as possible, that the clerk of the weather should be unpropitious. The Show was not a very extensive one, but there were some first-class exhibits. In the draught stock some good stallions and high-class mares were shown, together with a few good young stock. The thoroughbred stallions and mares were good, but not so some of the young stock. The hackneys and light horses with one or two exceptions, were a poor lot. It seems that the days of good hack horses are gone. The production of superior hacks is a lost art. His Excellency the Governor and Sir William Stawell (than whom there is no better judge) who were present on the ground, found one good sort of a light horse—one of the old sort—but he was over 20 years of age. A few very choice Shorthorns were shown, and some good Herefords. There was a good turn-out of dairy cattle. Sheep, and swine were well-represented as regards quality, and there were some good pens of poultry. The exhibition of butter was very good, and some interesting miscellaneous exhibits were shown. The district sadly wants 24 hours rain—five days rain, an old resident said.

ADVANCEMENT OF BRITISH AGRICULTURE.—The *Mark Lane Express* says, that Sir John Lawes, alone, spends more money in a year for the benefit of British Agriculture than the State has in a generation. Yet, there is nothing which would pay the nation better than judicious expenditure for the advancement of the most important of all industries.

Stringhalt.

Notwithstanding all that has been written on this extraordinary disease in horses, its cause seems still to be involved in mystery. A very interesting report on it has lately been prepared by the Government Veterinarian of New South Wales, who has taken much trouble to investigate its cause and arrive at a right conclusion regarding it, but we are afraid has scarcely solved the problem. Some time ago we said we were of opinion that the disease was attributable to the want of certain necessary elements in the animals' food—an opinion which, to a great extent, the report referred to corroborates. However, the other day we came across an experienced breeder, who said the worst case of stringhalt he ever saw was in a stable-fed horse in good condition. Now, we used to think we knew as much as, and a good deal more than most people, about Stringhalt, but after this staggerer we give it up. We know nothing; we don't even pretend to know anything. The report says, "It has never occurred in stable-fed horses," so the writer has evidently still a good deal to learn too. Nevertheless, the subject is so well treated that we give the first portion of the report as published in the *Sydney Mail* :—

AUSTRALIAN STRINGHALT.

"The peculiar ailment to which I give this name is new to me. Although a veterinarian for 25 years in Great Britain and in India, I have never seen such extraordinary abnormal symptoms as are manifest in this disease until investigating an outbreak of it in this colony.

There is no record of its existence in other countries.

A disease must have a name, and the name, however inappropriate to the pathology, will, nevertheless, be accepted by the public, if it leads them to recognise the disease when they see it.

Hence the word 'Stringhalt' is retained as being well understood by horsemen to mean a spasmodic affection of one or both hind legs, which is occasionally met with all over the world. At the same time, it is rarely so severe as to incapacitate an animal from work. Its pathology is not well understood, but it differs in many important features from the disease under consideration; so that it will be well to dismiss from the mind any idea of these two diseases being identical, or, indeed, of bearing any relation to each other. Therefore the words Australian Stringhalt are used, being distinctive and leading, as they will convey to the reader the geographical locality of the affection, and its most prominent symptoms.

From information I have been able to gain from various sources, it is a disease long known to have existed in the colony of Victoria, and has from time to time been under inquiry by the Victorian authorities and veterinarians; and I cannot understand why Mr. Curr, the Chief Inspector of Stock for Victoria, should have been so reticent of the information thus obtained, when at my suggestion the Chief Inspector of Stock for New South Wales asked for the result of their inquiries, at the time when a serious outbreak of this disease induced the department to enter on the investigation.

It is both interesting and important to know that this disease can be clearly traced to direct introduction from the sister colony, and it only occupies very limited areas in the counties of Cumberland and Camden; it has also been seen at Orange and on the Victorian borders.

HISTORY OF THIS DISEASE IN NEW SOUTH WALES.

The first case brought under notice was at Richmond, in a brood mare, sent from Dandenong, in Victoria, five or six years ago; she came for stud purposes, and was noticed to be badly affected with stringhalt in both hind legs. At the time this attracted little attention, but the following year many brood mares occupying the paddock she had been in were seen to be affected with stringhalt, all within a few weeks of each other. These mares were of different ages and breeds, and came from various districts. Inquiry was diligently made in the neighbourhood, but nothing of the sort could be found outside this one paddock; and, strange to say, this paddock has retained its reputation for producing this disease, outbreaks having occurred in it from time to time; but no fresh case has been seen there for the last two years, for this reason, that cattle and ponies have occupied the paddock

instead of mares. In May, of this year, I visited Moss Vale in consequence of serious losses being reported from this disease. I found that a very few cases only had been seen in 1885, and it was never seen in that locality previous to that year, when a stud mare had been sent to the breeding station first named, and returned with stringhalt. The following year, almost an epidemic of this singular affection suddenly appeared amongst the breeding mares, colts and fillies in the paddock she had occupied. The disease this season was widespread throughout the district, and many horses of all descriptions were found to be more or less affected; and being so general it was impossible to trace the source of contamination. It was certain, however, that nothing of the kind had previously been seen.

I visited a third centre of the disease at Camden, and found the history of this outbreak agreed so far as the year of invasion was concerned, but the actual method of its introduction could not be defined; two sources were open, one being by purchased animals from an infected place brought on to the station, although showing no symptom of the disease at the time; the second probable source being a river frontage, so shallow from drought that trespassing horses may have introduced the disease.

It is most satisfactory to find, from a circular letter sent to all inspectors of stock in New South Wales, that the disease is unknown beyond the places already named in this report. The disease is only seen in the horse species; I believe it to be communicated indirectly from one horse to another, and therefore it is contagious.

It is certain that one animal may contaminate a paddock so that others will have the disease; and it may spread by water, duststorms, and food, as well as by other means.

NATURE.

It is a local, nervous affection, characterised by an involuntary spasmodic action of the muscles of both hind legs, continuing for several weeks, or months, then most frequently recovery slowly takes place; in others the disease becomes chronic, and in some instances degeneration and paralysis are the results.

Death occurs from animals being unable to extricate themselves from difficult situations, or being unable to get about after food and water.

CAUSES.

Hitherto the cause has been enveloped in considerable obscurity, and I find that Veterinary-Surgeon Kendall, in his book on "Diseases of Australian Horses," describes the disease as so common to Australian horses that some breeders attribute it to a certain herb, prevalent in certain localities; others to a species of dandelion. Kendall evidently considers it to be rheumatic in origin, and not dietic, and that a sudden chill may be a sufficiently exciting cause to develop it.

The Richmond outbreak was attributed to a metallic poison known as vanadium, which was found on analysis to exist in the clay taken from the waterhole supplying the affected paddock, the water being very low at the time, and the fact of the disease being only in this paddock, and recurring year after year in it, strengthened the assumption.

With the kind assistance of Messrs. Watt and Hamlet, the Government Analysts, I obtained information on the poisonous action of this mineral, the Tribasic sodium vanadate being used for experiments by Professor Gamgee, and it was found to act upon the central system of the spinal cord and medulla oblongata, especially affecting the respiratory nerve centres. This action does not agree with the symptoms exhibited in this disease, which is excited action in the periphery of nerves. However, to satisfy myself, I visited the North Shore (Sydney) brick yards, which are working identically the same formation of clay as that found at Richmond, and which extends over a very large geographical area. From these yards lightly burnt bricks, richly tinted by the yellowish-green oxide of vanadium, are to be seen in many of the surrounding buildings; I also made inquiries of horse-owners and shoeing-smiths as to the prevalence or otherwise of the disease, and failed to get information of a single case of Australian Stringhalt having ever been across the harbour, although horses are drinking the water from these clayholes continually. Further, at Moss Vale I found a similar clay formation; also the vanadium efflorescence on burnt bricks in several places, which were free from disease. This metal exists probably in very minute quantities, and has undoubtedly been present in these clays for all time; but no case of poisoning has occurred, and this particular disease was quite new in the localities, never

having been seen to attract attention until the recent outbreak.

At Camden, where the disease was very severe, and in one paddock only the water supply was from a running stream, and no venadium could be detected, so that the venadium theory is untenable.

The Victorians say a dandelion causes it. The weed suspected is not a dandelion; it is the *Hypochoeris radicata*, the common names being cat's ear, or flat weed. It was introduced from Great Britain, is hardy, spreads rapidly, and smother's other herbage. It is wholesome and nutritious. Horses and ruminants eat it freely, and for weeks together have had little else to live on, and apparently did well on it. That *Hypochoeris radicata* has no connection with Australian Stringhalt is proved by great numbers of horses eating it, and never having the disease. The disease is known to exist in localities free from this weed. The weed has no medicinal or poisonous properties. It is very prevalent in many parts of the colony which are free from this disease. After deliberate inquiry and a close investigation of many cases, post-mortems, and microscopic examinations, with a very careful analysis of facts, I have formed the opinion that the origin of this disease is intestinal parasites; in other words, it is caused by worms attacking the mucous membrane of the horse's digestive organs. This they do in countless numbers and as larva, or as they escape from their ova, set up intense irritation in the bowels. This is conveyed by certain nerves to a certain set of muscles, as will be explained further on, and involuntary muscular action is the consequence. Based on this foundation, my hypothesis is fully supported by the symptoms, peculiarities, and progress of this singular affection.

No one is able to produce this disease at will, but certain places are known to be liable to produce it; and, again, it is noticed to originate at certain seasons of the year, and recoveries take place under well-defined conditions.

The localities favourable to its production and propagation are grazing paddocks. It has never occurred in stable-fed horses, but may and does occur in horses that occasionally run into a paddock and are stable-fed also. Such paddocks are cold, wet, and badly drained, with swampy patches—clay soil where gum and oak trees, and sour herbage, such as coarse and fine tussocky grasses, and the weeds sorrel, *Rumex acetosa*, *Hypochoeris radicata*, and *helichrysum*, *scorpioides*, and *apiculatum* grow. These have no poisonous properties, but thrive in moist places. Hills, vales, and river borders possessing the above characteristics are liable to become the home of this plague; but there is little fear of its appearance without being introduced.

Its commencement is only noticed in the summer months; most of the cases I have seen having cropped up in January and February of this year. About Christmas there was a light rainfall after a long drought, and at the end of spring there was a rush of vegetation, and at the same time of parasitic life. No combination of circumstances could be more favourable for the development of the lower organisms from their ova, in which condition they have been dormant, waiting a suitable season for their development; and this is the season that the migratory parasites of the horse enter his stomach and bowels with food and water, in the form of minute larva, there to find their natural habitat and food, grow and attain sexual maturity, and during the ensuing months they are entertained at the expense of their host; finally discharging their ova, or being themselves discharged in the animal's excrement, and so scattered abroad. Some become incepted in the animal's tissues, and in that manner enter the stomach of a carnivorous animal or bird of prey, and thus their distribution is extended and their cycle of development ensured.

The symptoms of this extraordinary affection are very marked and distinctive, but require a veterinarian's discrimination to show its distinction from other diseases to which horses are liable.

(To be Continued.)

BEET-ROOT.—Some interesting and agriculturally important researches into the structure and development of Beet-root have just been made and published by a French chemist, M Girard. The parts to which he devoted most attention were the tap-root and radicles, and he concludes that the saccharine matter for which the Beet-root is famous, is not formed in the underground part of the plant, but exclusively in the overground portions.

Meeting.

Council.

The ordinary monthly meeting of the Council of the National Agricultural Society of Victoria, was held on Tuesday, 12th October, 1886.

Present—Dr. Plummer (President), in the chair, Messrs. J. M. Peck, W. Thomson, J. Hearn, D. R. M'Gregor, S. G. Staughton, T. Brunton, A. Patterson, W. Learmonth, J. Currie, J. Hurst, F. Peppin, C. Lynott, D. Munro, J. Gibb, J. G. Brisbane, W. J. Lobb, J. Finlay, and the Hon. J. Buchanan, M.L.C.

The minutes of the previous meeting were read and confirmed.

The report of the Finance Committee, submitting the monthly statement of accounts, and recommending payments amounting to £203 6s. 3d., was read.

Mr. M'Gregor moved the adoption of the report, seconded by Mr. Currie, and carried.

This committee also submitted the following report:—"The Finance Committee report that since the last meeting of Council they have held several special meetings in relation to Mr. Aird's complaints about the trial of engines at the late show. After a personal interview with the judges and steward, when the matter was exhaustively dealt with, they unanimously resolved that there was nothing in the complaints deserving of further consideration; and, in accordance with the power vested in them by the Council, they instructed the secretary to inform Mr. Aird to that effect.

Mr. Staughton asked to be allowed to make a statement regarding the trial, which he did, and then moved that the inquiry be re-opened, seconded by Mr. Peppin. The motion was lost.

Mr. Thomson moved the adoption of the report, seconded by Mr. M'Gregor, and carried.

CORRESPONDENCE.

From J. Garton, stating that his absence from the meeting was owing to his being in Sydney. Received.

From Job Smith (in England), resigning his seat on the Council, and thanking the members for the various courtesies he had received during his many years of office.

Mr. Peck moved that Mr. Smith's resignation be accepted with regret, and that he be thanked for his many past services to the Society; seconded by Mr. Brunton, and carried.

From T. Brunton, withdrawing the motion, of which he had given notice, and substituting the following words, viz.:—"That all the words in Rule 9, after the word 'but' be omitted, and that the following be inserted:—The four members who shall have attended the fewest meetings of the Council during their term of office (unless granted leave of absence), shall not be eligible for re-election for 12 months, and in the event of one or more of such members having attended the same number of meetings, a ballot shall be taken of the members of the Council then present, to decide who shall stand out."

It was resolved that this motion should be brought forward for consideration at the next Annual General Meeting of the members of the Society.

From Geelong Agricultural Society, asking the Council to nominate judges for dairy cattle, poultry, dogs, and machinery. Messrs. J. Hurst and J. Kerr, were nominated for dairy cattle; Messrs. F. Peppin,

John Robertson, and D. G. Clarke, for poultry; Messrs. A. H. Hopton and W. Beilby, for dogs; and Mr. David Black, Essendon, for implements.

From Echuca Agricultural Society, asking the Council's co-operation in securing an abatement of the travelling sheep nuisance.

Mr. Thomson moved that the Council co-operate with the Society, seconded by Mr. Peck, and carried.

A number of letters received from the judges and stewards at the late show, in answer to a circular sent out by the Council requesting suggestions for the improvement of the arrangements of the several departments of the exhibition, were submitted.

Mr. Peck moved that the Council at its rising adjourn to Friday, the 22nd inst., for the consideration of these letters; the suggestions in the meantime to be classified and tabulated. Seconded by Mr. Munro, and carried.

A number of letters, of minor importance, were also dealt with by the Council.

MOTION.

In accordance with notice Mr. Peck moved that—

"If any office-bearer, with the exception of the Trustees, shall be absent from three consecutive monthly meetings of the Council without leave having been obtained, his seat shall be declared vacant."

Seconded by Mr. Brunton, and carried.

The meeting then adjourned to the 22nd inst.

Correspondence.

Art and Fancy Work at the National Society's Shows.

(To the Editor of the Journal of the National Agricultural Society of Victoria.)

SIR,—I notice in one of the articles in the last issue of your *Journal*, that you refer to adding a new class of exhibits to those usually seen at the National Agricultural Society's Shows, in the way of Art and Fancy Work. You seem to mention it in a casual way, and would assign it merely a corner, under an imaginary grand stand, but this same class of exhibits, if once fairly introduced, would become to many one of the most attractive features of the Show. At the late Show, in company with a lady friend, I went to see the West Highland Cattle, as being of interest to her, but they had been shifted from their former place, so we missed seeing them. I then asked her what she would most like to see—what interested her? She said, "nothing," or what amounted to it. Perhaps she should not have made this reply, as the Show was; but certainly would not if there had been an exhibition of Art and Fancy Work. And so with many other ladies there. It may be said that at an Agricultural Exhibition such things would be out of place, but surely country people would benefit by such a display. Gathering, as they do, to the central show from their secluded homes, they look for more than every day common-place country things. What would have a more refining influence upon the bucolic mind than a cultivation of the taste for art? Then, as you say, a new class of supporters to the Society would be brought in, and an attraction provided which would tend to heighten the moral character of the Exhibition, rather than degrade it, as it is feared by some a few of the attractions at the late Show would do. By thus providing something interesting and attractive to the more refined people of Melbourne, a benefit would

be conferred upon the Society, while instruction and advantage would result to the community at large. Hoping to see this idea carried out, I am, yours, &c.,

October 7th.

NATIVE No. 2.

The Portable Engine Trial at the Late Show.

(To the Editor of the Journal of the National Agricultural Society of Victoria.)

SIR,—With regard to the engine test at the late show, which resulted in a Compound Portable Engine, by Ruston, Proctor and Co. (exhibited by David Munro and Co.), gaining the special prize of £20, it may not be out of place to make a few remarks, as to the practical value and mode of conducting such tests. A few years ago, in the mother country, when portable engines did not approximate in any way to the perfection at present arrived at by most makers, such tests were established at various shows, and at first the differences between the economical working of such engines were great—partly owing to the faulty construction of some, and partly to the skill of the firemen and drivers—but as time went on, competition became more eager, and the engines were improved to such a pitch, that the results of trials were much affected by chance, and more by the skill of those in charge of the engines, and, in consequence, these trials were to a great extent abandoned. In entering an engine for the trial, the exhibitor made a declaration as to the horse-power, number of revolutions per minute, working pressure, &c. Steam was got up to working pressure, then all the fire was raked out, except a handful sufficient to kindle the fuel supplied by the judges, and a weighed amount (14 lbs.) per declared effective horse-power, was supplied to each competitor from the same heap of coal. The "Prony" brake was adjusted by the judges, and the revolutions from time to time measured, and when they fell below the declared rate, the trial as regarded that engine was at an end. At first, some of the engines did not manage to run much longer than one hour, but as they improved the trial extended over five hours. At the Melbourne Show, the preceding system was not adopted. Previous to the trial, the judges had little chance of consultation. No arrangement was made for separating the fuel used for raising steam, from that used for driving the engines. The judges limited themselves to apportioning the fuel and water, per indicated horse-power, taking care that the engines were doing as much work as they possibly could, that the regulators were wide open in the one case, working with as little expansion as possible, and in the other case with the throttle valve as wide open as possible.

There were three engines entered for the trial, two compound portables, and a single cylinder engine, which latter naturally had little show of success, so that, practically, the competition was between the two compound engines. The time for running the engines was limited to half-an-hour, but preparing for the trial and getting up steam took a much longer time, and as each engine was tested separately, a day and a half were spent on the tests. If such a trial were again attempted, it would be well if a more systematic method were adopted, and one better suited to the requirements of the colony; for in the country districts where these engines are most used, fuel is abundant and cheap, and a saving of a fraction of a pound of fuel per horse-power per hour is a small matter; but an engine that has few working parts to get out of order, and those easily replaced, that is stiff and rigid when working, that works evenly, is easily moved from place to place, and is light, strong, and

durable, is of much more value and better suited to our purposes than one that burns less fuel, but is not so economical in other matters. I say this without reflecting in any way on the successful engine, which I have reason to believe would fulfil all these conditions quite as well as any other.

In modern engines the difference of fuel consumed by those of different makers is microscopic, though such a difference would be of much importance in marine engines or in locomotives, where an increase of fuel to be carried meant a decrease in efficiency.

Yours, &c.

OBSERVER.

October 9.

Veterinarian.

Meeting of the National Veterinary Association in Edinburgh.

THE annual meeting of the National Veterinary Association, held in Edinburgh last week, proved in every respect a success. Besides short communications on various subjects, and motions deprecating overstocking cows and dishorning cattle, four extended papers, previously printed, were systematically discussed in the Hall of the Highland and Agricultural Society, granted for the occasion. Under the able presidency of Principal Walley, veterinarians attended from all parts of Great Britain and Ireland. Prominent among the speakers were the principals and professors of the British veterinary colleges; Dr. Smith, the founder and principal of the flourishing veterinary school at Toronto; the president and several members of Council of the Royal College of Veterinary Surgeons, and several army veterinarians.

The first paper introduced was by Mr. Hurdall, of Liverpool, on Veterinary Therapeutics. The essayist cavilled unfairly at the system of teaching of curative medicine at the several schools, but proposed as a substitute a very lame resuscitation of the exploded views of homoeopathy. Hahneman-like, he would attack diseases with drugs which, in large doses, are stated, erroneously, as we think, to produce symptoms resembling these diseases. The absurdity of this doctrine has been frequently exposed. Sensible veterinarians and medical men alike recognise that the safe and successful use of drugs is arrived at only by the study of their effects on healthy subjects, or what are technically termed their physiological actions, which are individual inherent characters, as well marked and distinctive as their colour, taste, or other physical properties. These physiological actions, when properly studied, guide and explain the curative use of medicines. Aconite, for example, has the physiological property of moderating the force of the heart-beats and controlling capillary circulation, and hence, when used with judgment and care, proves a valuable mean of combating acute inflammatory and febrile attacks. Again, nux-vomica and its alkaloids, stimulants of the motor tract of the spinal cord, in full doses, cause tonic spasms, and in consequence of these physiological effects, beneficially rouse defective nervous power in some cases of paralysis. Upwards of four hours, which might have been more usefully employed, were devoted to controverting the numerous fallacies of Mr. Hurdall's paper.

Second on the rota came a masterly essay on "Some of the Micro-Parasites of the Domesticated Animals," by John M'Fadyean, M.B., and G. Sims Woodhead, M.D. This carefully-prepared paper extended to 55 closely printed post oct. pages, and presented an admirable conspectus of this most interesting subject, but, abounding in facts and details, it is difficult to give an abstract of it. Amongst various practical conclusions arrived at is the opinion that the bacillus causing quarter evil, although allied to, is distinctly different from, that producing splenic apoplexy; it is stated to be shorter, thicker, rounded at the ends, near one end it has a shining nucleus or spore, it is motile, and its natural habitat appears to be the loose connective tissues. This bacillus is readily reproduced by inoculation in calves, sheep, or goats, and also in guinea-pigs or rabbits; but dogs and fowls are absolutely refractory. Inoculation of

the horse or ass produces at the point of puncture a hot, painful swelling, which soon, however, completely disappears. Intravenous injection of cultivated virus is stated to afford protection against either inoculated or natural quarter-evil for a period of eighteen months. Where quarter-evil occurs in a herd, it is urged that many animals, probably from taking up only a limited number of spores, have the disease in a mild modified form, and thus become protected against future infection. Numerous experiments which have been made regarding the protection of animals from that acute form of anthrax known as splenic fever, lead the essayists to the conclusion that inoculation with cultivated virus does not guarantee protection, either from the inoculated or natural disease, for periods exceeding six, or at most, nine months.

Recent German investigations have incontestably demonstrated that glanders and its analogue farcy, depend upon bacilli very similar to those discovered in tubercle. They are straight or slightly curved, rounded at one end, are from one to two-thirds the diameter of red blood corpuscles; their breadth varies from one-fifth to one-eighth of their length; they exhibit no true movements. Pure cultivations repeated for several generations, induce in the horse and ass the distinctive characters of glanders, and in the lesions the bacilli are readily found. In this virulent disease, as in others caused by micro-organisms, subjects which have passed through one attack are protected from subsequent attacks.

"In one old horse inoculated, and which was apparently healthy, they found that the disease remained entirely localised, and then the ulcers evinced a great tendency to heal. On making a *post-mortem* examination they found that the animal had in all probability been affected with occult glanders, and that this had been present for some considerable length of time, as there were old scars on the septum-nasi, and old caseous masses in the lung. The animal had, in fact, been protected against general glanders by the previous attack."—(p. 29). By inoculating various small and easily kept animals, German investigators have discovered practical means of positively determining the existence of glanders in those perplexing, dubious chronic cases, where there may be suspicious nasal discharge or enlarged lymphatic glands, but no characteristic ulcers on the nasal mucous membrane. It has been demonstrated "that the guinea-pig is very susceptible to the disease, while in the rabbit, on the other hand, slight rise of temperature, some local irritation, swelling, and perhaps ulceration, are the only consequences of inoculation. Having found that this is the case where the inoculation is undoubtedly from a glandered animal, it at once becomes apparent that strong evidence for or against a doubtful case of glanders may be obtained by inoculating rabbits and guinea-pigs with material from the doubtful source. If the guinea-pigs die with characteristic symptoms, and the lesions remain local in the rabbit, we have strong presumptive, if not actual, evidence, that the suspected case is a case of glanders."—(p. 30). These and other experiments connected with glanders bacillus have been repeatedly verified by the essayists.

Swine plague undoubtedly results from a bacillus which was beautifully figured and fully described by Dr. Klein, of London, as far back as 1877. But further elucidation appears to be needed, for the essayists declare that the swine fever described by Dr. Klein, although similar, is not the same disease described by German and French observers, who fail to find the intestinal ulcerations so characteristic of the disease as it appears in this country. Various observers, moreover, differ in the inoculability of dogs, rabbits, and pigeons, by the virus of swine fever. Quite recently a case has been recorded in the *Lancet* of a human patient stated to have died from swine plague. Investigations at the Edinburgh abattoirs and elsewhere have convinced the essayists that the tubercle bacillus, as pointed out three years ago by Dr. Bary, of Copenhagen, is abundantly present in the udder and milk of cows badly affected with tubercle, and that there is risk of these bacilla being conveyed in the milk, not only to calves and pigs, but also to children, and being reproduced in such susceptible hosts. Such tuberculous milk it is wisely urged, cannot be safely used until it has been boiled for at least fifteen minutes. Mr. M'Fadyean and Dr. Woodhead, at the end of their valuable report, make some observations on louping-ill or trembling amongst sheep, and in rather hasty language they discredit Professor Williams' investigations on the subject. In the discussion on the paper, the care and thoroughness of Professor Williams' experiments were, however, defended and vouched for by Dr. Hunter, who has much experience as a bacteriologist. The proverbial differences of opinion

amongst doctors usually forward the elucidation of truth, but certainly nothing has been adduced to upset Professor Williams' important conclusions that louping-ill, concerning the nature and causes of which so little was previously known, does depend upon the presence in the spinal cord of a bacillus or mucorinus, which is transferred to the sheep by the tick, which fulfils the service of an intermediary host.

An interesting and suggestive paper was introduced by Mr. William Hunting, London, on "Lameness in Horses: Its Symptoms and Diagnosis." The author wisely insists that more accurate knowledge of the anatomy and physiology of the horse's limbs, coupled with practical clinical experience, are the only reliable aids in diagnosing successfully many obscure lamenesses. He frankly confesses that he frequently sees cases of lameness in which he "can neither detect the cause nor locate the mischief, and that many of them become sound again without any treatment." "Lameness," he continues, "is not of itself a disease; it is only a sign of some locomotor mischief. I know no better definition than impaired movement of a limb or limbs. Lameness as been defined as 'defective' movement of a limb; but I prefer the word 'impaired' as implying that the condition referred to is not the original natural action, but a movement altered by some cause for the worse. The word defective is open to the objection that defective movement is not always lameness. A horse may be quite sound, and yet have defective action, such defect being the original, constant, and natural action of the animal. A lame horse, on the contrary, must be an unsound horse. Irrespective of any kind of accident or disease which gives rise to lameness, we may certainly say that only three causes exist—1st, pain; 2nd, mechanical interference with the locomotive organs; 3rd, defective innervation." The action of the patient, although indicating the lame limb, cannot, in the majority of cases, Mr. Hunting insists, alone determine accurately the seat or nature of the lameness. The stifle and hock-joints, for example, acting in absolute unison, injuries in either one or other exhibit very similar abnormalities of movement. In the fore limb the inter-dependence of the several joints is not so close as in the hind limb, and hence peculiarities of fore-leg action are more to be trusted in diagnosing lameness.

The concluding paper, by Professor W. O. Williams, of Edinburgh, and Mr. R. Roberts, of Kendal, treated of anesthetics and anesthesia in relation to veterinary practice, and presented a vast amount of information on these subjects obtained by correspondence and inquiries addressed to the most eminent Continental professors and practitioners. The first question on the list was, "What are the general or systemic anesthetics you ordinarily use for the lower animals before operating on them?" To this the following is an epitome of the answers:—Ether and chloroform, many using these two mixed; chloral hydrate; subcutaneous injection of morphia by many of the authorities is recommended to precede inhalation of the gaseous anæsthetic. In response to the inquiry of what quantities of the medicines are given to procure total anesthesia, the reporters generally recommend for horses from two to three ounces of chloroform or of mixed ether and chloroform, usually in equal proportions, but in prolonged operations larger quantities will be required. Somewhat larger doses are administered to cattle. For the larger domesticated animals morphia is subcutaneously injected in doses of $\frac{1}{2}$ grain to 1 grain. For dogs, half an ounce of ether, or of mixed ether and chloroform, is stated to be administered for every 24lbs. of the animal's weight. The approved mode of administering anesthetics is from a sponge, applied to one or both nostrils, which are lightly covered with a napkin, which, while preventing waste of the volatile fluid, allows access of sufficient air, which should be in volume at least equal to that of the narcotic gas. At Alfort anesthetics are sometimes injected direct into the jugular vein. For restoring narcotised animals to sensibility the remedies employed are aspersion with cold water, fresh air, inhalation of ammonia, artificial respiration, movements of limbs, and electricity induction current. The mortality caused by anesthetics results from syncope and asphyxia, and is very variously estimated by different observers. Dogs, especially when chloroform is used, are stated by some practitioners to furnish four to six per cent. of fatal cases; but the majority of reporters aver that they have never lost a patient from anesthetics. Anæsthesia is chiefly employed in painful, serious, and delicate operations, reductions of luxations and fractures, and difficult cases of parturition. Local anesthetics are stated to be little used, excepting cocaine for operations on the eye and throat, and occasionally snow and crushed ice

for arresting hyperæmia and pain of injured parts. Administration of anesthetics, either generally or locally, is not believed to interfere with the healing of wounds, and the reporters conclude their valuable paper with the observation that science and humanity alike indicate their more extended use in general practice.—*North British Agriculturist.*

Items of Interest.

WHEAT AND RYE.—Experiments are now in progress to make an artificial crossing between wheat and rye, so as to obtain a new and standard cereal for breadstuffs.

The preservation of timber set in the ground like fence posts is a very important matter to many. The climate of Queensland is very hard upon timber just at the ground line, the reason being that decay is hastened by air and dampness combined, whereas if the same timber were in water or muck altogether, decay would hardly be noticeable. Various preparations are used to try and keep the wood sound, but we never saw anything that was more effectual, or even so much so, as a kind of paint made from finely ground charcoal and boiled linseed oil. The charcoal was thoroughly pulverised and well mixed with the oil, and then the post was dipped into the vessel and lifted again to drain. After drying the dipping was repeated, and the post was then more imperishable than if it had been charred. We have since heard that wood of any description—hard or soft—can be made to last longer than iron in the ground by making a paint with boiled linseed oil and fine coal dust. There is much resemblance between this method and the former one, and probably the effect produced by either would be similar.—*Planter and Farmer.*

SOFT CHEESE.—At the recent meeting of the British Agricultural Association, the working dairy was, as usual, a great point of attraction; the principal feature being an illustration of soft cheese making, especially having reference to the "Neufchatel," or, "Suisse double creme" make. The Association had specially engaged a young French gentleman to show the process of manufacture, and the details of the manufacture may be described as follows:—The cheeses are made with equal parts of milk and cream. A gallon of the mixture at the temperature of the air is set with only one drop of rennet diluted with three drops of water, or in the proportion of one drop of rennet to 10,000 drops of the milk and cream. The object of the maker is to obtain a rich and smooth curd. He must not therefore use more rennet than is absolutely necessary to convert the milk and cream very slowly into curd. The quantity of the rennet required will vary with its strength with the season and temperature, and with the age and condition of the milk. Warm, poor, or stale milk will require less rennet. Cold milk or milk enriched with cream requires more. The exact quantity required in varying circumstances can only be ascertained by experience. The curd is formed in twenty-four hours. It is then put into a cloth in a light wooden square frame to drain for twelve hours, and gently strained two or three times, when the cloth is then changed and the curd pressed. When the whey has been pressed out, the curd is worked smooth in the cloth with a flat trowel, and put into moulds lined with paper when it can be turned out at once and disposed of as soon as the cheese is sufficiently firm to bear packing. It will be observed that the principles of manufacture of these and other soft cheeses are directly opposed to those which regulate the making of hard cheeses, such as Cheddar, Cheshire, Derbyshire, Gloucestershire, &c., as follows:—(1). The quantity of rennet applied is very small indeed. (2). The temperature is not raised. (3). The curd is therefore a long time in coagulating. (4). The curd is neither cooked nor cut. (5). The curd is carefully and gently lifted from one draining cloth to another.

On the Origin of the Domestic Cock.

I HAVE BEEN waiting in the hopes of seeing some further letters on this subject, which has recently been discussed in the *Field* newspaper, and which certainly deserves a more lengthened investigation than that which has already taken place. I may say that I cannot agree with Mr. Tegetmeier in believing that Cochins, however distinct their shape and type, have a different origin from the rest of our domestic poultry. In a paper which was read on the above subject at the International Ornithological Congress at Vienna, last year, I went very fully into this, and remarked about Cochins, that in instances where a buff Cochin cock had been turned down in a farmyard with the intention of enlarging the common farm poultry, yet, directly the descendants of this cross were allowed to breed among themselves, what had been the result? First, the bar on the wing made its appearance in a greater or less degree; next, the cocks became red, and the hens, brown or yellowish brown; and both showed only a slight trace of their Cochin ancestor in their fluffy sterna, and somewhat shorter tails. Gradually, even these evidences of Cochin blood disappeared, and in a very few generations the cocks relapsed into the common red, and the hens into the common brown birds of the country. Now, I am sure Mr. Tegetmeier must have often noticed this, and I think he will agree with me that if the buff Cochin had a different origin to other domestic poultry, its unusually distinctive type would not so easily disappear, and revert to what must have been the colour, and, probably, the shape of its original ancestor, viz., a black-breasted red.

Take another instance, where a black Polish cock, with a white crest, a breed of great antiquity, and of quite as pronounced a type as a Cochin, has been turned down with common barn-door hens. What is the result when the progeny are allowed to breed *inter se*? The colour of the Polish cock goes first, getting redder and redder, then the crest gets smaller until it gradually dies out altogether, and no trace of it remains. To quote an example, in which it disappeared in the very first cross, a beautiful and well-bred black Polish cock, with a white crest, was put down to some common barn-door hens, to whom no other cock could possibly get access. The chickens of the first cross were plentiful and strong, but, singular to say, not a cock except one or two, showed any sign of a crest. Only one cock was black, with a double comb, no crest, and much like a black Hamburg, whilst several were common black-breasted red birds, single combed, and distinctly barred on the wing, without a particle of crest or anything to denote the slightest trace of their Polish parent.

The above occurred under my immediate observation, but, of course, is not conclusive, as other Polish cocks may have the power of transmitting their colour and crest for a longer period, although I have no doubt the result would be ultimately the same. I may add that I think the buff Cochin generally, in crosses, transmits its colour and fluff for a longer period to its descendants than in the above case of the black Polish cock, it being probably an older established breed, but in the end both colour and fluff disappear.

If we look at the great difference that exists in Polish and buff Cochins, and if we consider the wonderful care and the great length of time it must have taken to have produced them, and when we see how quickly they disappear altogether when interbred with common poultry, and how their descendants persistently return to red cocks and brown hens when allowed to continue breeding together, surely we cannot be blind to the fact that they are striving to return to the natural colour and type of their common ancestor. A glance at that very interesting case of poultry in the Natural History Museum in the Cromwell Road, will, I think, convince the most sceptical. These birds are domestic poultry—killed on the island of Taviuni—that have reverted to the wild state, and are the descendants of poultry, most probably ordinary barn-door fowls, turned out by the early settlers more than a century since. One cock is a most beautiful black-breasted red bird, elegant in shape and drooping in tail, and in size somewhat between a black-red Bantam and a large black-red Game cock. Another cock is a most interesting example of a duck-wing cock, reverting to the black-red colour; the hens are small and yellowish-brown.

From the above it will be seen that, in my opinion, based principally on experiments in crossing the various breeds of Game fowl with each other, and with common poultry, and for the reasons above quoted, all fowls are descended from the one original wild ancestor, many celebrated naturalists think, *Gallus Bankiva*, but that our early poultry existed for centuries on this earth in the shape of small black-reds with drooping tails and single combs, and in no other form, until in process of time, owing to careful selection in crossing and breeding, and taking advantage of various sports, and especially owing to variations occasioned by climate, they very gradually developed into the different breeds of poultry which exist at the present day.—E. CAMBRIDGE PHILLIPS, F.L.S., in *Live Stock Journal*.

The Means of Increasing the Wealth and Prosperity of Victoria.

(Continued.)

(BY M. LANDY, BRIAGOLONG.)

IN continuance of this subject, I wish to fix your attention to these points:—That grazing in itself will not materially increase the wealth and prosperity of the people at large, inasmuch as it does not make the most and best use of the soil of the country is capable of producing, and does not give prosperity by the expenditure of labor. Neither will the production of cereals, they are too bulky, too heavy in proportion to value for export to a distant market. The farmer growing cereals solely, brings grist to the mill of others, but little meal is returned to himself; he certainly produces freight for our railways, and loading for foreign merchant services, commissions and charges without number. In doing this, however, he impoverishes his soil, and leaves little improvement of a permanent character in its stead. My object is to direct your attention to something better and more enduring than this. I want to see plantations of vineyards and orchards, groves of olives, and nut producing trees, not only producing wealth and prosperity for ourselves, but going down as an inheritance to our posterity. I am not prepared to say I can point out all the good uses that can be made of our soil and climate, I can only offer suggestions that may arouse thought. The progress of civilization requires that intelligence be devoted to these subjects. Knowledge in all departments has in our age vastly increased; shall it stand still in the matter of vegetable production? We read that in other countries, special care is taken that both instruction and education in these important branches of human knowledge, is provided or countenanced by the State. How much more is it necessary here, where we have to cope with conditions that are new to the most of us, both in soil and climate. In France since 1879, classes for agriculture have been created in each of the normal primary schools of the departments. To each one or two of these, a professor is appointed by the State. The practical schools of agriculture are six in number, there are twenty-four school farms. The expenditure of the Ministry of Agriculture, amounts to about 24,000,000 francs, over two million pounds sterling. In Austria, great attention is paid to the proper education of agricultural teachers. The expenditure of the Minister of Agriculture was, in the year 1868, 616,300 gulden (£56,000), in the year 1880, 10,507,120 gulden. In Germany there is at least, one agricultural school in every province, besides a high school of agriculture in Berlin, and another in Poeslesdorf. In Italy, Denmark, Norway, Sweden, and Netherlands, agricultural schools and colleges are established. Even in Japan, an agricultural college has been established at Tokio, and three English professors retained. Mr. Dow has pointed out the splendid agricultural colleges established all over America, sending out their skilled pupils year after year. What an influence this must have in improving the agricultural industry of the world. It is really not within the power of private individuals to test the values of various economical plants suited to our climate, so that we have to turn to other countries, to see what may be done in climates similar to our own. In going back to the special product category, I may allude to the production of cheese, which has been successfully established. In the year 1876, the value of exports of cheese and butter, amounted to £53,857; in the year 1882, this amount swelled to £118,852. This increased production speaks for itself. Again, in potatoes, although not at all a special product, yet amounts

to a considerable value in comparison to the area bestowed to its culture. In the year 1876, the value of potatoes exported, amounted to £65,242; in the year 1882, £110,544. This product, doubtless has reached its limit, and can only be produced to supply our Australian requirements. In fruit there is a very small export, and small increase within the same periods being from £5940 to £12,724. Still, with the small area under cultivation, it is satisfactory to note an export at all. In this and raisin culture, there is undoubtedly a large field open for profitable culture in the home demand alone, the value of imported fruits, including raisins and currants, amounting in the year 1882, to £204,150. Recollecting we have an import duty of two pence per lb. on imported fruits, there should certainly be ample scope for industrial energies in that direction. It is very poor trade to export low priced commodities, and import high priced ones, where the conditions of soil and climate are suitable for the latter. In jams, jellies, and preserves, we imported to the value of £2787 over exports. This, surely, is an article our climate and soil is quite capable of producing. Even in nuts, we imported to the value of £6722 over exports. In bottled fruits, £3346; dried fruits, other than raisins and currants, £18,266; and fresh fruits, £75,266. These figures are for the year 1882, but I expect will not be very much altered up to the present time. If this occurred in a country where such commodities could not be grown we might understand it, but in our own country, so favoured by nature, the cause rests only on our own supineness. Here in Gippsland, we have soil and climate naturally suited to the production of all those fruits and nuts, that would yield to the cultivator wealth, health, and happiness. Talk of vice, poverty, and crime, they must disappear like the shades of night before the approach of day—in the face of industries that give ample employment to old and young, and create a glowing interest in the beauties and utilities of the vegetable world. How much more our interest attaches to a tree than to a stalk of corn or a blade of grass; it is a thing of beauty itself. A well-trained and cultivated tree stands out like a piece of sculpture for our admiration, pleasing the eye and cultivating our taste for the perfect and the lovely. Can we wonder at the ideal state of human perfection, being man placed in a garden of fruits and flowers, and the glorious canopy of heaven around. Nothing can give a more ideal state of human happiness, not palaces nor castles, built, perhaps, upon human misery and grinding tyranny. It is the one grand pursuit that unites the ideas of utility and beauty. Even in the matter of medicine, fruit will not only prevent disease, but, in many instances it has proved one of the best medicines to cure it. In countries where malaria prevail, it has been discovered, according to the *Country Gentleman*, that nothing is a surer preventive of its effects than a regular supply of fruit. So you can see the advantages of raising fruit are of a very varied character. I will just give an instance of what a tree may produce in this colony, although there may be others to surpass it. The statement was made some years ago by Mr. W. Kilsby, of Muckleford, who kept a correct record of the result. One apple tree, the Kentish Fillbasket, produced in eleven years 383 bushels, or about 6 tons 15 cwt., and during the last three years 51, 65, and 50 cases, or about one ton per year off one tree. Can anything reward human industry better than this? The farmer or horticulturist cannot now afford to be ignorant of anything that science can do for him, or knowledge can point out. For this purpose must we read; the times are past when men laughed at the knowledge acquired by reading. The man who does not read, is narrowed down to his own little experience. Small, indeed, is the mind who does not seek to learn from others; in this respect we are all as children, we all want to learn. The united experience is large, the individual experience small. In the domain there is scope for the noblest ambition, the highest honour, for in its perfection the good of mankind, and the happiness of our race is concerned. I would have a cross of the legion of honour in horticulture, in agriculture, and in all industrial art. Surely this would be more ennobling than that other cross acquired by the slaughter of our kind and the wail of the widow and orphan. I would wake up our young men and women to a sentiment and love for the perfect in industrial art, for happiness would follow in its wake.

But to go back again to the practical part of the subject. Nuts, notably the filbert or cob nut, would flourish in almost all parts of the mountainous parts of Gippsland, finding a home in every flat and gully. Nuts are consumed in every part of the world where they can be obtained. The quantity imported into Britain,

principally from France and Belgium, amounted in value in 1875 to £581,355. Kent is the principal county in England for the growth of nuts, and great attention is devoted to their culture. The late Mr. Webb, of Walcot, a very large grower, states that he had six people for a quarter of a day gathering nuts off one tree. "Early in September we commenced gathering, and from half an acre we had 1300 lbs. of Cob Filberts, and also from another three-quarters of an acre, 1700 lbs., besides apples, pears, and potatoes. The 1300 lbs. brought £91, forty bushels fruit £20, potatoes £7 10s.; equivalent to £237 per acre." The price quoted seems very high, but Mr. Webb's new varieties bring exceptionally high prices. In Victoria, an orchard of full grown nuts, would yield from 1000 to 2000 lbs. per acre. Mr. Webb further states, that they are certain bearers six out of seven years. Writing upon the canned fruit industry, the *San Francisco Chronicle* says:—"Never have there been such magnificent displays of canned preserved fruits, as were made at the State fair and some of the district fairs this season, and it is worthy of note in this connexion, that nearly all the fruit so put up, was the handiwork of farmers' families. One lady had more than twenty varieties put up in glass jars, picked the fruit with her own hands from the trees, in order that no vestige of a bruise should spoil its appearance. The fruit in many instances appeared so clear and transparent, that one could almost fancy he was looking through it. Fruit put up in such an attractive form and placed upon the Eastern market, would not long remain without customers. This suggests the thought that every farmer who raises fruit might carry out fruit canning with profit. If one woman excels, others may do the same. The various canneries are turning out a superior article of canned fruit, and are employing a large number of women and girls in all branches of the business. A man with anything of an orchard might secure one of these skilled hands if he is not versed in the business, and put up his own fruit. So particular are some of the fruit canning factories, that if one of the employes in peeling a peach break a piece out of either half, so as to mar its shape, it is immediately thrown aside." Should any want to know what canning is, I may explain it is the preserving fruits for any length of time in tins or glass jars. The housewife is no longer at the mercy of the season, delicious fruit can be on the table every day in the year. All descriptions of fruit are suitable for preserving, but notably peaches, apricots, nectarines, pears, and cherries, and plums to a limited extent. Mr. Dow states that in the year 1882, 100,000,000 lbs. of fruit was produced in the State of California, of this 32,000,000 lbs. were canned the remainder dried. The year 1883 would show an increase of 20 per cent. upon this. So great was the demand for apricots in the year 1882, that the canners made heavy contracts with orchardists early in the season, before the fruit had even appeared on the trees, agreeing to take whole orchards at from 2½ to 4 cents. per lb. Dried fruits had certain advantages over canned in some particulars, notably in reduction of weight, and consequent lessening of freight and carriage. The previous authority gives a description of the grand establishment of Gen. Bidwell, of Chico, Sacramento Valley. The fruit ranch alone covers 1000 acres, and every acre is tilled as carefully as the smallest and best kept garden. Again, speaking of Santa Clara Valley, "this is the greatest orchard district of the State. Its whole length of 54 miles, in width from 12 to 18 miles, is covered throughout with orchards of fruit trees."

It will then be seen that in California, a country with similar climate and similar conditions to our own, fruit raising has been successfully established, and constitutes one of the wealthiest resources of that wealthy country. After an orchard is planted the spaces between the trees are used to grow vegetables, principally potatoes, beans, pumpkins, &c. Care, however, is taken not to grow corn or grain, as it is injurious to the growth of the trees by extracting the moisture. Vegetables will do no hurt so long as they are cultivated and prevent the growth of weeds. Then, as to profits, the trees are estimated to bear the third year enough to pay expenses. The fourth year they may be expected to average 50 lb. of fruit. This would be about from £20 to £40 per acre. This will leave no doubt in your minds but that there is more wealth in special industries than in grazing or grain growing, and must leave more prosperity among all classes, from the large employment it affords. In 1878, according to official statements, the land appropriated to fruit culture was 4,500,000 acres; upon this flourished 112,000,000 apple trees, 28,000,000 pear trees, 192,270,000 peach trees, and 141,260,000 grape vines. The total value of

the fruit crop was estimated at 138,216,700 dollars, equal to half the value of the wheat crop of the United States. In the year 1873, there were, in the month of December, landed in Liverpool, from the United States, 90,000 barrels. The principal varieties shipped from America are the Newtown pippin, the baldwin, and the greening. In Duxbury, Plymouth Co., Massachusetts, is a tree which measures in its girth 12 feet 5 inches, and has yielded the enormous quantity of 121 bushels in a single season. The varieties of various fruits are very extensive, and every day increasing. Apples number from 800 to 900, peaches are as numerous, peaches and apricots count by the hundred. The varieties desirable to cultivate need not be numerous once the variety suited to a district is noted. In the special industries list I need hardly mention hops, you see them around you, and the benefit they have given in employment and inducing industry and improvement. In comparison with these, I have endeavoured to point out that there are wider fields open for industrious enterprise to those who are not afraid to leave the beaten path of cereals and grazing. I am cultivating the cider apple, and also purpose to include the perry pear. This is an industry that has not been prosecuted to any extent, but for which there is doubtless an opening. Tea, I think, should not be omitted from our list, as it has become such a universal beverage. Baron Von Mueller has given it as his opinion that the tea would flourish in the mountain district of Gippsland—at our doors, in fact. We should produce all our soil, climate, and geographical position enables us, for not till then do we make the best use of the land of our adoption. In America, 50,000 tea plants have been distributed by the Bureau of Agriculture. Experiments made by the department in the south after Japan methods has produced an article pronounced by experts to be an excellent Oolong flavour. We have, in fact, such a varied field of special industries that I cannot possibly point them all out, but if I am fortunate enough to suggest one that will minister to our prosperity, and that of our country, I will have my reward.

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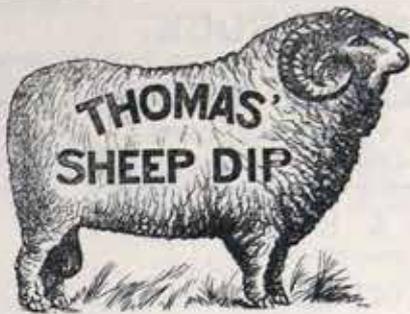
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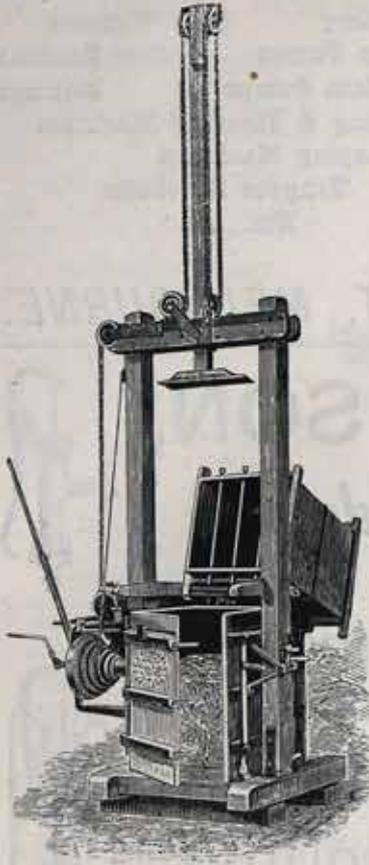
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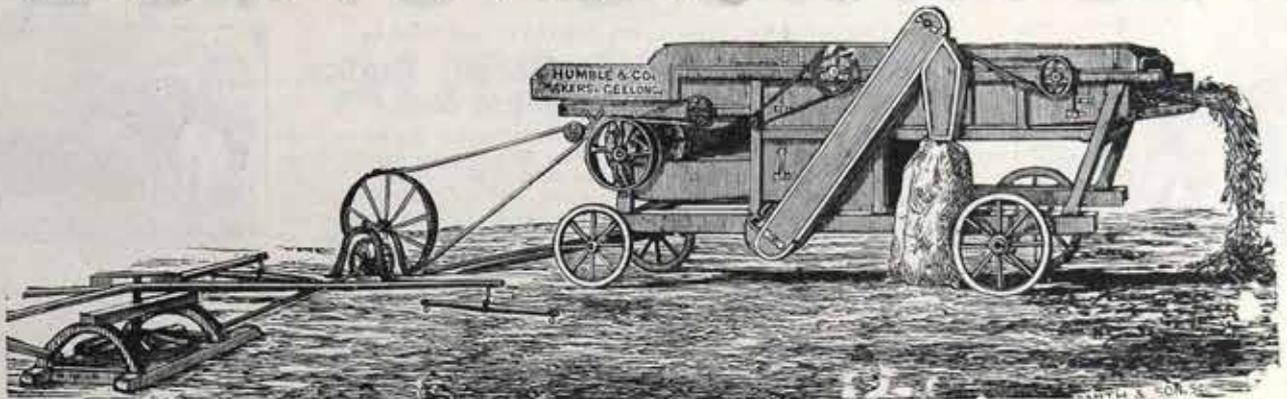
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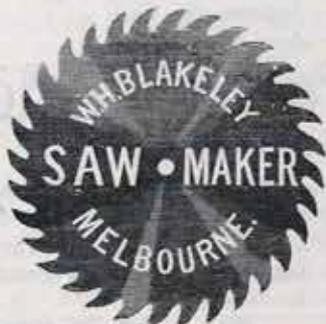
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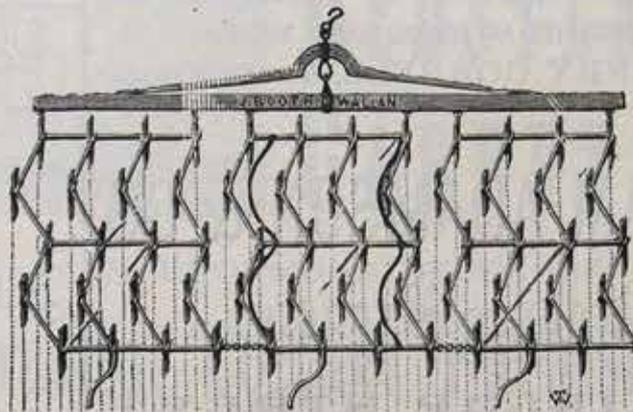
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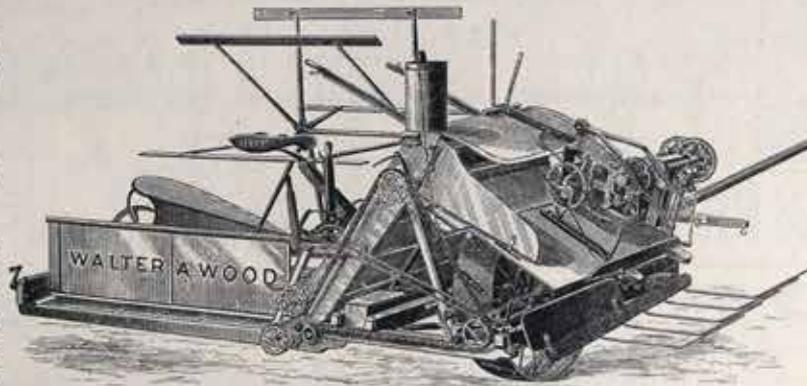
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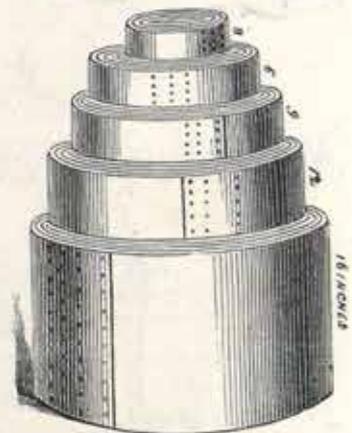
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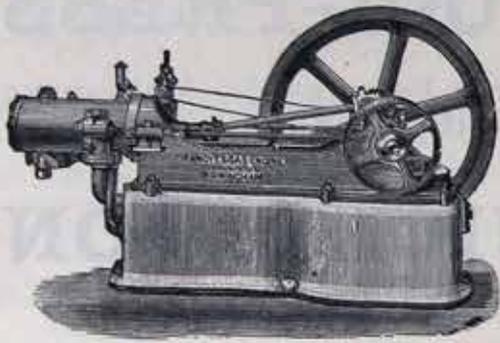
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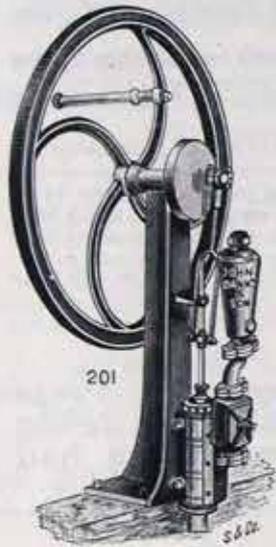
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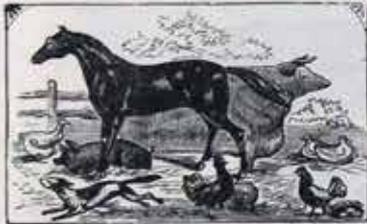
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VICTORIA

Vol II.—No. 16. [Read as a Newspaper.]

MELBOURNE, NOVEMBER 12TH, 1886.

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Then 'twere well done 'twere quickly done."

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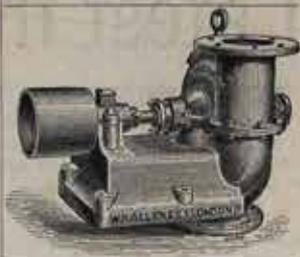
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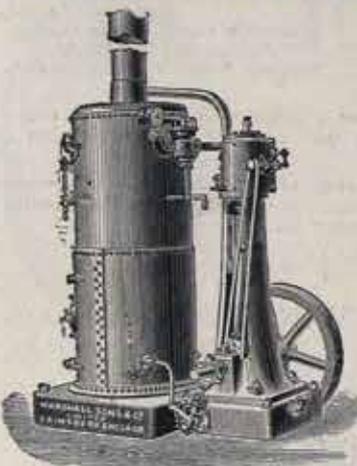
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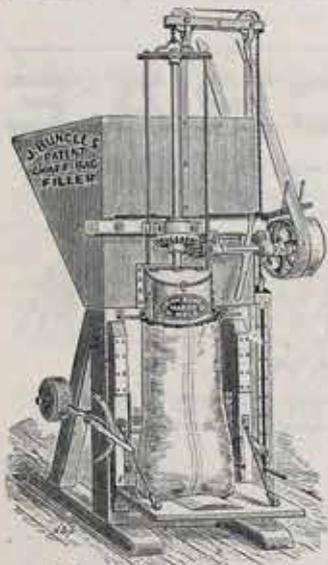
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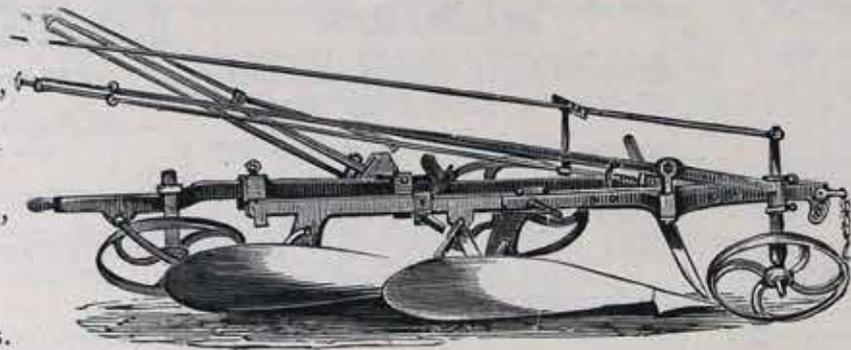
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THREE TIMES WINNER OF THE FIFTY-GUINEA GRAND CHALLENGE CUP.
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All communications for the Editor to be
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Bourke Street West, Melbourne.

Business communications to the Publishers,
Somerset Place, 6 Little Bourke Street West.

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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
requested to forward to the editor the dates on
which their respective exhibitions will be held,
also copies of their prize schedules as soon as
they are published.

NOVEMBER.

- 11, 12, Smeaton.
- 18.—Hardie's Hill, Grenville.
- 18.—Traralgon.
- 24, South Gippsland, Port Albert.
- 25.—Kyneton.

DECEMBER.

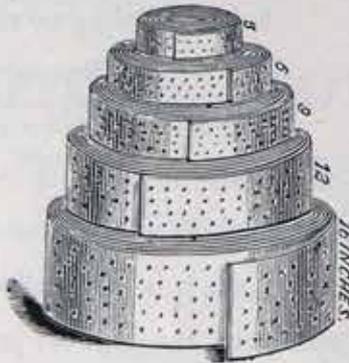
- 9.—Kilmore.

FEBRUARY, 1897.

- 3.—Dandenong.



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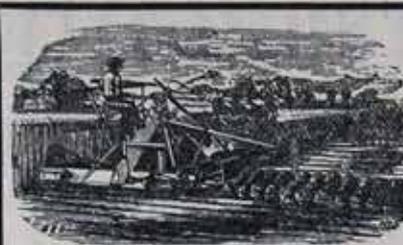
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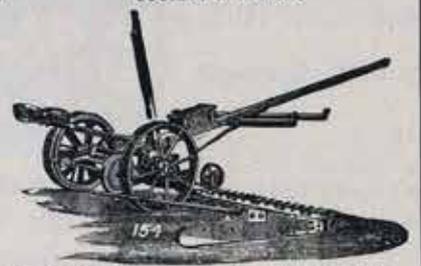


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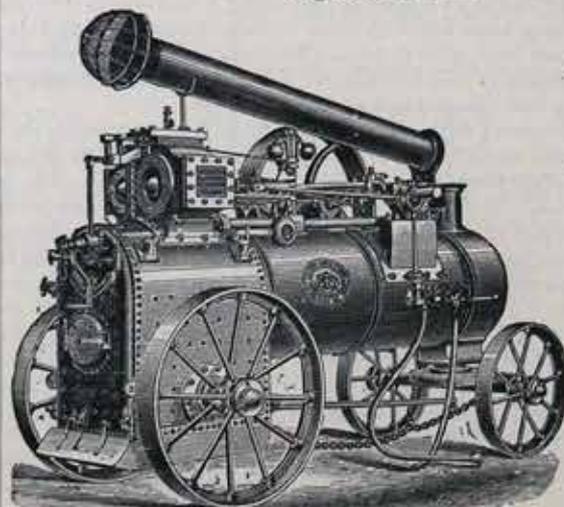


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The Journal
OF THE
National Agricultural Society
OF VICTORIA.

MELBOURNE, NOVEMBER 12th, 1886.

Suggestions.

THE following is a summary of suggestions received by the National Society, in answer to a circular sent out by the Council to the judges and stewards at the late Show. One hundred and ten circulars were sent out, and eighteen replies were received.

E. M. BOND (judge). With reference to the jumps, would advise the Council to have the ground ploughed on the landing side not less than 30 feet. All Hunters to be approved by the judges, whether they are sound enough for a hunter or not. In future either ropes or a fence should be put up further from the jumps, to keep the public back.

JOHN DANIEL (steward). Three judges would be better than five in draught horses. They would do it as well, and much quicker.

THOMAS HARMER (steward). The jumps are too high, and the jumping too often repeated. The effect is to cause great excitement, and to tend to divert the attention of visitors from receiving all the advantages such a grand exhibition is well calculated to impart. Also, the Council might insist on a more liberal supply of attendants (by exhibitors) on cattle exhibits on the first day of the Show, so that delay would not be caused to the judges in their work. Would suggest that the jumping should be only resorted to in a modified form, which would serve all the purposes of an Agricultural Show. With these exceptions, too much praise could not be given to the Society for the splendid management of a concern of such magnitude.

EDWARD BAKER (steward). General complaints of horse and butter-cow boxes being locked. Many enter cattle, and do not intend to exhibit, to get a stall for fodder and attendants to sleep in, causing expense to the Society. Steps should be taken to compel owners to have their exhibits ready to be judged, so that judges should not be kept waiting a moment for the next lot. Pig pens not high enough, and not room for large pigs to extend themselves. General complaint—excessive charge to Grand Stand.

W. R. VINCOR (judge) said:

"I would advise a double ring instead of a single ring as now; this refers to the outside ring. Let the outside ring be about one chain outside the present outside ring, and have it picketed, or otherwise enclosed, to prevent people getting over, and, if thought advisable, there could be small gates and gatekeepers at various points round the enclosure. While the judging of stallions was going on, the public could be admitted so as to have a close view of the small roped rings which are used for that purpose, or a small extra charge could be made for that privilege if thought advisable by the committee. But while the judging of hunters was proceeding, all the people should

be outside the proposed picket fence, and thus would be one chain from the nearest end of the jumps. The attention of the jumpers would not then be arrested by the crowd, and less chance of accident occur. To minimise this chance of accident I would suggest making the second jump of the double in front of the stand a log wall, say four feet high, and either the first jump, or the one after passing the stand, or the last jump, a sod wall or a jump of which the top eighteen inches be of sods. These jumps a horse is very unlikely to fall at, and a few sods could be stacked on the landing side of the sod wall to repair it if necessary, and if a horse struck it, the dust would at once indicate to the judges that he had not jumped it cleanly, and there would be little or no danger of a horse coming to grief at such an obstacle. The best horse in a hunting field is rarely the best in a show ground with a crowd pressing close on him, and horses will hit and fall that would never do so in the hunting field, hence my desire to have as little risk of a fall as possible. The fact of a horse hitting the jumps being sufficient for the judges to put a black mark against him. If the crowd could be kept back from the jumps a full chain the same as they are on the Flemington racecourse during a steeplechase, then there would not be so much necessity for an outer ring, although I have seen many narrow escapes of people being run over by the trotters and buggy horses owing to the absence of an outer or double ring. At Deniliquin, when I was president of the Society, I was the means of having a double ring erected, a chain wide, and it is undoubtedly the best improvement made on the ground. The public are never allowed inside it, and there is no chance of accident, but there were several before it was erected. Your ring, however, being so large, I think the public might be admitted except during the jumping. There would be no objection, however, to having a roped area round the judges' box say with a radius of 50 yards, taking the judges box as a centre, and admit a limited number of the public or ladies with or without a small extra charge, but I certainly think a double ring of some kind very necessary. Again in the buckjumping contest, which was a great attraction, some of the small ring-posts should be removed as they are very dangerous, and many horses, if bucking properly and determinedly, don't and can't see where they are going. I have seen horses killed and men hurt even in the open country through bucking against a tree or the corner post of a stockyard, and again, few horses will buck badly in a crowd. I have seen bad buckjumpers in the bush sold in the yards in Melbourne, and ridden quietly through the crowded streets."

The sheep and pig pens might be greatly improved, as persons cannot conveniently handle and examine the sheep as they are now penned. The pens should not be more than 3 feet 6 inches high, and should have convenient gates for persons interested to examine the sheep.

C. M. LLOYD (judge), would wish to refer to note in judge's book *re* ponies. There were four distinct breeds of ponies shown in one class; for the judges to select from which was highly unsatisfactory, both to the judges and the public. In future would respectfully

suggest that more classes be made. Considered all the other arrangements in the classes he had to deal with were perfect.

ROBERT HENRY (judge). That a special prize should be offered for a mare best adapted to produce weight-carrying hunters and hackneys. It is usual for a prize to be offered for a stallion for such purpose; but nothing is said of the mare. Breeders have been educated by the opinion of judges, so often expressed in their hearing, that nearly every horse man can point out a stallion likely to produce the stamp of horses above alluded to; yet these very men seem to utterly fail to breed such horses; the failure most frequently arising from want of merit in the dam. Also, when a prize is offered for a stallion best suited to beget hunters, hacks, and carriage horses, as the case may be, the judges be requested to state in writing the class or stamp of mares such horses should be mated with to produce the style of horses desired. Young men and amateur breeders would thus obtain the opinion of practical judges. That the Society offer a prize for boys under 14 years of age riding their own ponies, open to all kinds under 14 hands high; to be judged for general turn-out, pony, riding, and equipments. "I saw this at the last Sydney Show, and right well the lads looked. They were dressed in every conceivable riding-dress; and their parents and friends, who were very numerous, watched them with great interest. But besides gratifying those interested it has a most useful tendency—that of educating the young horseman to ride nicely, and to see that his equipments are well-appointed and properly put on his pony." As to the general management the arrangements were almost perfect; the courtesy and attention of the stewards in the department in which he acted could not be surpassed.

A. CRICHTON (judge). Arrangements for last Show appeared to be very good indeed. No suggestions to make beyond those contained in letters to the Society's journal of July and September on judging at Shows—Quality or Value.

J. L. THOMPSON (judge). Would be advantage to have cards put on boxes and stalls some days before the Show. Pigs should not be allowed in horse boxes prior to the Show, as horses do not like the smell of them, and will not feed well. Knows these suggestions are of minor importance; but it is attention to small matters that generally ensures the success of any undertaking.

J. J. SMART (judge). Would suggest that there should be more divisions in the class for carriages, buggies, &c., with say only one prize in each of any value, more especially in reference to buggies, as there are so many descriptions, all good of their kind; but what would be considered by some judges excellent quality and most fitted for town use, would be ignored by others, as against other descriptions more suited for country work. Believed some objection was taken to an imported under-carriage, as not being the work of the exhibitor, and as no special conditions were furnished, the judges gave the prize to what they considered the best. "Under any circumstances it would be very difficult to award to purely colonial manufactures, as so many parts have to be imported, and, therefore, I would suggest that this department of the shows be open to all

comers. Our customs duties on all vehicles are so high, that there is not much chance of foreign competition, and if so, it would cause desirable emulation amongst our builders, and the publicity given to exhibitors with the opportunities for making sales, should compensate for any disappointment in not getting a prize."

JOHN SPENCER BRUNTON (steward). Would recommend that a prize be offered for pony phaetons. All competing exhibits in saddlery should be brought together under one roof. "I believe it would give greater satisfaction, if separate practical judges were appointed for saddlery, instead of the same judgment taking both sections, viz.:—saddlery and harness."

DUNCAN MCPHERSON (judge). With regard to the department in which he acted, nothing could be better; he could suggest no improvement. "The whole grounds and everything connected with the show are the best I have seen anywhere. The Highland Agricultural Society's Shows are nothing to it."

J. L. CURRIE, Jun. (judge). With respect to those classes in which sheep competed in groups, thought that five in a pen was too many to compare against one another especially if there were a number of exhibitors. Would suggest that in these classes the number be reduced to three. They would make quite as attractive an exhibit, and the judging of them would be much more satisfactory. With this exception, thought the classes were very well arranged. Would hint that a little improvement might be made in the pens for holding the sheep, the present arrangement of hurdles for gates being hardly up to the standard of the Society's appointments in other departments. Would suggest that these be replaced by swing gates, to give easier access to the enclosures, and better facilities for taking sheep out while judging is going on.

W. R. RUTLEDGE (judge). Considered the Society should take steps to improve the sheep pens on the show grounds. Knew of no society in the colony with such bad accommodation for show sheep. A good deal of the old fencing could be utilised if proper gates were hung to allow people to pass in or out, or for the judges to have the sheep brought out."

H. HEARNE (judge). Much stronger partition required in pig pens, particularly those between the boars. "I would point out that the butter, cheese, and bacon exhibits are far below what they should be, and are really unworthy of the Society. When it is considered that the returns from the dairy and pig-styes form a considerable item in the accounts of any properly managed farm, the indifference to exhibit can only be attributed to the miserable accommodation afforded, and I certainly think if these legitimate farming exhibits, instead of being placed in an obscure corner, crowded round by carts and waggons, and hidden by a tent of miscellaneous goods, glass bottles, knitting machines, &c., &c., were properly housed in a comparatively dust-proof building, in a more prominent position, the result would be a very satisfactory increase in the interest taken, and in the number of exhibits shewn, not, perhaps, the first year, but subsequently,

when the farmers found out the accommodation provided for them. Another matter is the fixing of proper screens round the butter and cheese, to keep the public from messing them about, and taking them away. There is no reason why the public should be allowed to take the cheese away almost bodily, or why the exhibition should be attended with so much loss to the exhibitors. Perhaps this has something to do with the paucity of exhibits. In all fairness a farmer should no more lose his exhibits, than Messrs. M'Ewan and Co., or M'Lean Bros. and Rigg, should be expected to allow the public to help themselves to hammers, saws, or any other article, from their tempting show." There is insufficient space to stage bacon properly, and no space for the erection of trophies, which would be done for advertising purposes. There should be a rule that dairy produce should be exhibited only by the manufacturer.

JOHN BLYTH (judge). Was disappointed at seeing so few exhibits of grain. An effort should be made to induce growers to take a greater interest in forwarding samples for competition. Not much really good grain round Melbourne, but inducements should be offered to growers further afield.

R. B. BRINKLEY (judge). Would suggest that prizes for barley, and all grain, should be given for a quantity of not less than 1000 bushels, such quantity the judges might view in the respective establishments, to satisfy themselves that the amount was there, the exhibitors to send samples of same to show. The judges could award by samples from bulk, taken at time of inspection, and compared with show samples. By showing only 12 bushels it actually pays a man to have such samples picked over, which would hardly be possible with a large bulk.

LUKE NOLAN (judge). Would suggest more classes in dogs, as, for instance, separate sections for each class of setters, and that each breed of dogs be entered under their own distinct class. Also, that objectionable animals should be at once removed from the grounds.

The Ballarat Show.

The show held at Ballarat last month was a very interesting one, though there was a falling off in the stock classes. There was not a large number of draught horses, but some very fine animals were shown, and there was a fair turn-out of thoroughbred stallions. The hacks and hunters were better than usually seen at country shows—the jumping of the latter being a great attraction. The fine grand stand of the Society was crowded while the trial was going on. A very limited number of cattle was shown, though there were some superior Alderneys, and some good dairy stock. The pigs, which were very good, were mostly the property of one exhibitor. There was a large and interesting collection of poultry and pigeons, and a good show of dogs. The dairy produce and miscellaneous exhibits made a most attractive display. They were set out in the splendidly lighted sheep-shed, which answers admirably for this purpose. Ladies' fancy work, fine art exhibits, and all classes of interesting nick-nacks were shown here, and were

admired by a large crowd of interested visitors. No better argument than this is wanted in support of the suggestions of our correspondent "Native No. 2" *re* having fine arts, &c., at the National Society's Show. A considerable quantity of buggies, waggons, &c., was shown, and there was a good turn-out of machinery exhibits for a country show. During the afternoon, the grounds were thronged; everything going off without a hitch.

The Sandhurst Show.

A strong effort was made by the Bendigo Society to make their show, which was held last month, a success—the result being a very creditable turn-out. On entering the yards at the apex of the triangular block of ground on which the exhibits are displayed, the whole thing stretches out before one; giving the idea of a very large show. Some good draught stock are shown here, but the class is not a large one, nor is the thoroughbred section, though a considerable number of stallions are exhibited. There was a good turn out of hacks, hunters, &c., and a grand cavalry tournament. The Society has put up a small grand stand, which, however, did not fill, as the nature of the ground is such, that all the trials can be very well seen from the surrounding high ground. Very few cattle were shown, one well-known shorthorn breeder sweeping the board. A few sheep of excellent quality, and about half-a-dozen pigs were penned. Buggies and carriages made a fine display, and there was a good turn-out of machinery exhibits. In a building erected on the grounds for military purposes there was a good turn-out of miscellaneous exhibits, and a splendid display of flowers. The wines of this district are famed the world over, there being great competition for the Society's prizes. At the luncheon we sampled so many, at the solicitation of a popular M. P., that the wonder is we ever reached our train. The attendance was very fair, but the people don't turn out here as they do in Ballarat.

The Farmers' Co-operative Business Association of Victoria.

We notice that the above society is being formed, and we strongly advise the farmers of Victoria to take advantage of such an excellent opportunity of uniting for their mutual benefit. As far as we can see the Association promises well, both in regard to its directory and the objects set forth in the prospectus. Some of the leading agriculturists in Victoria are among the former, headed by the well-known name of Mr. John Finlay, of Wyuna, as chairman. It is only reasonable to suppose that men who have successfully managed their own affairs, will make a company prosperous. As to the objects of the Association they are manifold, but the leading idea is to make the farmers their own agents, and thus retain for themselves some of the profits hitherto made by middle men. By selling their stock, wool, wheat and dairy produce, through their own company, they will not only obtain better prices, but will receive a portion of the profits each half-year as dividends. The good sense of the farmers will at once detect the *bona fide* nature of such an Association, which differs

Meetings.

Council.

An adjourned meeting of the Council of the National Agricultural Society of Victoria was held on Friday, 22nd October, 1886.

Present—Dr. Plummer (President) in the chair, with Messrs. J. G. Brisbane, F. Peppin, D. R. McGregor, W. Learmonth, J. M. Peck, James Hearn, James Garton, T. Learmonth, D. Munro, and J. Currie.

The minute relating to the adjournment of the ordinary meeting was read.

Letter read from Robert Simson, who regretted that, having to leave town on important business, he would be unable to be present at the meeting as intended. Received.

The Secretary brought Mr. Bethell's case, in relation to a special prize, before the Council.

Mr. Garton moved that the Society cannot award the prize, as there were no entries, but the donor, if he sees fit, may give the prize to the winner of the first prize for buggy. Seconded by Mr. Peppin, and carried.

A summary of the suggestions received from judges and stewards at the late show was then read over, and afterwards considered *seriatim*.

It was resolved, on the motion of Mr. Brisbane, to adopt Mr. Bond's third suggestion, and that the question of having three fences (two new) round the trotting track be referred to the Works Committee.

It was also resolved, on the motion of Mr. Hearn, that the Council view the show grounds.

With regard to Mr. Lloyd's recommendation, Mr. Peck moved that it be a recommendation to the Show Committee to have more classes for ponies. Seconded by Mr. Garton, and carried.

It was also resolved to recommend Mr. Henry's suggestion of having boys riding their own ponies.

With regard to Mr. Currie's suggestion, Mr. McGregor moved that there only be three sheep shown in a group. Seconded by Mr. Peck, and carried.

Mr. Brunton's suggestion of separate judges for buggies and harness was adopted, as was Mr. Smart's, with regard to more classes for buggies.

The President then threw out a suggestion that the show should be extended to a fortnight, commencing with machinery, &c., and introducing various classes of stock exhibits and other attractions at intervals. The President stated he did not wish the matter gone into at that meeting. He only threw out the suggestion for consideration.

Mr. Peck moved that a letter be sent to the Sheepbreeders' Association, asking if the Society made sufficient accommodation for the proper display of sheep, if the Association would co-operate. Seconded by Mr. McGregor, and carried.

The meeting then closed.

The ordinary monthly meeting of the Council of the National Agricultural Society of Victoria was held on Monday, November 8th, 1886, pursuant to notice.

Present—Dr. Plummer (President) in the chair; Messrs. Robert Clarke, J. M. Peck, John Bond, J. Hearn, J. Currie, D. R. McGregor, W. Learmonth, T. Brunton, J. Garton, D. Mitchell, F. Peppin, J. G. Brisbane, and the Hon. C. Young, M.L.A.

The minutes of the previous ordinary and adjourned meetings were read and confirmed.

Election of member of Council vice Mr. Job Smith, resigned.

Mr. Jones (Messrs. T. Robinson and Co., implement makers) was elected.

The Finance Committee's report, submitting the monthly statement of accounts, and recommending payments amounting to £62 17s. 2d., was read.

Mr. Currie moved the adoption of the report, Seconded by Mr. Garton, and carried.

CORRESPONDENCE.

From Francis Henty, stating that other engagements prevented his attendance at the meeting. Received.

From Warrnambool Society, asking the Council to suggest five or six gentlemen competent and likely to act as judges of general farms in that district. Messrs. J. Hurst (Romsey) P. Mitchell (Romsey), David Mitchell (Richmond), W. J. Lobb (Darraweit Guim), W. Thomson (Kyneton), Hon. J. Buchanan (Berwick), J. Gibb (Berwick), and T. Harmer (Bundoora) were nominated.

OFFICE ACCOMMODATION.

The Secretary stated that in view of the large expenditure at the yards, he had hitherto refrained from asking the Council for extra office accommodation, furniture, and fixings; but the conveniences were now quite inadequate to the increased work of the office, so that he applied for more.

Mr. McGregor moved that the matter be referred to a committee, consisting of the President, Messrs. Peck, Currie, Mitchell, and the mover. Seconded by Mr. Currie, and carried.

Mr. Brunton moved that the Council adjourn to Friday, the 19th inst., at 11 o'clock a.m., at the yards. The architect to be invited to be present. Seconded by Mr. Garton, and carried.

The meeting then adjourned.

The Federation of Agricultural Societies.

DEPUTATION TO THE MINISTER OF AGRICULTURE.

THE Central Council of the Federated Agricultural Societies of Victoria waited upon the Minister of Lands on October 28th, for the purpose of asking for a grant of £500 and for the introduction of a bill to give effect to the federation of agricultural societies. The deputation consisted of Dr. Plummer, chairman of the council; Mr. H. S. Parfitt (delegate of the North-Eastern District Group), Mr. J. B. Miller (Wimmera district), Mr. J. A. Taylor (Eastern district), Mr. W. Thomson (Central district), Mr. Jas. Castles (Northern district), and Mr. J. H. Connor, M.L.C. (Western district); and was accompanied by Mr. Bouchier, Mr. T. Langdon, Mr. Graham, Mr. Harris, and Mr. Cameron, M.L.A.'s.

The deputation asked that the Minister of Lands should carry out an implied promise given by Mr. Service to grant £500 towards the preliminary expenses of the federation, and to introduce the bill which Mr. Dow himself had endeavoured to get passed last session giving effect to the federation. The scheme proposed was that the colony should be divided into 11 districts; that one board should be established in each district, to be called the district board, to which each society in the district should send one representative; that a central board should be established, to be composed of one delegate sent from each district board; that the Secretary of Agriculture, or other nominee of the Minister of Agriculture, should have a seat on the central board; that the duties of the district board should be to deal with all matters relating to agriculture and kindred interests generally; that the central board should deal with matters remitted to it by the district boards; and that a library and museum of agriculture should be established in Melbourne.

The federation has been partly carried out. The district board and central council are in existence, and about 70 have given in their adherence to the movement.

Mr. Bouchier introduced the deputation.

Dr. Plummer having explained the object of the deputation,

Mr. W. Thomson said he did not think that there would be any objection to the amalgamation if it were thought desirable. The district he represented believed that it would be of benefit to the country, as it would enlarge the representation of the agricultural interests on the Council of Agricultural Education. At present the number of members on the council was too small, and the state was over-represented.

Mr. H. S. Parfitt said, that the production of the agricultural and pastoral interests was greater than that of the of the mining interest, but the mining interest received a much larger subsidy from the state than the agricultural interest. The agricultural interest was entitled to an increased vote, but all they asked for now was the redemption of a promise made by the late Government.

Mr. Cameron said that personally he had no objection to the amalgamation of the central council of the federated societies and the Council of Agricultural Education, but at the meetings of agricultural societies he had attended it had been opposed on the ground that it would lead to too great centralisation. If the basis of the Council of Agricultural Education were amended, he did not think there would be any objection to the proposal.

Mr. Connor, M.L.C., Mr. Langdon, M.L.A., Mr. A. Harris, M.L.A., Mr. Graham, M.L.A., Mr. Jas. Castles, and Mr. Jas. Taylor also spoke.

Mr. Dow said that since the movement for federation was inaugurated the Council of Agricultural Education had come into existence, and a magnificent endowment of land had been given to them. This had caused the question to assume a different aspect, as some of the objects of the federation had been met. He sympathised with the deputation, and would do all he could to assist them. It was too late to get a bill passed this session, and, before he could ask for any vote, he would have to have something definite to lay before the Treasurer. There was apparently a difference of opinion with regard to the proposed amalgamation, and he suggested that the deputation should ask the various societies they represented to express an opinion on the subject. He would like to be able to tell the Treasurer either that there was to be an amalgamation or that the federation of agricultural societies was to be carried out independently of the Central Council of Agriculture. If there was to be an amalgamation, the Agricultural College Act would have to be amended.

After some discussion, the deputation agreed to adopt the suggestion of the Minister, and it was arranged that the Central Council of Federated Agricultural Societies should meet to consider what further action should be taken.

A meeting of the Central Council of the Federated Agricultural Societies of Victoria was held on October 29th, at the offices of the National Agricultural Society, Bourke-street west, with reference to the proposed amalgamation of the federated council with the Council of Agricultural Education. A proposal was made some time ago that the two bodies should be amalgamated, and that to enable this to be done the number of members in the Council of Agricultural Education should be increased, and necessary alterations made in the Agricultural Colleges Act. A deputation from the central board had waited upon the Minister of Agriculture, in order to obtain his assistance in securing the desired object. Mr. Dow, however, suggested that, before anything further was done, steps should be taken to ascertain the views of the agricultural societies of the colony as to whether it would not be more desirable to proceed with the federation of the societies, independently of the Council of Agricultural Education. The present meeting was called to consider the matter. There were present—Dr. Plummer, in the chair; Mr. J. Castles, Rochester; Mr. H. S. Parfitt, Wangaratta; Mr. J. A. Taylor, Bairnsdale; and Mr. J. B. Miller, Murtoa. On the motion of Mr. Parfitt, it was decided that it was desirable to take steps to complete the federation of the agricultural societies in the colony. It was further resolved that the chairman and the hon. secretary (Mr. Thomas Patterson) should be requested to draft and forward to each society a circular explaining the present position of the agricultural federation movement, and asking the view of the society upon the point indicated by the Minister of Agriculture. The meeting then closed.—*The Argus*.

THE best cure for setfast on a horse's back is excision, and dressing with some common healing ointment.

widely from the bubbles sometimes placed upon the market. It is not anticipated that more than 5s. per share will be called up. Full particulars can be obtained from the secretary, Mr. Clarence Pitman, 81½ Little Collins-street west, to whom applications for shares may be made.

To and from Adelaide.

A hurried run to Adelaide affords an opportunity for a few remarks. The overland railway, although the middle section will not be out of the hands of the contractors till after the end of the year, has been available for traffic for some little time, so that those who prefer a railway journey to water may now be accommodated. Though no time is gained, it is well to go to Ballarat by the late train and stay there over night. This does away with the necessity for rising at an unearthly hour to catch the morning train, which reaches Ballarat after ten, when a decent start can be made a little before eleven o'clock. Ballarat is spoken of all over the colonies as a nice place at which to spend a few days. Some time ago we had an opportunity of proving it so. In the lake, the gardens, the mines, and the town itself there is much of interest; while Craig's is a really nice hotel not very far behind the York in Adelaide, which is about the best in Australia, though it is said there is one in Townsville, Queensland, which beats them all as far as regards the table. But we will never get to Adelaide at this rate. In travelling north, and passing through the Wimmera plains, great expanses of wheat are seen, looking well after the late rains, which will just save the crops. The Bay of Biscay land, consisting of heights and hollows, and giving the surface of the ground the appearance of an ocean, is a phenomenon for which we could hear no reasonable cause assigned. There are vast areas of this land here, and the more 'Bay of Biscayfied' it is, the better is said to be the quality of the soil. Horsham, the capital of the Wimmera country, is an old established town, which, however, scarcely realised our expectations. Dimboola, on the edge of the Mallee, is reached at dark, and a stoppage is made here for the night. Dimboola is said to be a South Sea word for—well Sheol; so its temperature may be imagined. Starting next morning, Nhill and Lillimur are passed; fields of wheat extending on either side of the line till Serviceton is reached. This is the new boundarytown where a very extensive network of rails is being put down, evidently with the idea of its being an important station. Bordertown is reached about midday, and shortly afterwards a start is made in the South Australian train with an enormous engine which has a cow-catcher in front of it. The country after leaving Bordertown is of a wretched description, mallee and scrub, varied by scrub and mallee. The train rolls along, over thirty miles an hour, on white limestone ballast straight ahead for miles and miles through this miserable country, the line not being fenced on either side. Nothing of interest, except one belt of grazing plain, is seen till the Murray is reached. The water is a fine sight after the dreary mallee, the river being very much wider than it is at Albury or Echuca. The train winds along the bank through deep cuttings, in the last of which it lets a howl long and loud enough to wake the dead; then turns sharp round and crosses the river by a splendid bridge at right angles to the stream. The rest of the journey is performed in the dark, a sight of what we understand to be the best part of it for scenery being thus missed.

Adelaide is a very pretty, clean town, lying at the foot of interesting ranges of hills, of which fine views are obtainable from different parts of the city. The town has an older appearance than Melbourne, so

much of which has lately been rebuilt. Throughout the city are fine squares planted with trees, giving it a nice open appearance. King William Street, the street of which Adelaide people are so proud, is wider than Collins-street. It has a long gently rising sweep, so that on entering it from the north, the lower end, the whole sketch of the street is in view, presenting a very fine appearance. Rundle Street, the Bourke Street of Adelaide, crosses King William Street at right angles. It is rather narrow, but has good buildings where the principal business of the city appears to be transacted. The horse-trams are a great institution in Adelaide. They run in all directions. While they have a more primitive look than the cable trams, they serve their purpose admirably, travelling as fast, and being very convenient. There is a platform in front on which one or two may stand with the driver. We always rode here in order to see as much as possible, and to talk to the drivers who are most civil fellows, and give every information willingly. They have an amusing way of getting the trams up-hill. One horse is sufficient on the level ground, but at the bottom of a hill a boy has a second horse ready harnessed, which is drawn up beside the tram, which scarcely stops as the boy jumps on the low platform, drops the catch of the swingle-tree on to a hook on the tram, and drives his horse up to the top of the hill, where he takes a pull at him, lifts the swingle-tree off the catch, and jumps off with the horse loose, the tram not having been stopped at all. There is a saddle contrived on the harness of the second horse on which the boy mounts and rides away back to meet the next tram and help it up-hill. The horses used are very heavy—for the trams require a good pull at starting—so that at the pace they travel they must wear out their legs quickly. This will always cause a demand for horse stock, which, from an agricultural point of view gives these trams a pull over the more scientific cable ones. The waggonettes, which, almost all, have two horses, and the hansoms are better kept than those in Melbourne, and the charges for them are reasonable.

One of the prettiest drives is out to Magill, which lies right at the foot of the mountains. The road out is in itself very pretty, for the houses all have gardens in front, with olive and other trees growing luxuriantly, while the ever-varying view of the hills adds to the interest of the scene, and increases the beauty of the prospect. A visit to the Botanical Gardens is one of the treats of Adelaide. The plants have a more tropical character than those in Melbourne—palm trees growing in profusion, and plants and flowers generally having brighter colours. The roses, which are a specialty here, are very fine. Bright coloured flowers are massed together over the grounds with telling effect. On a sloping bank, a brilliant mass of colour growing right down to the water, in which it was reflected, and peeping through the loose drooping branches of the willow trees, was lovely to look at. The aviary is in the gardens, making them of course much more attractive. Fancy luxuriant vegetation, brilliant colour, water, birds, a bright sky, and an atmosphere laden with the odours of Araby. A vivid remembrance of this, of the gardens described in *Boccaccio's De Cameron*.

Through the courtesy of Mr. Shaw, the English captain, we had an invite to visit the cricket grounds, which are very nicely situated in North Adelaide. Approaching the grounds from the north, a grand view of the surrounding country is obtained from the hill above. With the aid of a powerful glass the players down below may be seen as distinctly as from the stand, and a splendid view of the hills on the left, and of the water on the right, is obtained. On reaching the grounds where we spent a few minutes the day we started back, the appointments are found to be very good, but the attendance of people is limited. They

don't turn out here as they do in Melbourne. The Englishmen, in their appearance, their equipments, and everything else, seem far superior to the South Australians. One of the South Australians, although caught, stood at his wicket till the umpire declared him out. Shortly afterwards the young fellow came on to the stand, when Mr. Shaw said to him, as he was passing, "That was a good catch." "I don't believe I was caught," returned the other. Mr. Shaw did not reply, but the quiet smile on his face was worth going a long way to see. The South Australian evidently had a good deal to learn.

The Adelaide people are very kind, courteous, and obliging. They seem to be older, more firmly established, and more settled down than the Melbourne people, without any jealous priggishness, and with an almost entire absence of that which cannot be better expressed than by the slang word, "frill." They are nice people.

Having determined not to go back by rail, it was very tempting when a notice appeared of the English mail steamer being due in a couple of days, to wait for her, but business necessitated a return by one of the Adelaide Steamship Company's boats. After having secured a berth the day before the steamer sailed, and after having been told she was due at a certain time, it was annoying to find, on going on board, that she was to call on the way for loading, thus delaying her for nearly a whole day. This sort of thing is scarcely conducive to confidence in the Company's management. Water is infinitely preferable to rail, to those who can sail, for the swing of the boat is very different to the accursed jar of the wearying train. To anyone, whose nerves are unstrung, a journey to and from Adelaide by rail, under excitement, would be just about enough to make him a second Mr. Fairlie, in *The Woman in White*.

The boat steamed steadily on round the uninteresting coast till she called at Kingston, in Lacipede Bay, reaching the long pier just as another steamer started for Melbourne. This boat, which came from further west than Adelaide, had scarcely got well clear, when a Chinaman came rushing up. He had been indulging in a stroll on the land while his boat was taking in cargo, and arrived too late. He kept repeating "Thirty bob gone long that one," and worked himself up into a great state. However, our captain, a real good fellow, took compassion on him, and let the poor beggar come on board our boat. Kingston is a port whence a good deal of South Australian wool is shipped, 700 bales going by our boat. After loading up here, an uneventful passage brought us safely round the coast, up the Bay and river, to the wharf at Flinders-street. Then we bustled ashore, and once more mingled with the busy throng of Marvellous Melbourne.

ATAVISM—When a hen passes her second laying season she is never so good, and will generally fail to pay for her keep. Any hen which layed badly her first year should not be kept a second year, as she may be a bad strain, or if of a pure breed she may have some impure blood generations back which she has followed. Such a bird should not be bred from, as she is almost sure to reproduce her bad qualities. We are not always certain to have first class birds from first class parents, though when the parents are good and their ancestors for four or five generations have been good, we are generally sure of very good offspring, but if we breed from an inferior specimen, even if its ancestors were ever so good, we need not expect to get good stock. As in cattle, so in poultry. Good blood and good specimens are sure to reproduce their like, but good blood and poor specimens are doubtful, and poor blood and even fairly good specimens are more likely to breed back than reproduce their like.

Correspondence.

Judging at Shows—Quality or Value.

(To the Editor of the Journal of the National Agricultural Society of Victoria).

SIR—In your last issue Mr. A. Crichton failed to see why I called on him to answer the question how to judge horses for value without considering quality, or *vice versa*. To make an explanation would not in any way advance the subject under notice, and I am willing to accept the inevitable, as most men from the old world consider it is characteristic of the Australian native to be forward, and even a bit cheeky. If I have been one, or both, I apologise, and trust for pardon; yet I claim the right to differ. I am opposed to value as the basis likely to give most satisfaction in awarding prizes at Shows, and the one judge system. I have always taken value, from a breeder's point of view, to mean the money value in the market—the return the producer gets for his skill and management, supply and demand regulating a higher or lower price. Accordingly, quality in my opinion should form the basis likely to give most satisfaction in awarding prizes at Shows. Quality, as I have been led to believe, meant something superior or possessing great merit, including all the rare and special characteristics that breeders are trying to produce for usefulness, strength, durability and beauty. I must admit there is a difficulty in dealing with quality when it is too small, but Societies might step in here, and instruct their Judges on that point. When we get size and quality combined they never fail to come to the fore “and *sae* will they yet.”

Soundness is another matter that is receiving notice, and very proper that it should; but Societies should decide and state what is to constitute unsoundness in breeding horses, and have them judged by a first-class Veterinary authority, as it is plain to anyone whenever our practical Judges deal with that matter, they have proved beyond a doubt they had taken upon themselves a responsibility they have been seldom or ever fitted for.

Mr. Crichton asks, what is the result of the three separate opinions in judging when they all disagree. If this is the weak point in the three judge system, I claim it is even then better than one judge. It is reasonable to expect the three judges appointed will each have as much skill and ability as the one who is appointed to do all the work himself.

With the three judges, we have two selecting the best animals, and admitting they disagree, it would be a much easier task for the third judge to place the selected animals than carry a ring of say 15 to 20 in his mind, which, with the one judge system, he would have to do. It is admitted that three good judges are seldom appointed together, but there should be a better chance to get two good judges out of three, than one good one out of one appointed. It would be a happy time for the exhibitors with the one judge system if he was a bad one, placed on such a high throne of authority, handing round justice with air of infallibility, without a check in any way. This is too good.

I have a paper before me, *The North British Agriculturist*, dated June 23rd, 1886, with an account of the Glasgow Show, and the names of the judges. I see they appoint three judges. I was informed some time since they carried out the one judge system at this Show, but it is not correct.

In conclusion I feel disgusted that this subject has not been taken up by an abler pen than mine. I meet exhibitors who complain and find fault, but when they go home they forget all about it until next Show, but now is the time, and here is the place to give their views to mend the wrong, or put them right, for at Show time exhibitors mouths are shut or I should say ought to be. As I have given my views on the subject, I will now leave the matter to others equally interested.

Yours, &c.,

Rochester, November 1.

NATIVE.

Australian Stringhalt.

(Continued).

PATHOLOGY.

The pathological changes are chronic inflammation, and thickening of the mucous membrane of the stomach and large intestines, with abscesses and ulcers infested with worms living and dead. The intestines literally swarm with parasites, males and females. Some are embedded in the tissues; others are attached by their heads. Some are free, and vary in size from the trichonema arcuata, microscopic objects, to the large common ascaris megaloccephalus, a foot long. These worms are of several distinct varieties, and are in myriads. The spinal cord and nerves present nothing abnormal to the naked eye until the popliteal region is reached, where clots of extravasated blood and serious effusions are seen; also an unusual amount of fatty matter surrounding the bundles of nerves within their sheath. The arteries and veins are healthy, and free from any obstruction whatever. The muscles of the back, loins and haunch are all healthy; but the muscles surrounding the thigh are flabby and wasted in a most conspicuous manner, the stifle joint looking very prominent. The muscles are progressively paler as their lower attachments are reached, their texture getting tendinous, from atrophy, and yellow, from fatty metamorphosis of the muscular fibres. The affected muscles were: the biceps femoris, vastus externus and internus; these were atrophied and pale; but the gastrocnemii, solens, flexor perforans, perforatus and popliteus, flexor matatarsi, and extensor pedis were extremely atrophied, and of a dirty, oily appearance, all undergoing fatty metamorphosis. I found the tibio femoral joints, in chronic cases, to be seriously diseased. The posterior attachment of the capsular ligament was ruptured, and synovia of a slight bloody colour, extravasated into the popliteal space and surrounding tissues, the synovial membrane being in a state of chronic inflammation. The cartilage on the inner condyle of the femur was worn flat, and so thin that the congested blood-vessels could be easily seen through it on the bony surface. The tibia has overridden the articular surface during extreme flexion, and had rested on the outer neck of the femur, the friction exposing the bare bone, and the crucial ligaments were also roughened by the attrition with sanguineous effusion, and small blood-clots in the joint. The fetlocks also bore evidence of inflammatory changes in the synovial membranes, the sheaths of both tendons and ligaments, and also the synovial fringes, being highly congested and fatty, and the cartilages being almost worn through in patches. The hoofs become deformed, the soles sink, and the toe elongates; and the other minor structural changes are seen, consequent on the prolonged perverted muscular action. That this disease may not be mistaken for others, I will briefly describe the most important of them:—

Spinal injury causes more or less paralysis. If the horse is down he sits like a dog, and he cannot rise without great difficulty, and after many attempts; he has a helpless swaying motion of the hind quarters, the tail hangs limp and almost useless; he cannot walk straight and steady, but strikes one hind fetlock with the other foot, and places a hind foot across the front of the other; he can move backward with difficulty, but without any snatching up or spasmodic action of the hind legs. Chronic cases show atrophy of the muscles of the loins and haunch.

Recovery is rarely complete, on account of the injury involving the spinal cord and some branches of nerves.

A horse suffering from a chronic spinal injury is called chinked in the back, or a shiverer. Such a one can go forward and trot with ease, frequently without any snatching up of the hind legs; but make him go backwards, and the muscles of the haunch and tail tremble or shiver with slight spasm, the hind legs are snatched up and held outwards in a rigid manner, and set down on the ground carefully. Such animals sleep standing, and if they fall down, rise with difficulty.

Stringhalt, as ordinarily understood, is a intermittent spasmodic affection of one hind leg, which disappears when warm at work, and scarcely interferes with the horse's usefulness. It seldom affects both legs. Recovery rarely occurs, and it is incurable. He can advance the foot and place it on the ground voluntarily, and propel himself and draw a load. There is no alteration of external structure to indicate the existence of this disease.

A comparison of these diseases will show they are distinct from Australian Stringhalt; and the prognosis of the latter is favourable, although from 20 to 50 per cent., or even more in a mob, may become affected, but only a small percentage will retain the affection sufficiently long to become chronic and incurable. My theory being correct, the disease is then not only under control, but can be cured in the early stages; and, what is more important, it can be prevented. The contagion is the ova or larvæ of worms eaten in the spring and autumn on young, fresh herbage, or taken in the water.

The drought and heat of summer and the frosts in winter arrest germ life. It is almost needless to say that spontaneous generation of life has no place in science in these days; a horse can no more breed worms than an orchard grow oak trees, unless ova and acorns have been first deposited. It is interesting to know that horses are infested with several distinct varieties of worms at the same time, and they are far more numerous and widespread in these colonies than many suppose. To give an idea of their procreative properties, Krause mentions a two-year-old horse, which contained 500 ascarides, 190 oxyurides, 240 strongili armati, several millions of strongili tetraeanthi, 69 tænia, 287 filaria, and six cysticerci. Sixty millions of eggs have been counted in a single worm; and in a colony of a tape worm a thousand million of eggs. These figures show how extremely easy it is for one animal to infest a paddock with ova, and should the soil, herbage, season, and weather be favourable and the unfortunate victims, a mob of horses, be brought together and only graze for a few hours under such circumstances they cannot fail to become infested, and I believe such has been the cause of every outbreak of this disease that has recently been investigated; and this will account for travelling horses becoming suddenly attacked, assuming the sudden invasion of myriads of these minute pests into the digestive organs of the horse, in a few days after being hatched, and getting active, they individually attack the mucous membrane, some boring right through it, and take up their abode in its structure, others attach themselves to its surface, all feed on its nutrient juices. The result is intense irritation, and interference with the circulation and nutrition, the irritation disturbing the sympathetic nervous system is conveyed through the mesenteric nerves and communicates the impression through the lumbar and sciatic ganglia to the great crural and sciatic nerves, and acting on their peripheries, or terminal extremities, produces the spasmodic muscular movements which are so diagnostic a symptom of this disease. This phenomenon is known to physiologists as reflex nervous action. Reflex nervous action is shown in young dogs when infested with worms, by cerebral disturbance, they have fits, and when teething suffer from convulsions; vomiting is a familiar illustration of reflex action. It is also seen in horses after eating wheat, they have laminitis,—tetanus, arising from a wound, is also from similar reflex nervous action; and many other instances could be cited. We see the same effects in a horse suffering from colic, or spasm in the bowels; irritation, pain, restlessness, and its results are remarkably identical; it causes a peculiar and diagnostic symptom called “kicking at the belly,” supposed to indicate the seat of pain. This action is spasmodic, and quite involuntary, and is caused by reflex nervous action, indicated by sudden spasmodic contraction of the flexor muscles of the hind legs. We know that various articles of food introduced to a horse's stomach will cause colic, such as change of food, new corn, green food, dry coarse feed, and also worms. Each of these may cause pain, irritation, altered peristaltic action, cramp or spasm of the bowels. Ruminants are far less subject to spasmodic colic, because their nervous system is more lowly organised, and they are less susceptible to pain.

The persistence and continuation of the affection is coincident with the development of the parasites; they increase in size and activity, and the irritation they set up only subsides as they arrive at maturity. Such an explanation of cause and effect agrees in every particular with the facts observed in the history of this disease. The disease may only be seen in one paddock or a run, showing it must contain a special infective material, as horses in the next paddock, with the same formation of soil, herbage, water, and climatic influences, all escape. The disease is only seen on cold, wet, retentive soils, and in horses that have been in such paddocks, whether temporarily or otherwise. Complete recovery is very remarkable, clearly proving that the disease arose from a temporary cause, and that it was strictly functional in character; there could have been no actual change of structure as in most diseased processes.

SUSCEPTIBILITY.

Horses of all ages and classes are equally liable to attack; brood mares, perhaps, suffer most; cobs and ponies seem the least susceptible, and young animals suffer less than the aged; whether horses are working, unbroken, or for breeding purposes, makes no difference; and strange horses contract the disease quicker than local ones. The recovery of horses brought into the stable, or taken on board ship for a voyage, is well known, and proves that feed and situation are important elements in connection with recovery. That it is not a poison, either mineral or vegetable, or sand in the stomach, is proved by history, symptoms, progress, and post mortem examinations. Foals never show it whilst sucking their affected mothers.

That it is not rheumatism, or the result of over-driving, a sudden chill, exposure to rain or cold wind, must be apparent, because such influences have for ever existed everywhere, and this disease is of recent introduction, and its geographical extent can be clearly defined, at least in this colony.

TREATMENT.

The curative treatment is to expel the parasites by the administration of anthelmintics, and dose after dose may be required for this purpose. It is necessary to remember that brood after brood have to be poisoned, and that when they are ensconced in a living being, whose tissues are also liable to suffer from the introduction of drastic drugs, it is impossible to effect our object without perseverance; and to prevent reinfection it is advisable to move the patients to a sound paddock, or, better still, into a yard or stable, to feed liberally, and also constantly supply salt with their food.

PREVENTION.

Preventive measures, I consider, are very important; with this object avoid putting an affected animal into a paddock at all favourable for the development of worms. Infected paddocks should not be used by horses, even temporarily; half an hour's grazing may infect them, especially during the spring and autumn. The first grass after summer will scour animals, and has been known to cure them, because at that season the parasites are prepared for exit; microscopical examination shows this, for many males are encysted and dead, and females pregnant with fully developed eggs; some are viviparous; and it is to be noted that this is the time the paddocks get contaminated, and suitable soils may retain their ova for an indefinite period; so that one affected animal introduced (though he may be eventually cured) means later on (all circumstances being favorable) a hotbed of infection for future tenants of the paddock.

An interesting case came under my notice of a recovery, almost as sudden as the attack; it occurred accidentally; the owner jumped on the affected horse, which had only been attacked a few days, to help to yard an obstreperous beast; and warmed with the excitement he worked hard and fast, and afterwards he was astonished to find his horse had recovered. The explanation is that the excitement increased the peristaltic action of the horse's bowels, and purged him, and so expelled the parasites; and subsequently stable-feeding established a cure. The obscurity of the subject, and its importance, has entailed my giving much detailed information, which has increased considerably the length of this report.

My thanks are due to those gentlemen who assisted me in the inquiry, by generously giving their horses for observation, and subsequent post mortem examination, as this proved to be of great importance in making the investigation.

Breeding and Feeding Pigs.

The following is an extract from a first prize essay published in the *Western Agriculturist*:—The breeder should be very particular in selecting the stock from which his future herd and profits are to come, as a mistake at this juncture may deprive him of all chances of success, and eventually drive him out of the business in poverty and disgust. The stock breeder is most likely to succeed with that breed which he fancies most, be it white or black, large or small. Only the best representatives of the most popular families and leading strains should be procured in founding a herd for the production of pure-bred stock. These the novice should buy only from thoroughly reliable and experienced breeders, and leave to them the selection of animals. With the best stock and the ripest experience of those who have gone before to guide him, the beginner is fairly started on the road to success.

The farmer who raises swine for family use or the market is not so particular about the breed as he is for individual merit—he is no stickler for pedigree, but he is for bone and muscle. He will have in his successful pork producers strong constitution, powerful digestion, and quiet temperament. A strong constitution is necessary to ward off disease; good digestion enables them to assimilate food and convert it into pork; while quiet temperament renders them easily handled and prevents loss of blood by needless roaming and ranging. When grain is scarce and high, and food is made up of milk, mill feed, or fruits and vegetables, or when infectious diseases prevail, the small, fine-boned breeds are undoubtedly the best. But when grain is cheap—when clover and corn are produced in abundance—and hogs are bred and fattened in large numbers, those of large size are preferred; for on account of their greater weight they are generally preferred by shippers, and they can be held and fed longer with profit when prices are not sufficiently high. They are also better adapted to feeding with cattle.

Every farmer and breeder who desires to improve his stock or keep up his herd to a high state of excellence must use great discretion in the selection of the boar. A certain amount of laxity may be permissible in the females of the herd, where the sole object is to breed for slaughter, but even here a pure-bred boar is of prime importance. It is to the male, in a very considerable degree, we must look for the good qualities of the future herd; and were it for no other reason than the comparative ease with which a common herd is improved by the judicious use of a few well-bred males, this would be of permanent consideration. The typical sire should be of perfect symmetry, and share in a marked degree all the attributes of the breed he represents. He should carry, with a masculine appearance, a head far removed from coarseness, with broad jowl and short face, betokening great aptitude to fatten. He should have a level back, with equal thickness at the shoulders, loins, and hams. Fine in bone, with hams and shoulders extending well down, and body evenly covered with long, silky hair, betokening good constitution, and are evidence of careful breeding. Such an animal, backed up by a pedigree showing unmistakably that his parents and remote ancestors were of the same character, is bound to show up good results when placed at the head of any herd. It is a generally accepted idea among experienced breeders that the boar should be more blocky and compact than the sow, on the theory that the offspring in outward form resembles the sire more than the dam. Another rule is that the male perpetuates, in a marked degree, the characteristics of his dam; hence it follows that the boar should not only descend from a well-bred, good shaped sow, of the highest quality and characteristics, but her nursing ability is of the greatest importance, and should be carefully inquired into. As the boar is one-half the herd, and he is expected to impress his qualities with certainty on his progeny, he should be kept quiet and in a strong, healthy condition all the time. How long he should be kept for service will depend upon his value as a breeder. He would have to be at least two years old before anything would be determined. If he proves to be a valuable sire at that age he should be kept as long as he retains his health and vigour, which may be five or six years.

The highest success in swine breeding cannot be attained without the most intelligent care in the selection of brood sows. The breeder should have a well defined idea of the form and qualities which he aims to produce in the offspring, and as this ideal is not to be attained by chance or haphazard breeding, he should exercise great discretion in selecting sows to be used in the herd. One of the most important requisites for a brood sow is prolificacy. To insure this trait, we should select our breeders from the litters of sows that have already been prolific. Sows that produce from eight to ten pigs are to be preferred. Sows can have too many pigs as well as too few. A good average sow can suckle profitably about nine pigs. Usually larger litters are uneven in growth, and are so weak when they come that the per cent. of loss at farrowing time is very great. Next to being prolific, the sows should have great vitality, not only to impart this trait to her numerous offspring, but to assist in bearing the trials of maternity and nourish the litter properly. The full girth round the heart tells the lung power; the strength of kidneys is amply sufficient if the loins are broad, while the long, well developed barrell tells of strong digestion and room within for food and fetus. A neat head and ear, strong limbs and symmetrical form, cover most of the important points and features of a good pig producer. We should

have added a good disposition to the above requirements, as this point is very necessary in handling the sow or young pigs successfully. If the offspring is to be sold for breeders, additional care should be taken to get mothers of high merit, that have the peculiarities of the breed well defined, and at the same time being as free as possible from any objections that may be incident to the breed. The tendency to reversion is so strong in all improved breeds of animals that it is only by the most careful and judicious selection that we can hope to keep up or improve a herd. The breeding sows may be selected when from three to six months old. They should be separated from the main herd, and such a system of feed adopted as is best calculated to develop their muscular and bony structure. A slop made of milk, ground corn and oats, with a small proportion of wheat middlings, makes an excellent food for the young sow. The proper age to breed should not be overlooked. We do not think it best to breed young sows before they are a year old. By breeding younger their growth and full development are checked, their flow of milk is most likely to be scant, and the pigs are most likely to be small, uneven in size, and few in number. A great many farmers who breed extensively for market, prefer good grade sows to pure breeds, or a cross between a large and a small breed—the Berkshire and Poland-China being generally preferred for this purpose. It is quite probable that these crosses, where they are made judiciously and understandingly, produce better feeders and better meat than any of our pure breeds. By crossing a pure-bred boar upon vigorous, healthy, common sows, you get pigs that have in them the hardiness of the dams and the excellence of the sire combined. They mature early and seem to possess more thrift and vigor than any of the pure breeds.

It is the custom with most swine breeders to have two litters of pigs in the year, breeding their sows so that spring litters will be farrowed about March or April, (September or October in Victoria), according to the latitude and climate of the breeder; and for fall litters so that pigs will come from the middle of July to the latter part of September. When only a few hogs are raised on a farm the better plan is to have the sow litter but once a year, very early in the the spring, then by careful feeding they can be made good hogs by January following. The sow should not be too fat when bred, but rather in a thriving condition during pregnancy. Always have a good warm shelter provided for the sow to have pigs in if they come in March. At the time of farrowing, as well as afterwards, the sow should be disturbed as little as possible. Her food for the first few days should be warm and sloppy, and small in quantity. After a week or ten days, feed more liberally. Nothing is better than skim milk and ground oats to make a sow give a large quantity of milk and the pigs to flourish. Next this would be Indian corn meal thoroughly cooked and made into gruel, with sufficient bran in it to keep the bowls open. When the pigs are three weeks old they should be fed a little milk in an enclosure separate from the sow. They learn to eat rapidly, and although they take but little at first, as they grow older they consume more and more, so that by the time they are ready to be taken from the sow there will be no perceivable check in their growth, besides being much larger and superior to pigs that only suckle the sow. The nice point in raising pigs is to keep them growing. When they are old enough to wean, a little corn meal may be added to their rations. When they are old enough to take kindly to grass or clover they should not be neglected, but given a little feed regularly to keep them growing rapidly.

Diseases is more prevalent among swine than any other class of farm animals, as a rule. This is brought about by defective feeding, watering and sheltering. Monotony of diet is the worst fault in feeding. The physical well-being of the hog, like other animals, demands a variety of food, and unless this variety is furnished the health of the animal is impaired. It is also necessary to feed sound and clean food. Filth and manure on the food is just as inimical to the health of swine as of other animals. When we consider the quality of the drink supplied to hogs we have yet greater cause to wonder that the amount of disease is not greater. Foul drink is just as productive of a diseased condition of the body when drunk by a hog as when drunk by a horse. Although the hog can endure more cold than any other of our farm animals, yet of all it is most injured by a wet hide. To preserve its health it must be favored with dry shelter. If allowed to burrow in straw or manure piles it is sure to get over heated, and disease is produced. All quarters should be kept as clean as its food or drink.—*New Zealand Country Journal.*

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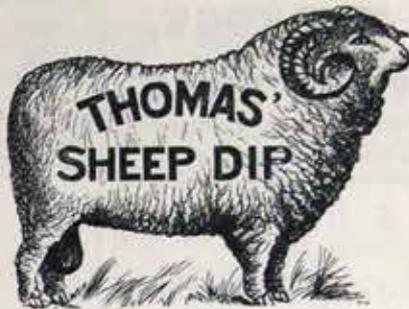
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COMING OUT OF COLOR.—The questions—To which parent do offspring owe their peculiarities? and, How long may we reckon on influence exerted by atavism (*i.e.*, the influence of ancestors more remote than parents)? will never cease to perplex breeders. That there is a truth underlying each question is certain; but none can demonstrate to what extent each is true in any particular case. Probably, no better evidence is forthcoming than that given by parents of different colour. These do sometimes give startling results. Two have just come under notice—one in an old newspaper, the other in this year's broods of chickens. The former is to this effect, and is published in a Cumberland paper of 1823: "Mr. Hawthorn, of Coniston, bought 40 white ewes of Mr. G. Topping, and put to them a white tup bought of Mr. Eccles, near Hawshead. The produce was 50 lambs, every one of which was black. It turns out that the sire was the son of a noted black ram." The other instance is the result of crossing a black-red Game cock, with willow legs, with white Game pullets with yellow legs. The produce are of various markings, but there is this odd peculiarity—all the pullets have the willow legs of their sire, and all the cockerels have the yellow stockings of their dams. That this should be the case, over above thirty chickens, would seem to show that the influence of each parent is greatest upon the offspring of opposite sex to itself.—*Live Stock Journal.*



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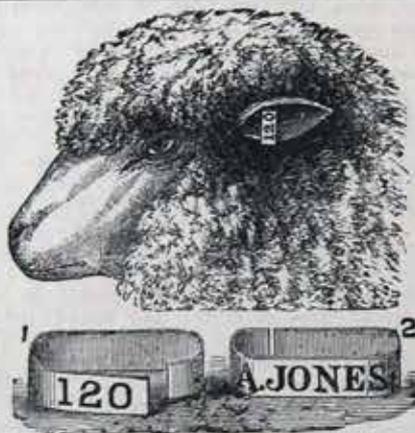
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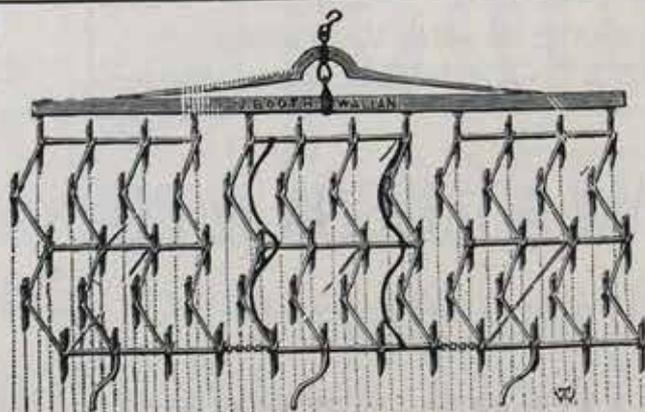
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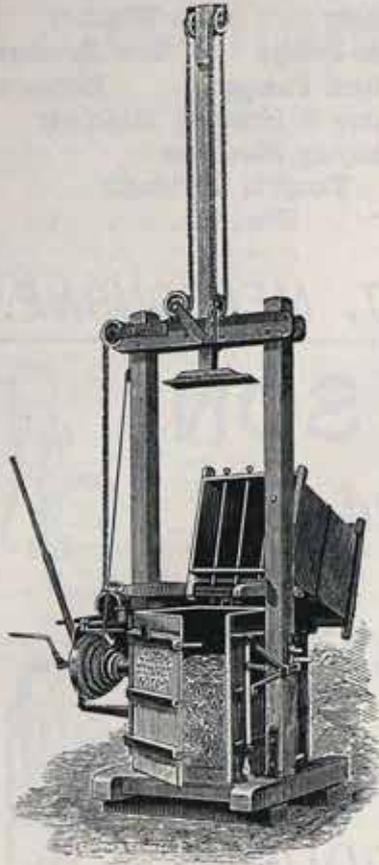
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It will be understood how very much quicker the power is brought into application by this means than by the ordinary screw press, and double the work is got through by the same number of men.

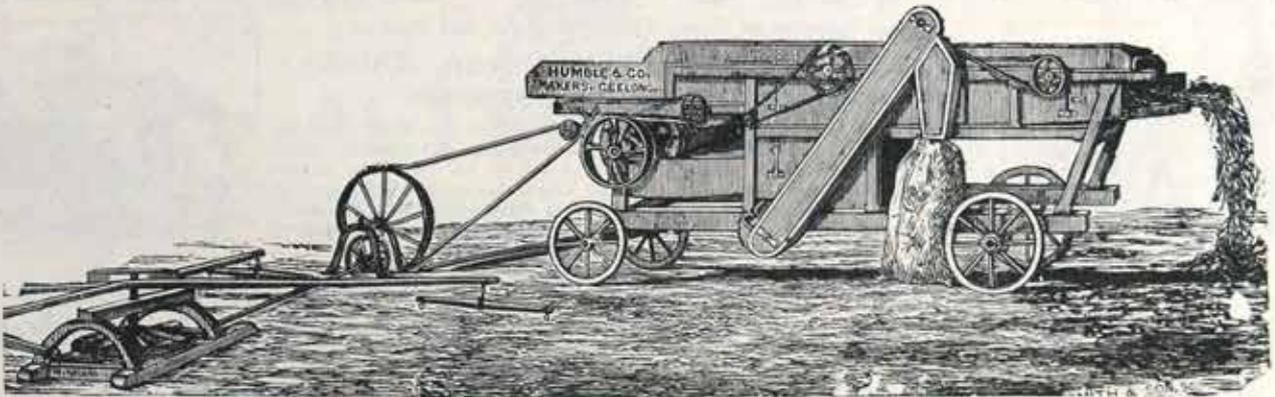
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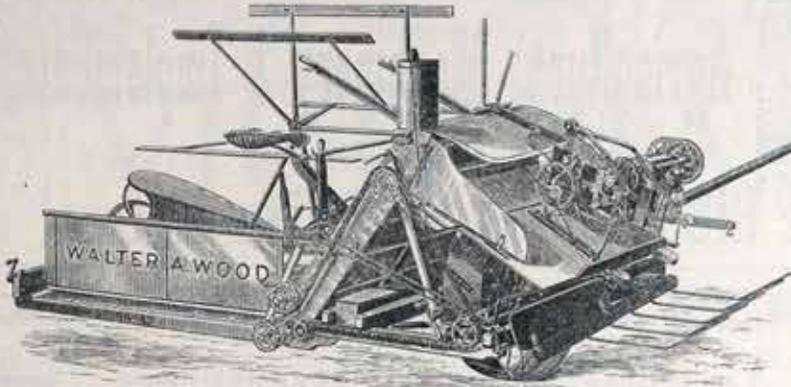
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BOOK ORDERS AT ONCE.—Our first shipment of Binders having arrived and been disposed of, we would ask intending purchasers NOT TO DELAY, but to send their orders in at once, as it will be impossible for us, "notwithstanding the special arrangements made by us," to fully supply the season's demand at the rate at which the orders are coming in.

To prevent DISAPPOINTMENT, we will supply the Binders according to priority of application.

We are enabled this year to sell our best selected HEMP AND MANILLA TWINES at a lower rate than heretofore, and would caution consumers to see that they get our Twine, which is more even in quality, stronger, and gives a greater length to a pound weight than any other kind.

JAMES M'EWAN & CO., SOLE AGENTS, MELBOURNE.

MACHINE BELTING.

Saddlers by Appointment to His Excellency Sir H. B. Loch, K.C.B.

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Saddlers & Tanners,

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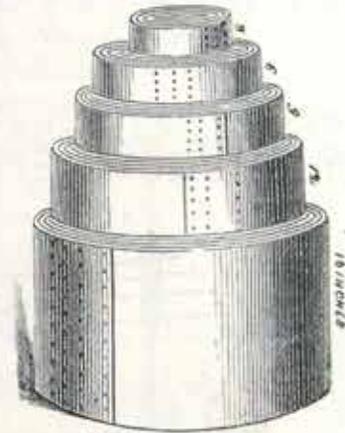
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Machinery supplied on
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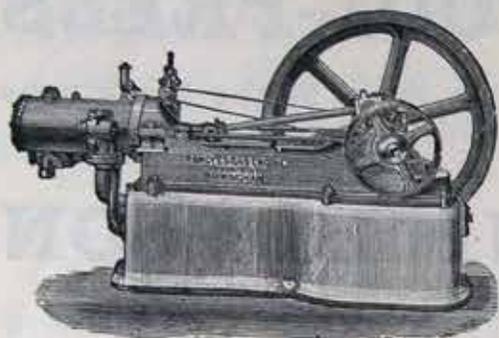
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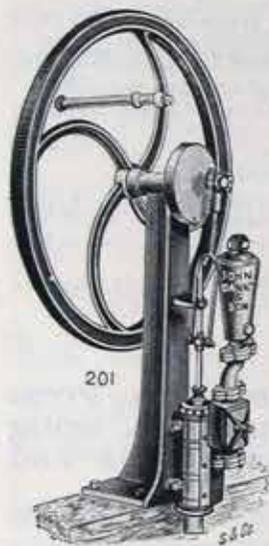
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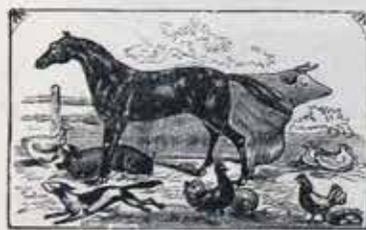
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NORRIS'S SPICE



"WE GET THE GENUINE!"

Is Unequalled for Giving LIFE, HEALTH, and Flesh to
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Fowls, Pigeons, Dogs, &c.

Tried, Proved and Certified to be the Best Medicine for Horses ever discovered. Will coax the appetite when all other things have failed. Gives a bright eye to the Horse, makes his skin like velvet, his looks and temper good. Increases the quantity of milk in Cows, and enriches the quality. Fattens Pigs in half the usual time. Makes Geese, Turkeys, Ducks and Fowls as fat as butter, and double their value. Converts the commonest of Hay and Straw into a superior provender.



"WE GET VILE IMITATIONS!"

Sold by all Druggists, Grocers, and Storekeepers, in Tins, 1s., 2s., 5s., 10s., and 20s.

T. W. NORRIS & CO. (S. M. DALTON), Chemists, Sole Proprietors & Manufacturers.
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NATIONAL AGRICULTURAL SOCIETY.



VICTORIA

VOL II.—No. 17. [Rept. as a Newspaper.]

MELBOURNE, DECEMBER 17TH, 1886

GRATIS.

"If 'twere done when 't's done,
Then 'twere well done 'twere quickly done."

CATERER

CHARLES D. STRAKER,
Three Crowns Hotel,
WEST MELBOURNE.

Caterer for the Victorian Racing Club, The National Agricultural Society of Victoria, and the Victorian Coursing Club.

Orders for Banquets, Fetes, Dejeuners, Weddings, Suppers, on the Shortest Notice in Town or Country.

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Wholesale and Retail Tinsmith and Ironworker,
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Opposite the Meat Market, Melbourne.
Churns, Cheese Vats, and all kinds of Dairy Utensils on hand and made to order. Tallow Casks, Spirit Kegs, etc.

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(LIMITED,)

Millers & Grain Merchants
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GENERAL COMMISSION AGENTS.

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Every description of Agricultural Machinery and Implements, by all the best Melbourne Manufacturers and Importers on sale on favorable terms. Town Agents for transaction of every description of Farmers business requiring Confidential Care and attention.

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Meals at all hours from 6.30 a.m. to 11.30 p.m. SUNDAYS INCLUDED.

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Little's Dip.

(NON-POISONOUS.)

Why send Ticky Wool to market when Wool dipped with this Fluid will realise fully 2d. per lb. more in the market.

It is the Best, Cheapest, and Safest Dip in the Colonies.

PRICE—5/6 per gallon in 40 gallon casks, and 6/- in drums. Orders under 5 gallons, 1/- per gallon extra.

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STEAM

Hydraulic Hay Pressers, Chaffcutters,

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BUYERS OF COUNTRY HAY CHAFF.

Baths Hotel & Bathing Palace

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TURKISH, HOT OR COLD BATHS.

Best Beverages of the Very Best Brands in the Market, and Cuisine Second to None.

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Football, Cricket, Bicycle, Lacrosse Suits in stock or made to order. Hats constructed with Instructions for Self-measurement on application.

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DAVIS
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GOLD MEDALS,

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Are cash Buyers of all Dairy Produce at highest market rates. Consignments received.

Account Sales promptly rendered. Advances if required.

Also, Sole Agents for

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The Greatest of all Dairy Improvements. From 15 to 20 per cent more and better butter. Highest market value. Great saving in space, time, labor and the number of utensils. The construction is extremely simple, and requires no mechanical knowledge to keep in working order. The cost saved in less than a year. Can be driven by horse gear. Full particulars post free on application.



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105 FIRST PRIZES

In Australasia.

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**RANSOMES'
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2, 3 & 4 H.P.

Extra Large Firebox and
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The Most Suitable Engine for
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**ALLEN'S
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Larger Sizes Imported Specially
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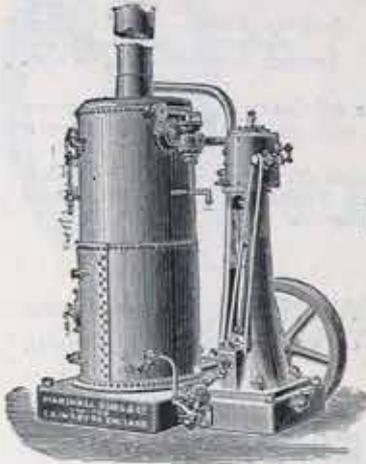
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Novelties in every description of Agricultural
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LIMITED,

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Manufacturers of High-class Buggies, Carriages, Phætons,
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Half a Hundred Leading Styles to Choose from.



Thoroughly reliable in every respect. Absolute warranty on all grades.

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The Largest Manufacturers of Fine Light Vehicles in Australia.

We sell the Cheapest, Lightest, Strongest, Most Durable and Convenient Buggy in the Market.

A Large Quantity of thoroughly seasoned Second Growth American Ash and Hickory always kept in stock.



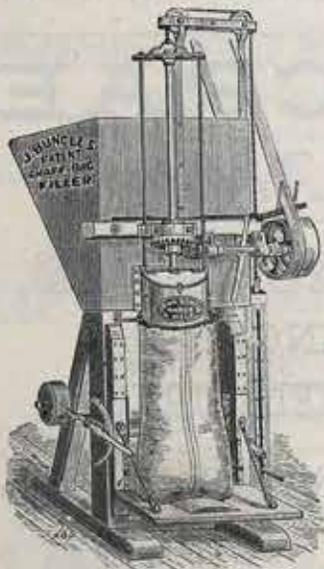
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Any conceivable style of Vehicle built to order at shortest notice.

Customers may depend upon having their orders turned out in a thoroughly workmanlike manner, and on the latest and most approved style, as none but the very best skilled workmen are employed on the premises.

N.B.—The Trade supplied on the Most Liberal Terms.

M. E. GILBERT, Manager.



BUNCLE'S Patent Chaff Bag Filler.

JOHN BUNCLE, in stating what is well known, viz., the great competition in the Hay, Corn, and Chaff Trade, begs at the same time to call attention to his endeavour to lighten the toil and increase the profits from such a business, by designing and manufacturing a machine for the above purpose, and one which cannot be approached by any other maker at present, or recommended to equal in **Simplicity, Durability, and thorough Adaptability and Cheapness** combined as in the above Machine. The **BAG FILLERS** are manufactured complete, ready to be sent to wherever ordered or in any of the colonies, either to fix in stores in connection with the fixed Chaffcutters, or to be attached to his well-known Travelling Chaffcutters previously supplied, and now supplied either with

or without Baggers. A few attempts have been made by some to supply such a want, but probably not having a theoretical as well as a practical knowledge of machines, have not been able to reduce the complicated movements in their machines, and which are perfectly unnecessary—as witness the Unique Simplicity and correctness in design, and the admirable working of **BUNCLE'S PATENT BAG FILLER** compared with the few others tried at work.

For the information and convenience of customers, a machine is kept constantly set up ready to show at work in **BUNCLE'S PARKSIDE IRONWORKS**, and many customers have witnessed **80 to 90 lbs.** of Chaff put in a bag in 15 seconds!!! which, after making allowances for time removing the full bag and replacing an empty one, would easily on an average keep **Four of Buncle's No. 1 Chaffcutters**—well, if there is any doubt, say Three Machines clear of all the Chaff they cut (medium length.) Of course the Machines are arranged to put in as light weight as you like, or you can fill up and burst all your Bags—to pieces. As a trade requirement (in addition to filling bags) the necessity for a **Mixing Machine** is a long felt want, the laborious and unsatisfactory way at present adopted cannot much longer be endured, and there is no necessity for it!! as J. Buncle can arrange to "Blend" the worst and the best samples "To a Hair" at the least possible expense with the best results.

The season is now coming on when all those who intend having the latest improved Machines should forward their orders as early as possible, to prevent disappointment in the day of their need.

J. Buncle's Machines have, as usual, been awarded First Prize at all the leading shows wherever he exhibited last year (1885), and the many improvements introduced and constantly copied by other makers, is the best proof of the value of the continued consideration in all that affects the profits and welfare of his customers.

Chaffcutters with 14-in. wide mouthpieces and Newest Designs, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

Sirs and Gentlemen, yours respectfully,

JOHN BUNCLE.

Parkside Iron Works, North Melbourne.

Catalogues Post Free on Application.

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MANUFACTURERS OF ALL KINDS OF

Agricultural Implements,

Beg to inform the Farming Community that they are the SOLE MAKERS of the

MCKAY'S PATENT COMBINED HARVESTER.

Single, Double, and Treble Ploughs.

Drill Ploughs,

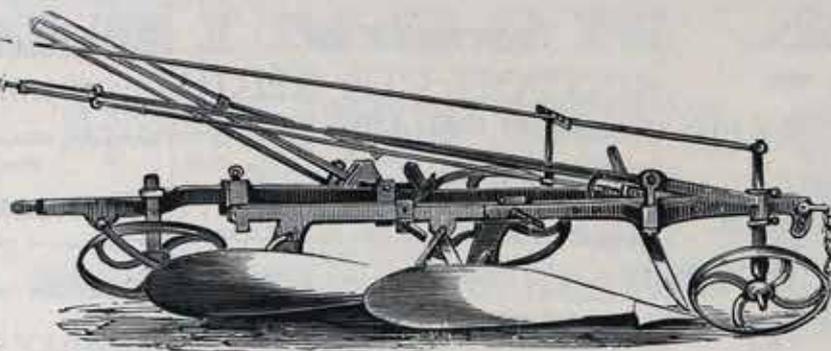
Horse Hoes,

Scarifiers,

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Horse Rakes,

Field Rollers.



Squatters' Ploughs

For dam sinking.

CONTRACTORS' PLOUGHS

For road making.

Special Ploughs

Made to any design.

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All kinds of Implements kept in Stock to select from at their Manufactory,

BLACKWOOD STREET, NORTH MELBOURNE.

METEOROLOGY.

Farmer's Barometers, with Thermometers,
Guaranteed Instrument, 25/-

RAIN GAUGES, from 15s
Standard Instruments of all Kinds.

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GAUNT'S
ENGLISH
LEVER WATCHES

still hold their ground
against all competitors as
the most durable and trust-
worthy timekeepers in the world.

The favorable opinion formed of Gaunt's
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AWARD FOR HOROLOGY at the Melbourne
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that his watches cannot be excelled. Seven Gold and other
Medals. Price from £6 6s. to £10 10s. Get the opinion of any
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PRICE WILLIAMS,

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MANUFACTURER OF THE WELL-KNOWN

Williams' Rack & Pinion Wool Press

Rack and Gear Steel Press for the use of large stations.
Lever & Chain Press, with Folding Top Box, for the use of smaller stations
Lever and Chain Farmer's & Selector's Press. Price, £22 10s.

As the season for this latter kind is now approaching, those requiring them
should lose no time in sending their orders. Owing to the general satisfaction
given by those supplied for last season, orders are now freely coming in, and a
large demand is looked for. The following is a fair sample of a large number of
Testimonials to hand for those supplied last season:—

MR. PRICE WILLIAMS—

BALLYROGAN, JAN. 23RD, 1885.
Dear Sir.—I have much pleasure in informing you that the Farmer's Wool Press I
purchased from you last October, gave me every satisfaction. We turned out very compact
small bales, about 34 cwt., but could have them heavier if we wished with once down. By
what the Wool Brokers tell me, they would clear themselves in two seasons to anyone having
twelve bales. Since done with the Wool, I have had it in constant use as a Cheese Press, and
I reckon it worth half its cost for that. We have weights on the levers. Any number of
Cheeses can be put in at once. It would make a good Press for Hay or Straw, and for Grapes
or Apples it is just the thing. I can highly recommend it as a most useful, substantial, and
cheap article.—Yours truly,
HUGH GORDON.

McDougall's Sheep Dip

USED THROUGHOUT THE WORLD.

McDOUGALL'S SHEEP DIP.

PERFECT SAFETY, NON-POISONOUS.

A Dip with 20 Years' Record and Second to None in the
Market.

As certain as arsenic in its effects in exterminating all insects, and
without its danger. It is the only true specific for scab.
Finely stimulates the growth of Wool.

Trial Once Made, Always Used.

PRICE, 5/6 PER GALLON, 5 GALLON DRUMS.

Direct Agents—

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NORMANBY BUILDINGS,

CHANCERY LANE, MELBOURNE.

McDougall's Sheep Dip

VICTORIAN RIFLE CLUBS.

Members are informed that
W. H. HUNTER
 SADDLER,
 15 POST OFFICE PLACE & 11 BOURKE ST. WEST,
 is the GOVERNMENT CONTRACTOR, and the Only Saddler
 Appointed for supplying the Regulation Riding
 Saddle, Bridles, Leggings, and Wallets.
 Any of the above will be supplied in any quantities to Members
 of RIFLE CLUBS at the Contract Prices. Apply early.

DANIEL TOPP,

Late J. J. Walker, Wholesale & Retail
SADDLE AND HARNESS MANUFACTURER,
 29 BOURKE STREET WEST, MELBOURNE.

Manufactures of every description of Saddles and Bridles; Gig,
 Carriage, Buggy, Spring Cart, Dray, American Express Waggon
 Scotch Tandem, Leader and Outrigger Harness.

D. T. wishes to call particular attention to his Colonial-made
 Rough and Smooth Bullockhide, Hogskin, Bush and Town,
 Saddles, which for Shape, Price, and Quality, cannot be equalled.

TRADE SUPPLIED.

WM. ADAMSON,

Seed Merchant,

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Grasses—Lucerne, White Clover, Red Clover,
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FORWARDED ON APPLICATION.

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WHEELWRIGHTS,

AND GENERAL BLACKSMITHS.

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LOANS NEGOTIATED.

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R. GOLDSBROUGH & CO. LIMITED

(In which are amalgamated the Australasian Agency and
 Banking Corporation Limited and R. Goldsbrough & Co.)

WOOLBROKERS,

Capital, £3,000,000.

HEAD OFFICE—MELBOURNE,

MAKE LIBERAL CASH ADVANCES on the ensuing CLIP
 of WOOL and on STATION SECURITIES.

They hold AUCTION SALES of WOOL twice each week
 during the season, and at frequent intervals during the
 winter months.

AUCTION SALES of TALLOW, HIDES, SHEEPSKINS,
 etc., are held three days each week throughout the year.

AUCTION SALES of WHEAT, OATS and FLOUR are held
 each Wednesday during the grain season.

Three Months' Free Storage allowed on Grain.

Liberal Advances made at bank rates on receipt of produce
 into warehouse.

Full rates of interest allowed on fixed deposits, current
 accounts, and financial business of all kinds conducted.

Branch in Sydney: No. 93 Pitt-street.

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Shamrock Hotel,

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W. G. SMITH, Proprietor.

FIRST-CLASS ACCOMMODATION.

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 GOOD STABLING.

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 152 & 154 LITTLE LONSDALE STREET EAST,
 Near Spring Street,
MELBOURNE.

**MR. WALTER BEILBY'S
 HIGH-CLASS FOX TERRIERS.**

The English Prize-winners, imported to strengthen my
 collection, are not equalled by all the kennels in Australia.

CHAMPION RICHMOND JACK,

THREE TIMES WINNER OF THE FIFTY-GUINEA GRAND CHALLENGER CUP.
CHAMPION DECKER.

This celebrated English winner, has sired more prize-takers,
 than any fox terrier in the colony. Vide Nat. Ag. Soc. and Vic.
 P. and Dog Society's Prize Lists—1883, 1884, 1885.

Satire (by Joker); **Sagauly** (by Spades); **Leaguer** (by
 Corinthian); **Daphne II.** (by Flunderer); **Melbourne**
Hill and **Same Saas Meret** (by the Belgravian); **Arius**
 (by Tackler.)

The above lot are from the very best strains, direct male
 lines, and only equalled, by about six kennels in England.

THE COLONIAL-BRED STOCK ARE CHIEFLY FROM THE ABOVE.

MELBOURNE STEVEDORE (by Decker.)
 A WINNER EVERY TIME EXHIBITED, PROVING HIMSELF THE BEST
 COLONIAL-BRED DOG IN THE COLONY. Vide 1884,
 1885 Prize Lists.

MELBOURNE JOKER (by Leaguer, ex Wilfrida,
 imp.) by Rompe, by Brockenhurst Rally, ex Satire.

MELBOURNE RAGE (Brother to Melbourne Joker).
 Winner of three Prizes, Exhibition Building, 1885.

MELBOURNE NELL (by Diamond Jack, ex Alice.)

SHELFORD RUBY (by Decker, ex Shelford Fury).
 Guaranteed Pedigrees with young stock. Photos, 13d. stamps.

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 Life Governor's Do. - £24.

The privilege of membership consists of
 power to vote at the Election of all Office-
 bearers, of free admission to the Library,
 Reading Room, Lectures; and, with two
 ladies, to the Society's Exhibitions and Grounds
 at all times.

A copy of this Journal, which is published
 monthly (on the Friday after the Council
 Meeting), is also forwarded to each member.

Members' Tickets may be obtained on
 application to the Secretary at the Office, or to
 Mr. JOHN HEDRICK, the Collector.

THOMAS PATTERSON,

SECRETARY.

Kirk's Bazaar, Melbourne.

NATIONAL

Agricultural Society of Victoria.

Shorthorn Derby Sweepstakes, 1889.
Hereford do do 1889.
Ayrshire do do 1889.
Jersey (late Alderney) do do 1889.

A Sweepstakes of £1 each (10s. at time of nomina-
 tion, and 10s. at date of general entry for Show), with
 £3 added in each case for Heifers calved between 1st
 July, 1886, and 1st July, 1887, to be divided and
 awarded as 1st, 2nd, and 3rd Prizes, for three-year
 olds, at the Society's Show, 1889.

Nomination of Calves of each breed respectively
 will be received on payment of a nomination fee of
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Notices.

All communications for the Editor to be
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Business communications to the Publishers,
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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
 requested to forward to the editor the dates on
 which their respective exhibitions will be held,
 also copies of their prize schedules as soon as
 they are published.

FEBRUARY.

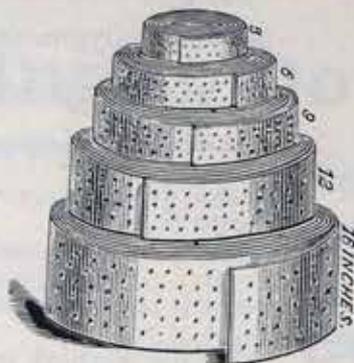
3.—Dandenong.
 17.—Mornington, at Cranbourne.

MARCH.

3.—Ballan.
 9.—Baringhup.
 10.—West Bourke, at Lancefield Road.
 11.—Grantville.
 23.—Daylesford.



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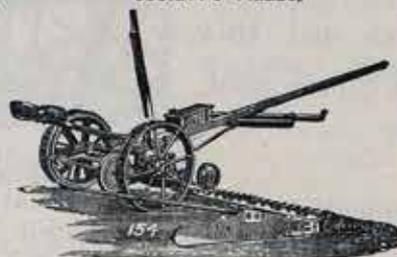
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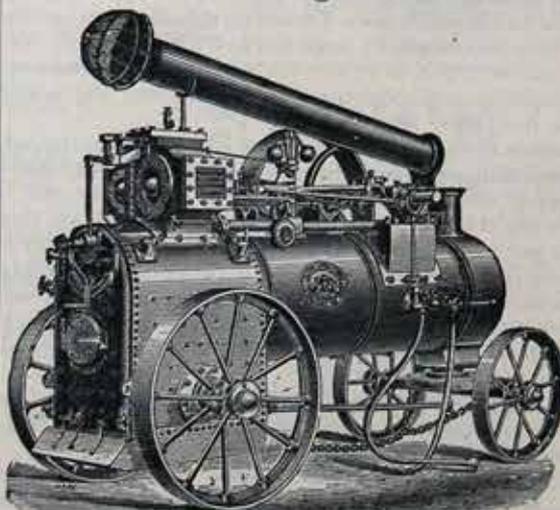
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We advise our farmers to induce their children to commit the piece to memory, not only as a literary curiosity, but, also as a picture of something to work up to. If the books used in our State schools throughout the colony contained more lessons of a somewhat similar character it would be well for the rising generation.—EDITOR.]

First cast your Eye upon a Rustick Seat,
Built strong and plain, yet well contriv'd, and neat
And situated on a healthy Soyl,
Yielding much Wealth with little coft or toyl.
Near by it stand the Barns, fram'd to contain
Enriching stores of Hay, Pulfe, Corn and Grain;
With Bartons large, and places where to feed
Your Oxen, Cows, Swine, Poultry, with their breed.
On th'other side, hard by the Houfe you see
The Apiary for th' industrious Bee.
Walk on a little farther, and behold
A pleafant Garden from high Windes and Cold
Defended (by a fpreading fruitful Wall,
With Rows of Lime and Fir-trees fireight and tall),
Full fraught with necessary Flowr's and Fruits,
And Natures choicest forts of Plants and Roots.
Beyond the fame are Crops of Beans and Peafe,
Saifron and Liquorice, or fuch as thefe;
Then Orchards fo enrich'd with fruitful flore,
Nature could give (nor they receive) no more:
Each Tree stands bending with the weight it bears,
Of Cherries fome, of Apples, Plums and Pears.
Not far from thence fee other Walks and Rows
Of Cyder-fruits, near unto which there flows
A Gliding Stream: The next place you difcover,
Is where St. Foyn, La Lucern, Hops and Clover
Are propagated: Near unto thofe Fields
Stands a large Wood, Maft, Fewel, Timber yields.
In yonder Vale, hard by the River, stands
A Water-Engine, which the Winde commands
To fertilize the Meads; on th' other fide
A Perfian Wheel is plac't, both large and wide,
To th' fame intent: Then do the Fields appear
Cloathed with Corn and Grain for th' enfuing Year.
The Pastures flockt with Reafits, the Downs with
Sheep
The Cart, the Plough, and all good order keep:
Plenty unto the Husbandman, and Gains
Are his Rewards for's Industry and Pains.

The Traralgon Show. 1884

The second annual exhibition of the Traralgon Society, which was held last month, was a decided success. The weather was fine, the grounds were clothed in a rich green carpet, the exhibits were numerous, and there was a crowd of visitors. The draught stallions and mares made a good class, in which there were some worthy representatives of the heavy breed of horses, a description of stock for the production of which this moist district should be well suited. Some fair blood horses were shown, and there was a grand turn out of hackneys, ladies' hackneys, and hunters. Although, taken as a whole, the hackneys, as has been said, were good, and made an attractive show; still, a really first-class horse, one that a man would go into raptures over, was not to be found. No, even in Gippsland, the art of breeding hacks seem to be lost. There was a very good turn out of cattle, particularly of the milking breeds, but the pens in which they were shown were of a very primitive character. Years ago, at a show yard not many miles from this one, when the judges went to adjudicate on the aged shorthorn bulls, one of the animals jumped out of the four-rail capped pen he was in and made off home, but those days are long since past, and societies in putting up yards should have something more in keeping with modern requirements. It is unusual now-a-days to show animals for a prize which have not been broken to lead and taught to stand tied up, so that the old rough stock yard fence which hides the exhibits is out of place in the pens on a show ground, even in the case of those for fat cattle, which can be made of lighter material. Two grand teams of working bullocks were shown, and attracted considerable attention. The display of dairy produce was extensive, and creditable for a new district. A considerable amount of machinery and implements was on the ground. There was also a great number of side shows, including the three fat children, which have been exhibited lately all over the colonies, and which were bred and born in this district.

The Kyneton Show.

The success of the Kyneton Show, which was held last month, was in a measure marred by the weather. The heavy rain which fell the night before and the morning of the show kept back a number of exhibits as well as many visitors, but is served to put the farmers in good heart. There was a grand turn out of draught horses, although the aged stallions as a class were not up to the standard we have seen in this yard. There was a lot of fine young stock and a good crop of foals, so that the district is not likely to lose its fame as the home of the Clydesdale. A great number of light horses and ponies were shown, and there was a good turn out of hacks and hunters. The first prize hackney was a superior animal. Shorthorn cattle were not numerous, but there was a large exhibit of dairy cattle of all descriptions and of mixed breeding. The sheep and pig pens contained some very superior animals. Dairy produce was an attractive exhibit, the butter being particularly good. A large number of flowers and plants, and some interesting exhibits of honey in the comb were shown in the produce shed, which proved very attractive to visitors. There was a good collection of buggies, but only a limited amount of machinery. The want of space was again felt in these grounds, so that it is to be hoped that before next show the society will be in its new quarters.

Meetings.

Council.

An adjourned monthly meeting of the Council of the National Agricultural Society of Victoria was held on the Grand Stand at the Show Grounds on Friday, November 19th, 1886, pursuant to notice.

Present—Dr. Plummer (president), Messrs. S. G. Staughton, D. Mitchell, C. Lynott, J. Hearn, J. Bond, J. Garton, D. R. McGregor, W. Learmonth, W. J. Lobb, T. Learmonth, J. Currie, J. Jones, F. Peppin, J. Finlay, and T. Brunton.

The first matter considered was the trotting track and enclosures.

Mr. Brunton moved that the present fence round the inside of the trotting track be moved out to a width of say over 30 feet, that it be lowered and made more circular, and that another fence be put up inside the jumps; seconded by Mr. Staughton, and carried.

Mr. Currie moved that the fence be shifted out 25 feet, and that it be put up on the outside of the trotting track, a portion of the corners of the latter being cut off; seconded by Mr. Mitchell, and carried.

Mr. Garton moved that the trotting track be not less than 30 feet wide (inside the fence); seconded by Mr. Currie, and carried.

Mr. Brunton moved that the width between the outer and the inner fence be 80 feet; seconded by Mr. McGregor, and carried.

Mr. McGregor moved that the inside fence be a picketed one, 3 feet 6 inches high; seconded by Mr. Lynott, and carried.

Mr. Lobb moved that the existing fence be moved out, lowered to 3 feet 6 inches high, and made so that at any time it may be picketed; seconded by Mr. W. Learmonth, and carried.

Mr. Brunton moved that the alteration of the trotting course to a more circular form as well as the alteration of the judges' box, be referred to the Parade Committee, consisting of Dr. Plummer (president), Messrs. J. M. Peck, T. Learmonth, J. Garton, J. Hearn, and C. Lynott; seconded by Mr. T. Learmonth, and carried.

Mr. Brunton moved that the question of the erection of a main hall for agricultural products and varieties of exhibits be referred to a committee consisting of the president, Messrs. Mitchell, Peppin, Staughton, McGregor, and the mover; seconded by Mr. Lynott, and carried.

Mr. Brunton moved that the question of the erection of new sheep accommodation, be left pending a conference with the Sheepbreeder's Association, the matter being referred to the lastnamed committee; seconded by Mr. McGregor, and carried.

The meeting then closed, and those present adjourned to a dinner on the grounds, set out in capital style by Mr. C. D. Straker.

The ordinary monthly meeting of the Council of the National Agricultural Society of Victoria was held on the 14th December.

Present:—Dr. Plummer (President), in the chair, with Messrs. J. Gibb, F. Peppin, D. Mitchell, T. Learmonth, J. Bond, J. Hurst, A. Patterson, D. R. McGregor, W. Learmonth, D. Munro, C. Lynott, J. Garton, J. G. Brisbane, S. G. Staughton, J. Currie, T. Brunton, J. Malcolm, W. J. Lobb, J. Jones and J. Finlay.

The finance committee's report, recommending payments amounting to £51 11s. 9d., was read.

Mr. McGregor moved the adoption of the report, seconded by Mr. Lobb, and carried.

CORRESPONDENCE.

From Robert Simson, stating that in consequence of being engaged at board meetings on the days on which the Council met, he resigned his seat in order that some other gentleman, having more time at his disposal, might be elected in his place. Although no longer a member of Council, he would not cease to take a lively interest in the Society with which he had been so long connected.

Mr. McGregor moved that Mr. Simson's resignation be accepted with regret. No man could be more liked and respected by his compeers than Mr. Simson had been by the members of the Council. He wished to include in his motion an instruction to the secretary to write a letter thanking Mr. Simson for his valuable past services. The motion was seconded by Mr. W. Learmonth, and carried.

From Francis Henty, stating that, in consequence of failing health, he tendered his resignation as a member of Council.

Mr. Garton moved that Mr. Henty's resignation be accepted with regret, as the members would be sorry to lose the services of a pioneer like Mr. Henty, to whom a letter should be written, thanking him for his past services. Seconded by Mr. Peppin and carried.

From T. Patterson, hon. secretary Central Board Federated Agricultural Societies, asking whether the society was in favor of the federation scheme, as previously submitted to the societies, and

The Journal
OF THE
National Agricultural Society
OF VICTORIA.

MELBOURNE, DECEMBER 17th, 1886.

Stringhalt.

THE report of Mr. Stanley, the Government Veterinarian of New South Wales, on Australian Stringhalt which has appeared in our columns has done good in so far as that it has again directed special attention to this peculiar disease in horses. That the writer has failed to find out the cause of the disease, and that his conclusions will never be considered authoritative we are, however, much more certain now than when we introduced the subject to our readers. Some practical men of undoubted experience have even characterised the report as "rot," and have treated it with contempt—refusing to give the theory advanced therein the slightest consideration. This, however, is scarcely the spirit in which to approach a subject, the successful solution of which necessarily involves a considerable amount of speculation, and one which at the same time is of such importance to the community. Rather, the efforts of everyone, who honestly tries to throw light on the matter, should be appreciated; for though their observations may lead them on a wrong track and they may thus fall short of success, they prevent others from going the same way; thus narrowing the field of enquiry, and enabling investigators to get "hot, hotter," as children say in hide-and-seek, by which means the solution is, at any rate, brought nearer. Though there are many people who think they know all about the cause of the disease it would really appear that no one has yet been able—metaphorically speaking—to put his finger on the spot. After certain experiences a man flatters himself that he knows all about it, and states what he considers to be the cause, and gives his reasons to another man. This second party immediately cites a case where such causes could not possibly exist; yet the disease was there. This party will proceed to give his idea, which the first will say is all wrong, as it is quite contrary to his experience; while a third, who has heard them both, will say neither knows anything about it, and will proceed to prove from a case that has come under his notice, that they do not. This is the peculiarity of Stringhalt. It would almost appear that it may be produced by different causes. Any way, those who have the widest experience of the disease are the least self-assertive regarding it, and are the most ready to admit that we want "more light." Mr. Stanley's idea of the cause of Stringhalt being intestinal worms cannot be correct in all cases, for the disease has been known to come on in a few days, after horses have been turned out of a stable, so that it is too much to believe that worms could invade the system and develop in such a short time to an extent sufficient to produce in the hind legs of an animal "the spasmodic muscular movements which are so diagnostic a symptom of the disease." But the disease appears even more suddenly than this. We know that on one occasion a pair of horses, previously sound, were driven from a home-stead to an out-station at a good pace, being pretty well heated on the way. They were then allowed to stand while lunch was partaken of. After lunch, when about to start for home, it was found that both horses were so badly stringhalted that there was very great difficulty in getting them to start, and some trouble in getting them home. Now, Mr. Stanley tells of a sharp gallop having cured a stringhalted horse by warm-

ing him up, increasing the peristaltic action of his bowels, purging him, and causing him to expel the parasites. But how does he square this statement with the case just cited, where the disease appeared after fast work. A well known horse dealer maintains that it is yellow weed, or, as it is also called, flat weed (*Hypochaeris radicata*), and nothing else that causes the disease, and proves his faith by buying stringhalted horses and curing them. He says that in cases where horses die of the disease—as they sometimes do—the lower side of the lining membrane of the whole digestive apparatus from the mouth to the anus is as it were corroded and destroyed by the action of the weed passing through. He removes the cause, or rather removes the animals from the cause, and the effect ceases; then, after a little treatment, they become sound. Yet we know a case of a horse in first-class condition which was bought where there was scarcely such a plant as flatweed, and which was ridden quietly for some time and taken to another part of the district where there was very little of the weed, yet, one morning, this animal, previously quite sound, was found to be so severely stringhalted that he could not be worked. This horse—as has been said—was in excellent condition, and remained so while he had the disease, so that when he was standing still no man could tell there was anything wrong with him, yet he was quite useless for work. Surely the worm and the flatweed theories both fail here. Some people hold that it is sand which causes the disease—the sand being taken up by horses when grazing on very bare pastures. It is well known that, under these circumstances, horses do collect quantities of sand, but the sand, as well as the worm and the weed theories would fail to account for the last mentioned case. The most stringhalted animal we ever saw was a brood mare, which was so very bad that she could not walk. Her only mode of progression was by bounding along, snatching her hind legs up together to her belly (from which the hair was worn off), and bringing them down with a thud which could be heard for a considerable distance, then after going a little way she would stop exhausted, her hind legs involuntarily thumping the ground for some time before she settled down. This was towards the end of summer when the paddock in which she was running was bare. It was stocked with mares, yet none of the others showed the disease, so that Mr. Stanley's infection theory would scarcely hold here. It may be interesting to know that this mare—an unbroken one—had nothing done to her, yet she got well again without "the administration of anthelmintics." It may be said that as there are abnormal cases in all diseases, it is absurd to cite individual examples and proceed to disprove well worked out conclusions thereby, but it must be evident to anyone who has read the foregoing, that no theory yet advanced can possibly account for all the cases mentioned. The fact is, the subject requires further investigation. A good deal of work has been already done, but it requires some one of ability to follow it up; to thoroughly master all that is known of the subject, and to discover that which we believe has yet to be found out. We await the advent of the master mind.

The Centennial Exhibition.

As the Government has resolved on holding a Centennial Exhibition, in Melbourne, in 1888, it behoves pastoralists and agriculturists to see that their interests are thoroughly and adequately represented on the occasion. Nothing is of more importance to the colony than the agricultural and pastoral interests. Gold gave the colony a great push on, or she would never have attained such prosperity in so short a time; but, now that the supplies are falling off, we shall have to depend on

the productions of our soil for a continuation of such prosperity. We will either become a great pastoral and agricultural community or nothing. We may protect ourselves, and thus establish manufactories, which are all very well for a time, but, after we produce beyond our own requirements, we will be in the same fix as the Americans; as free-trade countries, which can produce more cheaply, will be able to undersell us, thus cutting us out. This may be very elementary political economy, but there is, nevertheless, truth in it. However, with regard to the exhibition, every effort should be made to have our stock and produce thoroughly represented thereat. Such being the case, the following is worth notice. In 1884, the Secretary of the National Society wrote certain letters to the Council, making suggestions for transmission to the Minister of Agriculture. The details are too long for repetition here, but the idea was to take steps to have all the champion exhibits at the various shows throughout the colony, during the previous year, brought together in Melbourne. It was then said, that—"The result of bringing together, on the Metropolitan ground, the choicest exhibits from every district in the colony would be, that there would then, indeed, be a thoroughly representative exhibition, which would properly mark the progress of agriculture, where agriculturists and others would be enabled to arrive at a proper standard of excellence, and which would thus have a really educational influence." If the sympathies of all Victorian Societies were enlisted in this matter, and if they were induced to have their several districts thoroughly represented, *the leading Societies, the Stock-owners, and others of the neighbouring Colonies, would, no doubt, co-operate.*" Now this is just what is wanted. Let the Minister put the scheme into operation during 1887, so that, in addition to the Ordinary Exhibition, a Grand Autumn Exhibition might be held, when, as was said in the second letter: "Samples of the season's grain and produce could be secured, and when there would be a great probability of settled fine weather. The harvest would be over the crops sold, and farmers would have time and money at their disposal." "By having the characteristic exhibits and productions of all parts of the colony brought together, it will enable new arrivals and others to ascertain at once, by personal observation, the districts best suited for the branches of agriculture in which they wish to engage." We notice that "Augur," in the *Australian*, suggests a grand representative race meeting for the Autumn of 1888, so we do not see why agriculturists should not have a Grand Representative Exhibition about the same time. It could be managed so as to make it pay—and pay well. The Government could give special facilities to exhibitors for the carriage of exhibits by rail, so as to keep their expenses down. The prizes need not necessarily be large—though, generally speaking, there is nothing like a liberal prize list—for all would vie with one another in making the display a worthy one. The neighbouring Colonies patronise the Ordinary Melbourne Show. No doubt, they would give us extra patronage on this occasion, so that the Exhibition might adequately represent to the world the marvellous progress made by settlers on Australian soil. We expect to say something further on this subject in a future number.

A Model Farm.

[The following description of a farm is from a book bearing date 1716; the first edition of which was published in 1668. We question if we have any farms in our present century to beat the one described; and we doubt if even Messrs. Chaffey Brothers, with all their American 'cuteness,' will be able to show us an improvement thereon.]

ground at one time, they be introduced in instalments; and in this is contained the whole gist of my proposed change of management. This system, although as applicable to three days as to three weeks, would probably involve a considerable extension of time; but it would not necessarily follow that any section of live-stock would be longer detained than at present. It is not my intention to set out any hard-and-fast plan of details. Should you view with favour the instalment system which I have suggested, it would be for your council to work out a programme that would be most instructive and interesting. However, in order to make my proposition better understood, I will sketch out a plan that will illustrate my meaning. Assuming the show to extend over three weeks, I would open with machinery and implements, and make this department the standing dish during the whole entertainment. I would associate with it during the first week the sheep show and sale, provided the amalgamation with the Sheepbreeders' Association which I have heard spoken of were effected. As it is, there might be a stallion show lasting for a couple of days in this week, and farm and dairy produce, needlework, knitting, and the various results of feminine handiwork in the art of housewifery might be introduced. In the second week the various sections of draught horses, the dairy breeds of cattle, swine, and poultry would be brought forward, and this week would close with a sale, say on the Friday, allowing the stock to be removed on the Saturday. The third week would introduce the various sections of light horses and the meat-producing breeds of cattle, this week also finishing with a sale and the close of the show.

I claim for the instalment system which I am advocating for the conduct of your show the following advantages:—

1. That it would afford visitors an opportunity more systematically and thoroughly to examine the various exhibits, and thus render the show more effective in producing its legitimate educational results.

2. The judging, instead of being confined to one day, would be extended over three or more, affording the stewards more leisure to attend to the various sections, and allowing visitors additional opportunities of witnessing the performance of this important ceremony.

3. The stabling accommodation could be utilised by two or three relays of animals, and this, with the great increase in the number of exhibits, of which there is every prospect, should be an important consideration.

There is what I consider a very objectionable feature becoming prevalent in many leading show-yards; that is, what are called "side shows," such as "Punch and Judy," sword swallows fire eaters, fat boys and girls, &c., all of which have a tendency to distract attention from the main purpose of the show. While I hold that all animals, products, machinery, works of art, or feats of skill that are desirable to be produced or encouraged on the farm or station, should have a place in the show-yard, I equally maintain that all undesirable objects or unnecessary exhibitions should be as strictly prohibited.

There are other matters, such as the time for holding the show, and the question of a single judge, which would legitimately come under the heading of this paper, but I shall not discuss them on this occasion.

And now, Mr. President and gentlemen, whether you approve of the suggestions in my paper, or whether you disapprove, I trust you will give me credit for being influenced solely by a desire to promote the best interests of the society in preparing and reading it.

The fundamental and essential principles of improving any of our domestic animals by breeding consists in a selection of those males and females the union of whose qualities will remove the defects and induce the properties desired.

Management of Farmers' Flocks.

(BY R. BENNETT.)

I WOULD advise all farmers in a district to keep but the breeds best adapted to their pasture, and let that be on our rich western coast, one or other varieties of the English long-wooled. Of all others, I would suggest the Lincoln, and fatten up and sell all other kinds. Fancy cross-breeding will never pay him; on no account let him attempt to become a breeder of stud sheep; let him purchase his rams and ewes as he requires them, from some known breeder, and, when he wishes to obtain fresh ones, let them be of the same breed. As an old sheep-breeder, I would recommend a yearly culling, just prior to shearing, of all ewe flocks; it is a system I have always adopted with very satisfactory results, most particularly with stud flocks, and it is only by the closest and most systematic culling that all noted Australian, and, indeed, home breeders have developed such perfection; for it is a most mistaken idea, that because a sheep or a horse is the progeny of a highly-bred sire or dam, he must be good because he has the blood. Never was there a greater error. I have passed days with Mr. Bayley, at Mudgee, assisting in culling his sheep, a task he deputed to no one, always doing it himself, and if he found a ram or ewe weaner with a blemish, it was withdrawn from the flocks. If a ewe, it was fattened for the butcher, if a ram, it was never used. Mr. Bayley never bred from a second-class flock. He used to say second-class sheep perpetuate and increase defects. All culled sheep should be marked, fattened, and sold to the butcher, not to a neighbour to breed from. Let a farmer in purchasing rams or ewes, take no rejected sheep for breeding purposes. It is better to pay a good price and get a first-class animal. As the pasture essential to the heavy long-wooled English breeds is extremely limited in the colonies, in comparison with that necessary for the merino and crosses, between them and the long-wool. I would most certainly advise all our farmers possessing such pasture, to revert to the Lincoln, Leicester, or Cotswold as speedily as possible, and keep them in their purity.

Some little distance back from the coast, where the pasture is warmer and timbered, cross-breeding can be profitably carried on, and to such as do so, I would suggest the observance of the following rules laid down by Mr. W. P. Gordon, in a paper read before the Agricultural Society of New South Wales, at Sydney, November 7th, 1874. He says:—

1. 'In commencing a flock with merino ewes, select large sound four-year old sheep, and keep them healthy with salt.'
2. 'Having obtained a good cross, do not go to another breed to cross again.'
3. 'Do not use a crossbred ram because he is to be had cheap from a neighbour, if you want to save time and money.'
4. 'Do not sell your best ewe lambs, because they are the first fat, to the butcher, if you want to continue a good paying flock.'
5. 'Shelter from drenching winter rains, and long-wooled sheep will repay you for all the comfort they enjoy, as well, or better than any stock you can keep.'

Lime as a Fertiliser.

The most common fertiliser is lime, either burnt from limestone or oyster-shells, or in a state of sulphate commonly called gypsum or plaster of Paris. There are few soils which are not benefited by its application. It does not seem to be of very great importance whether it be added to the soil in the shape of lime direct from the kiln, slacked, or in the form of carbonate, as it occurs in chalk, marble, or marl. The essential point is extreme fineness. The finer it is the more easily it enters into combination and produces its effect. This purpose is always better attained by burnt lime, whatever it may be burnt from, whether limestone, marble, or shells.

Lime has a great affinity for carbonic acid, which is one of the ever-present constituents of the atmosphere; so that, upon the exposure of caustic lime, it soon becomes carbonated. Caustic, or fresh-burned lime, when put in contact with organic matter, either animal or vegetable, causes immediate action and rapid decomposition. Carbonate of lime is less active; and, although it has lost its power by the absorption of carbonic acid, still it produces important changes in soils. As we have seen, soils are mixtures of salts and organic matter containing air and water in their pores. Here lime acts, decomposing the organic matter and freeing car-

bonic acid. It again acts upon the alkaline and earthy salts, decomposing them, and enabling them to form such combinations as the plants require. Chemistry has rendered important services to agriculture in many ways, none more than by analysis of soils; not by informing us of the difference between poor and rich soils, nor by pointing out the specific wants of the farmer, or the particular applications to each soil so desired by him, but by showing us that certain combinations exist in the soil; that a simple silicate of alumina is barren, experience proving that the mere application of manure to it will not give fertility; though lime being added on common clay, a double silicate of alumina and lime will be found, which, in the course of time, with manure, becomes fertile. Lime added to a clay soil destroys that sticky, waxen consistence that makes it so difficult to work, and prevents the baking and hardening so fatal to vegetable life.

The addition of lime is not so beneficial from its mere presence in soil, for generally there is enough for plant food; but its good effect is chiefly owing to the chemical changes it causes among the substances forming and existing in the soil. A mixture of lime, earth, and rich organic matter, such as manure and decomposing vegetable substances, causes the production of nitric acid. Such a mixture is used in many parts of the world to produce saltpetre, which is a nitrate of potash. It is collected from the earthy mixture by dissolving it in water, which is evaporated, leaving the salt in crystals. The same thing takes place in the earth; when lime is added to it, nitric acid is formed, which combines with the alkalis and earth in the soil, forming nitrates. These are all excellent fertilisers. It must be borne in mind that lime of itself will not give fertility to soil. The materials upon which it can act must be present, or its greatest effect will be lost. There must be organic matter in the soil, either as decomposing manure or as vegetable mould, upon which it can operate. Lime brings into play the constituents of the soil, and enables the plant to feed on them; while, as a salt, it forms the food of plants, yet its great effect is upon the different parts of the soil itself. The richer this may be the better will prove the effect of lime, the poorer the soil the slower and worse the effect. —Agriculture.

Veterinarian.

Bad-Mouthed Horses.

There is no subject connected with horses and their management with which there is generally such a practical acquaintance as what, in the language of equitation, is called "the mouth," yet relatively to the true principles by which it is regulated very little is really known. Horses are said to have hard mouths, soft or tender mouths, or mouths hard on one side, or even crooked ones, according to the amount or mode of resistance, as well as yielding, they offer to the hand of the rider or driver through the medium of the bridle-reins, thereby implying that the animal being amenable, or the contrary, to the control of the bridle depends upon the amount of sensitiveness possessed by that portion of the inner mouth in which the bit is placed, and on which it presses, usually called "the bars." It is not expected that the following observations will be understood at once by persons who will not take the trouble of investigating even the simple mechanical principles on which a curb-bit acts, and has its power varied according to the mode in which it is fixed to, or loosened from, the jaw by the curb, as well as its lever cheek being long or short. To perfectly understand the principles on which a horse is amenable or the contrary to his bridle, it is necessary to have an acquaintance with that portion of mechanics relating to levers. That superficial form which enables a man merely to distinguish between a needle and a hand-spike, or a thimble from an engine-boiler, will not suffice for the satisfactory solution of the subject; therefore, those who have not the required amount of elementary knowledge, and who will not take the trouble of acquiring it, had better read no further, as a perusal of what is about to be written would be to them a waste of time and a tax upon their patience. Few horses obey the rein equally well on both sides, yet, if the mouth be examined, there is seldom any perceptible difference between the bars of each side where the bit rests, and where any difference does exist it is found that the side to which the horse resists turning is the most sensitive, which is caused by the additional pressure of the

approved by them, being carried out to completion, and worked in their interests on an independent basis; or whether the society was in favour of the federation scheme being allowed to lapse into the Council of Agricultural Education.

The President explained the steps which had been taken in the federation movement, and stated that immense indirect good had already resulted from it, as it was the cause of the stir which brought about the Agricultural Colleges Act, and other new ideas for the advancement of agriculture. Notwithstanding all this, he was convinced that the scheme should be still completed, and worked on an entirely independent basis, in order that all its advantages might be fully gained.

Mr. Hurst moved:—"That in the opinion of the society the federation scheme should be completed, and worked on an independent basis." Seconded by Mr. Brisbane.

Mr. Gibb said he thought most of the objects of federation were in a fair way of being carried out by the Council of Agricultural Education, which had been liberally endowed with land for the purpose.

The President said only for the purposes of agricultural education, which was merely a branch of the general agricultural interest.

Mr. Gibb, continuing, said: That notwithstanding what he had said favourable to the Council of Agricultural Education, he certainly disapproved of the basis of representation on it; there was too much nomineeism. The election of members should be left to the agricultural societies, which institution should assist the Council of Agricultural Education in every way.

The President said he firmly believed that the Societies by their Federation scheme would materially assist the Council of Agricultural Education. As chairman of that Council he was not at all likely to say anything inimical to its interests. His great desire was to see both movements successful.

The motion was then agreed to unanimously.

WINE EXHIBITS.

A deputation from the Australian Wine Association waited (by appointment) on the Council with a view to the alteration of the wine schedule at the Society's Show, and with the object of having the following introduced:—"That prizes be offered to growers for the best new wines (quality and quantity being considered), and to growers and merchants for the best matured wines ready for the market, and also that the management of the wine section be placed (if practicable) under the supervision of the Council of this Association."

The President explained that the Council had always been anxious to assist the Wine Association in any way, as they recognised the importance of their industry. With regard to the appointment of judges and management, that must be left in the hands of the Society, but the Show Committee would meet the wishes of the Association with regard to the classification of the wines and awards for same in every possible way. The deputation then thanked the Council and withdrew.

From Alexandra Society, stating that they were desirous of holding a meeting

in the Society's office in January, for the purpose of discussing the advisableness or otherwise of forming a Victorian Farmers Co-operative Association. The use of the office was granted.

From Secretary Colonial and Indian Exhibition, London, thanking the Council for their courtesy in regularly forwarding copies of the Society's journal during the currency of the exhibition. These had been placed on the newspaper files, where they commanded the attention of the reading public. Received.

Mr. J. C. Cochrane then read his paper (which appears elsewhere) to the Council. At its conclusion, Mr. Munro moved a cordial vote of thanks to Mr. Cochrane; seconded by Mr. Lobb, and carried.

The suggestion which the President had thrown out at a previous meeting, regarding the extension of the Society's Show to about a fortnight, commencing with machinery and introducing other classes of exhibits at intervals, was then taken into consideration.

Mr. Peppin moved that the principle be affirmed that the show be extended beyond its present limits; seconded by Mr. Lobb, and carried.

Mr. Lynott spoke in favor of the Council then and there resolving that the Show should commence on Wednesday, and continue till the next Saturday week, but it was agreed that it would be better to leave the whole question to a committee, who should be untrammelled by any definite instruction.

Mr. Lynott then moved that a committee consisting of two members chosen from each section of the Show Committee deal with the matter; seconded by Mr. T. Learmonth, and carried.

The committee is as follows:—The President, Messrs. J. Gibb, J. Hearn, F. Peppin, C. Lynott, T. Brunton, S. G. Staughton, D. R. McGregor, J. M. Peck, W. Learmonth, and J. Currie.

The meeting then closed.

On the Management of the Annual Exhibition of the National Agricultural Society of Victoria.

(Paper read by Mr. J. C. Cochrane before a Meeting of Council held on 14th December, 1886.)

MR. PRESIDENT AND GENTLEMEN,—

When we reflect on the successful financial results of the late show held by your Society, I can imagine many persons prepared to uphold the system of management which has hitherto been adopted, and to treat any proposition for a change as uncalled for and presumptuous. Were the replenishing of the exchequer the main object in holding an agricultural show, perhaps the suggestion of a different plan would not be necessary. I hold, however, that the first and most important aim of such exhibitions should be to stimulate a spirit of healthy rivalry amongst those classes of the community who are engaged in agriculture and kindred occupations, and at the same time afford the agricultural student, and others interested in farming pursuits, an opportunity of inspecting and comparing specimens of the best that can be brought forward, whether of live stock, manufactures, or the artificial or natural productions of the soil. These exhibitions should provide most valuable educational advantages, and especially so in a new country like Australia, where so much

has to be learned concerning the capabilities of the soil, the peculiarities of the climate, the adaptability of products, &c., and where so many persons have entered into the farmer's calling who have had no previous experience. As your show is at present managed, the objects which I have indicated cannot be sufficiently attained. Its increasing popularity, and its greatly increased dimensions, make it too big an event to admit of its receiving proper justice within the time it is kept open, and visitors have hardly mastered details of the arrangements until the whole affair is wound up. The time is too short, and the excitement is too great, to allow of a calm and instructive investigation of the various objects of interest which are annually presented for examination at your show. The first day is taken up with judging, which is a most interesting event, and affords the very best opportunity for seeing the various classes of live stock to advantage; but as the judging is all conducted simultaneously, the visitor has only the opportunity to witness the examination of one or two sections. The second day is all excitement with trotting and jumping. The third day is devoted to auction sales, which are increasing in popularity each year, and have a tendency greatly to increase the number of live stock exhibited, for it must be admitted that whatever the objects of the Society may be, the main object of exhibitors is to advertise, and that with a view to sales, either present or prospective. On the fourth day, trotting and jumping predominate again, and last show, more distracting than all, an exhibition of buckjumping was thrown in. I by no means object to testing the jumping and trotting abilities of horses, but these and other exciting events occupy so large a proportion of the limited time devoted to the show, that the more sober, but quite as useful, departments are comparatively overlooked.

The machinery and implement department, for instance, does not receive that attention its importance deserves, for I am confident there is no department of the show which contains more objects of interest, or can be more profitably studied by the farmer than this. He is indebted to the ingenious inventions and spirited enterprise of those manufacturers and others who supply the various labor-saving appliances which enable him successfully to pursue his calling, in the face of scarcity of labor, high wages, and foreign competition; and at each succeeding show new inventions and improvements are to be found. I consider a week could be profitably devoted to this section of the show alone; but as it is now, a visitor is no sooner settled down to the careful examination of some implement, or piece of machinery, than a shout is raised and a crowd collected, perhaps by some equestrian feat—it may be jumping, it may be trotting, or it may even be buckjumping. It is only human nature to follow a crowd, and the whilom student probably meets with an acquaintance, has his thoughts directed into another channel, and it is only after he retires to his home, or after the termination of the show, that he remembers his unsolved problem. I know this has been the experience of many with whom I have conversed, as well as my own. I may be asked what remedy I would propose to meet the objections I have raised, or what change I would suggest in the management of the show. It may be necessary for me here to explain that I do not make any charge against the details of management under the policy which has hitherto guided the conduct of the show. What I contend for is that the show has now assumed such dimensions that a change of policy or plan in working it out is demanded. Your bill of fare is too ample and too varied to be either fully enjoyed or properly digested by your guests at a single entertainment. What constitutes one surfeiting feast would provide three or four enjoyable banquets. I would suggest, therefore, that instead of all the exhibits being placed in the show-

Breeding.

[THROUGH the courtesy of one of our foremost breeders, we are enabled to give the following article on the above subject, from a valuable work in his possession.—EDITOR.]

BREEDING.—The art of rapidly multiplying and of improving domestic animals. Some wealthy and patriotic landlords expend much wealth, great patriotism, and not a little labour and science in improving local breeds of live-stock, in introducing superior breeds from other districts and countries, and in indoctrinating the agricultural community with enlightened principles in the art of breeding; but such men are benefactors of their country rather than breeders, and must be viewed rather as patronising the art of breeding than as taking part in any of its ordinary cares and toils. Professional farmers, who labour for profit, are the only true class of practical breeders; and, while agricultural improvers desire such breeds as promise to be most beneficial to a whole country, practical farmers desire such as will yield the largest amount of profit in the particular circumstances of their respective farms. A wise practical breeder regards his live stock as an important portion of his property, and conducts the treatment and the increase of it with a direct view to the obtaining of the largest possible remuneration. He considers the nature of his farm—whether dairy, pastoral, arable, or mixed; its locality; the amount and quality of its pasturage; the character of its soil; the adaptations of its climate, exposures, and elevations; the degree and kind of its resources for the support of stock in winter and spring; the markets to which it has the most ready access; and the varieties and comparative value of pastoral produce for which these markets maintain a demand. He will decide whether sheep-walk, or the dairy, or grazing, or a combination of objects, promises to be most suitable; and will select only such principle of breeding as subserves the department which he adopts. "The best beast for him is that which suits his farm the best; and, with a view to this, he studies, or ought to study, the points and qualities of his own cattle and those of his neighbours. The dairyman will regard the quantity of milk, the quality, the time that the cow continues in milk, its value for the production of butter and cheese, the character of the breed for quietness, or as being good nurses; the predisposition to red-water, garget, or dropping after calving; the natural tendency to turn everything to nutriment; the easiness with which she is fattened when given up as a milker; and the proportion of food requisite to keep her in full milk, or to fatten her when dry. The grazier will consider the kind of beast which his land will bear, the kind of meat most in demand in his neighbourhood, the early maturity, the quickness of fattening at any age, the quality of the meat, the parts on which the flesh and fat are principally laid, and, more than all, the hardihood and the adaptation of constitution to the climate and soil."—*Youatt*. The sheep-farmer will act on analogous principles with reference to sheep, making his selections in adaptation to the situation and character of his farm, and with a view to produce in wool or in carcass; the breeder of hogs will consider the adaptation of his resources to one breed rather than to another; and the mixed breeder will take account, not only of the fitness of his farm for supporting particular kinds and breeds of domestic animals, but of the best methods of so economising it as to maintain the most productive balance between the different kinds, and the most powerful reciprocity upon the fertilising of the soil for the produce of grain.

The art of breeding live-stock for profit is very laborious to both body and mind. The purchasing of proper stock in the best markets, the collecting of them from different districts into one farm, the managing of the offspring stock from birth to maturity, and the disposing of the surplus in the most remunerative markets, involve great bodily exertion; and the care of the large capital requisite for the enterprise, the doubt whether the outlay for two or three years may be equivalent to the risk, the uncertainty as to the purchased stock producing a progeny as good in character as themselves, the daily solicitude in rearing the progeny to maturity, the fear of disaster from the attacks of disease, and the apprehension of loss from the fall of prices, impose a large degree of labour and trouble on the mind. Any man who begins to be a breeder, therefore, ought to have great powers of both bodily and mental endurance; nor will he ever be likely to enjoy much success unless he also possess a large judgment and an enterprising spirit. A breeder who cultivates any sort of stock which he can most easily procure, or who rears it with little trouble or with

merely routine care, has no right to expect any considerable remuneration. A thoroughly prosperous breeder selects his stock with much discrimination, readily expends labour and money to obtain at a distance a better animal than he can procure at hand, keenly observes the practices, or notes the principles, of other successful breeders, and omits no practical precaution, however minute, for securing excellence in the progeny, averting disease, and effecting a plump, early, and ample maturity.

The natural progress of the art of breeding is well illustrated by Mr. James Dickson, of Edinburgh, in a suppositious case, which we shall here transfer to our pages:—"The securing of the greatest profit in breeding with the least labour consists in procuring that breed which will attain the greatest weight and maturity in the shortest time, and on the least quantity of food. On observing the progress of different individuals of the same breed of cattle, every breeder may have noticed that some individuals fatten quicker than others under the same treatment; and were the cattle of different breeds, the difference in the progress of fatness would probably be the more striking. Results so obvious cannot fail to rouse the inquiries of the breeder. How is it that animals of different breeds, or individuals of the same breed, fatten faster than others? They all receive the same attention and care, food and comfort. On inspecting the subject more closely, the breeder discovers that those animals which improve fastest are the most beautiful to appearance, and most handsomely formed. Out of regard for them, he has a desire to handle and fondle them, when he makes a new discovery—he finds that their skins feel agreeable to the touch, are loose, and easily laid hold of; their bodies are soft and fat, and he can press his fingers into the flesh, which springs back again in an elastic manner. He can also ascertain the same properties in the parents of the respective cattle which have thus exhibited them; and when he has made this observation, he has made another discovery. He thereby learns that cattle possessing certain good and useful properties have the power of imparting them to their progeny. He becomes convinced that good properties are hereditary, and, by a parity of reasoning and observation, he concludes that bad properties are also hereditary. He therefore retains the breeding stock which possesses the good properties, and disposes of the rest which possess the bad, and fills up their place with animals possessing properties similar to the first. His mind having thus been awakened to the proper course to be pursued in breeding, he perseveres in the selection of the best animals, and, in the course of time, his experience and taste correct the defects which may exist in even the minutest properties of his animals. Some of these minute defects may not exhibit themselves for some time, even for years; but when they do appear, the animals having them are removed, and those only cherished which have preserved all the good properties to the latest period. Having thus procured that breed which attains the greatest weight and maturity in the shortest time, and on the least quantity of food, not absolutely, but relatively to other breeds—for it is, perhaps, not in the power of man to fashion an absolutely perfect breed of cattle, which these qualifications would indicate,—the breeder's next consideration is how to preserve the good properties which have been acquired in his cattle. This consideration will be early impressed upon him, for he knows that the possession of any good thing is but a fleeting acquisition; for he sees that others more than he cannot retain a good thing permanently, for everything becomes the more evanescent the purer it is. He finds this to be true in regard to cattle. The good properties gradually disappear, one after another. The more minute properties disappear first, as it were stealthily, before he is aware of their disappearance. He finds, to his amazement and embarrassment, that his cattle are undergoing an evident change for the worse. They are becoming smaller, they are more tender, more easily hurt by change of food and weather; they show symptoms of internal disease, and some even die in spite of his attempts to preserve them. He becomes alarmed, he ascribes the change perhaps to some temporary change in the atmosphere, to some epidemic, which will pass away with the season; and, at all events, he cannot ascribe the mismanagement on his part, as a cause of the disheartening change. He is not conscious of having deviated from the exact line of conduct which has hitherto led him to prosperity and fame. He finds himself in a dilemma. If he continues as he has latterly proceeded in his method of breeding, he fears that the value of the cattle, upon which he has bestowed so much care, and of whose beautiful appearance he is justly proud, will decline every year. It is no

easy matter for a breeder to extricate himself out of such a difficulty. The many conjectures which he forms to account for the unfortunate change, the epidemic among the rest, have now lost his confidence, and he begins to distrust his later management, and attempts to discover an error of judgment or of practice. But although an error of judgment or of practice had produced the effects, its immediate connexion with them may not be very apparent; and, at all events, he is reluctant to acknowledge that it is easy to account for so great a change as has taken place in his stock. He cannot conceive that a pursuance of the same plan which perfected his animals, can at any time be detrimental to them. He resolves, however, to proceed in future with circumspection. The first precaution which he uses is to change his breeding stock, in that line whose progeny have shown the greatest change. He purchases a bull from the best breeder in the country. This is at least a safe step. On comparison, his eyes are opened to the lamentable fact, that his present favourite bull which has procured him his stock, is not so perfect as other people's, nor what he has before had; he is fat enough, but seems bound together, and is small. He resolves that he shall serve no more of his own cows, but he puts him to a cow which he has bought, in order to mark the results of the double change which he is about to effect by introducing a fresh bull and a fresh cow into his stock. The results prove better than his expectations. He tried the experiments in doubt, but he exults in the results, because he is in the way of regaining his lost stock. The fresh breed exhibits the size, strength, hardiness, all the good qualities of his best animals. He now sees the necessity of changing, at intervals, the blood in breeding cattle, in order to maintain them in that high and palmy state which imparts the greatest pleasure and profit to the breeder. He is convinced that without a change of blood in its constitution, or, in other words, without crossing, no breed of cattle can maintain its health and usefulness.

Convinced though he be of this position in regard to crossing in the same breed, still he naturally asks himself, Will any kind of crossing produce similar favourable results? Were any bull or cow used, would their progeny be as perfect as that of the crosses which he had just used? No reasoning can satisfy any man in the matter; experiment alone must answer those questions. But having already made experiments and succeeded, he may try others. He buys a bull of any breed different to his own. He puts him to one of his best cows. The result proves almost a failure. The progeny is no doubt strong and hardy, but it is coarse, and by no means an improvement on his own breed. Such an experiment shows that he should not rely on a confessedly inferior bull. He then finds that the crossing of breeds must not be conducted in an indiscriminate manner, that a superior bull is necessary, and that a superior cow cannot secure him against disappointment when coupled with an inferior bull.

He will try another experiment, the converse of the last. He now buys a cow of a different breed from his own, and puts the best bull to her. The result is much superior to the last experiment. The progeny is not so fine as his own pure breed, but it is superior to its mother. It proves a rapid grower, kind feeder, has a good figure and hardy constitution. He is encouraged to proceed a little farther—he puts a fine bull to a cow of this cross. He is still not dissatisfied; the progeny is still not so fine as his own pure breed, but it approaches nearer in similarity to it than the first cross; and proceeding in this manner for generations, he ultimately finds that the coarse breed merges into his own. As he is still in the field of experiment, he tries the effect of a bull of a different breed from his own with a cow which is a cross between a coarse cow and a fine bull of his own. Instead of the cross improving as it did with the fine bull, it is decidedly worse than its sire. He receives no encouragement to proceed in this direction. These latter experiments prove to him, that, were it possible, from the course of events, that no superior cow could be obtained, a superior bull would in time raise a stock similar to himself from a cow of a different breed; and that this cross should either remain as it is, because it is certainly a good cross, or it will merge, by means of a superior bull, into his own pure breed; but that, by an inferior bull, the cross degenerates at once.

In the present state of improvement, however, no man requires to pass through the progress of breeding, from a low to a prime condition; nor even while modern improvement was advancing, did any man pass through the whole of that progress. Mr. Dickson's suppositious breeder is an impersonation of several or even most of the enterprising men by whom a chief portion of the existing improvement in breeds has been ac-

bit-injuring its surface, and inflaming the gum beneath it, sometimes injuring even the bone. Some horses resist the bit to such an extent that the bone becomes so injured that pieces of it come away, yet, even with the mouth surface in the most painful state of sensibility, they are termed "hard-mouthed."

When horses refuse to turn their neck round it is in consequence of a difficulty of bending it, not from any callousness of one side of the mouth, nor is it from any insensibility within the mouth to bit-pressure that a horse is a "puller," but from his not carrying his head in such a position as to allow the restraining force coming from the hand of the rider acting with mechanical advantage. This is the general rule, but in some animals the muscles are capable of more resistance than in others, and consequently offer greater opposition to the tractile force used for governing or restraining the animal. Much more depends on the "setting on" of a horse's head than is generally imagined. By "setting on" is meant the relation of the head with the upper part of the neck to which it is attached, the angle at which the junction takes place, and the angle at which the axis of the head is placed in relation to the line between the hand of the rider and the attachment of the bridle rein to the bit. The head of the horse is the lever by which the power of the hand, through the medium of the bridle rein, restrains the animal. The longer the lever the greater the power. The lever is artificially increased by lengthening the cheeks of the bit, as in that of a curb bridle. The longer the cheek of the bit the greater the power. The nearer to a right angle the force is applied to a lever the greater will be the power with which it acts. The nearer to a right angle with the length of head is the tightened rein between the bit to which it is attached and the hand which pulls it, the greater is the power in restraining and governing the animal. The horse that naturally carries his head in such a position as to have its length at a right angle to that point above the withers, where the bridle-hand is held, requires scarcely any breaking for ordinary purposes.

The greatest object in breaking, as a general rule, consists in "bending" the horse's neck in such a way as to get the head as near as possible into that position as to have its length at a right angle with the direction at which the force is applied from the hand through the medium of the bridle-rein. Martingales and running reins are used that the traction force from the hand may be applied to the bit nearer to a right angle with the long line or axis of the head. Some of these appliances, as the fixed nose-band martingale, forcibly hold the nose down, so as to keep the head in the position in which the bridle-rein can the more effectually act upon it as a lever; others, as in the ring martingale, change the direction in which the force is applied from the hand to the mouth to one more at right angles with the axis of the head, and consequently of more powerful effect. The running reins, with one end attached to the girths between the horse's legs, or under the saddle skirts, the other held in the hands of the rider, the intervening portion running through the rings of the bit, as through "a single block pulley," acts powerfully in applying the restraining or pulling force in the most favourable direction. If two tractable forces of equal power and velocity of action, coming from different angles to a particular point, are applied to an object at that point, the direction in which it is moved is in a middle line between the two forces. The resisting point to wherever one end of the running rein is attached to the girths, and the hand that pulls the other end, represent the two forces; the lower part of the horse's head, the object to be moved, and the forces thus applied to the bit will have a tendency to draw in a line of direction equidistant between the resisting and pulled ends of the running rein, the middle portion of which, playing freely through the ring of the bit, regulates the position of the latter as to its running or slipping itself into the centre of the two forces, the active one of pulling coming from the hand, and the passive one of resistance arising from the attachment of the fixed end of the rein between the horse's fore-legs to the girths, or beneath the saddle-skirts to its straps. The head not yielding equally towards the two points causes a modification in the direction of the line in which it is moved from its original position; but the running of the rein through the bit adjusts the balance between the power and point of resistance at the end of the running reins.

RUNNING REINS.—Independent of the mechanical advantage in using running reins, by the direction in which the force is applied to the bit, there is another with respect to the amount of power effected by the force used, the force exercised by the hand being transmitted along

the rein through the ring of the bit (pulley fashion) to a point of resistance at the fixed end of the rein; the resisting power is transmitted back to the hand through the same course, thus doubling the amount of pressure which would be exercised on the bit by the hand through the medium of an ordinary rein buckled to the bit ring, instead of running through it to some fixed point about the horse's body beneath the hand of the rider. In breaking horses naturally stiff-necked, or in what is called "pulling together," a horse, be his formation what it may, it is necessary to exercise caution that the head and neck be very gradually changed or relatively bent in their positions so that there be no inconvenience felt in progression, otherwise the animal will move with uneven paces, particularly in his walking or trotting, if urged to quicken them. This false cadence in action soon becomes a confirmed habit, most difficult, in many cases impossible, to remedy as long as any restraining power is exercised through the medium of the bridle-reins, or any other appliances producing the same effect. The writer of the above observations wishes it to be distinctly understood that he offers them not as instructions relative to the manner in which horses should be broken, but merely in explanation of the mode in which certain effects are produced as the results of certain causes, whether from the natural formation of the animal or the artificial interference of either the rider or driver, whether as *menage* master, ordinary rough rider, or general user. It has merely been sought to explain, in familiar language, the principles on which certain effects, that are generally known in practice, are produced. All horsemen are familiar with these practical results. It has now been sought to explain the simple principles by which they are brought into existence.—*Agriculture.*

West Bourke Agricultural Society.

The usual monthly meeting of this Society was held at the Lancefield Junction Hotel on Saturday last, Dr. A. Plummer (acting president) in the chair; the members present being—Messrs. Hurst, J.P., Wilson Gibson, R. Clarke, S. Seymour, Skehan, M'Intyre, Woodworth, H. Campbell, H. C. Sandford, and the Secretary (A. N. Thomas). The minutes of the previous meeting were read and confirmed, and the outward correspondence approved of.

INWARD CORRESPONDENCE.

From Mornington Agricultural Society, intimating that their Committee had fixed 17th February as date of Show, in deference to the wish of this Society. Received. Already acknowledged.

A telegram from Mr. J. F. Hamilton was read, intimating his wishes in the matter of his special prize of £5.

From the National Agricultural Society, soliciting an expression of opinion as to whether this Society favoured the federation scheme lapsing into the Council of Agricultural Education, or whether it preferred the scheme being carried out independently, as originally proposed. After some discussion, during which the President fully explained the position, it was resolved on the motion of Mr. J. Hurst—"That this Society approve of the Federation Scheme, pure and simple, being carried out, and that it be not merged into the Council of Agricultural Education." Seconded by Mr. Gibson, and carried.

RESIGNATIONS.

Mr. J. T. C. Riddell, J.P., telegraphed his resignation of his office as member of Council, finding that his duties precluded his being able to attend the meetings. After some remarks from various members, expressive of regret at losing Mr. Riddell, Mr. Hurst moved, and Mr. R. Clarke seconded—"That the resignation be accepted, and that the Secretary inform that gentleman of the Council's regret; and that a vote of thanks be accorded to him for his past services."

Mr. Walter J. Clarke, being eligible for the vacancy, Mr. Gibson moved, and Mr. M'Intyre seconded, that that gentleman be elected to the vacant seat. Carried unanimously. Mr. Clark, in a few felicitous remarks, returned thanks for the position to which he had been elected.

MR. MORRISON'S RESIGNATION.

The Secretary read a letter from Mr. Morrison, one of the oldest members of the Council, who detailed therein his reasons for resigning a position that he had faithfully filled for a period of fifteen years. A lengthened discussion took place upon the letter, during which several members expressed sympathy in his being virtually accused of an act of which he does not believe himself guilty. Eventually Mr. Walter Clark moved, and Mr. Skehan seconded—"That

the resignation be not accepted, and that Mr. Grant and the mover be appointed a committee to enquire into and, if possible, satisfactorily settle what appears to be a dispute over an unfortunate mistake in the matter of a member's subscription." Agreed to.

PEA THRESHER.

A letter was read from the Department of Agriculture, requesting the nomination by this Society of a gentleman willing to act as a judge of the pea-threshing machines entered for competition for the Department's bonus of £100. Mr. R. Clarke moved, and Mr. Gibson seconded, that Mr. P. Mitchell, J.P., be appointed and recommended accordingly. Carried.

SITE OF TRIAL, &c.

In conformity with the Department's further request, and on the motion of Messrs. Gibson and Skehan, a committee, consisting of Messrs. A. Plummer, Seymour, Wilson, Grant, Galbraith, Hurst, and the mover, were appointed to select a site for the trial; such committee to be convened as early as convenient, and report to the Department accordingly.

REAPER AND BINDER.

Mr. R. Clarke moved, and Mr. Sandford seconded, that the same committee be empowered to arrange all details for this trial also, and that it take place upon a date suitable to all—in the Romsey District—during January next.

PRIZE LIST AWARDS.

Special prizes, the gifts of Dr. A. Plummer, Messrs. Walter J. Clarke, L. Campbell (Glenbride Park), J. Grant, and Robert Clarke, J.P., were considered, and allocated in accordance with the donors' wishes.

COMPLETION OF DINING HALL ENLARGEMENT.

The Secretary stated that the contractor had completed the work of enlarging the dining-hall, painting, &c., with the exception of a few minor extras. It had been inspected by the Building Committee individually, but the honorary Clerk of Works, Mr. Blackburn, Shire Engineer, had not yet reported. It was resolved that the Secretary be empowered to pay the amount of the contract, £102 1s., on receipt of a satisfactory certificate from Mr. Blackburn. Agreed to.

STEWARDS FOR SHOW.

The following gentlemen were appointed stewards in the undermentioned classes, *vice* those resigned:—Hackneys, Mr. Alex. Wilson; Farm Produce, Mr. Walter J. Clarke; Needlework, Mrs. Feehan; Draught Stock, Mr. J. J. Daly; Dairy Cattle, Mr. W. M'Intyre.

WATER SUPPLY FOR YARDS.

Attention was drawn to the necessity for making provision for storing the surplus water, now obtained from the shed, as being spouted all round a large volume was being wasted. After some discussion a committee, consisting of Messrs. Gibson, R. Clarke, and Hurst, were appointed to inspect, and authorised to expend a sum in forming a storage tank or other suitable receptacle.

NEXT MEETING.

It was decided, on the motion of Messrs. R. Clark and Woodworth, that the date of next meeting be postponed until 15th January, and that a special invitation be sent to Sir William Clarke, soliciting his attendance on the occasion.

The recommendation of certain members of the Ball Committee, suggesting the postponement of that event until March next, was approved.

NOTICE OF MOTION.

Mr. D. Gibson gave notice that, at the next meeting, he would move—"That a deputation wait on the Hon. Mr. Dow to request him to appoint a commission of inquiry into the nature and cause of the disease occurring among horses, known as the Australian stringhalt."

RETURN OF SIR W. J. CLARKE.

The Acting-President (Dr. Plummer) stated that as the Society's president (Sir W. J. Clarke) had now returned to the colony it was his pleasing duty to resign the temporary appointment that had been conferred upon him, and thanked the members for the uniform kindness and courtesy he had always received from them. He would now vacate his position in favour of Sir William. After some eulogistic remarks from various members a vote of thanks was accorded to Dr. Plummer for his valuable services; his health being also drunk with musical honours.

The following gentlemen, together with as many others as could make it convenient, were appointed a deputation to meet Sir William on his arrival on behalf of this Society at 12 noon on Monday, Menzie's Hotel; the Secretary to apprise him of same by telegram, viz.:—Dr. Plummer, Mr. J. Hurst, J.P., Mr. Walter J. Clarke, Mr. Sandford, and others.

FINANCE.

Accounts, amounting to £119 7s. 8d., were passed for payment, and the meeting terminated.

hieved. Any one man has, in general, but a limited range of experience, and both learns from the operations of his neighbors, and takes advantage of the achievements of his predecessors. Yet though the alleged facts in Mr. Dickson's delineation are not imaginary—though, for example the breed which he represents as having been brought to the highest degree of perfection is the short-horned, and its degeneracy is indicated by pursuing the breed too near akin—the principles embodied in his sketch, particularly those respecting the effects and the alleged necessity of crossing, are very far from being undisputed.

(To be continued.)

Keep the best animals on the farm no matter what some speculators may offer for them.

CURE FOR MILK FEVER.—At the judge's dinner in connection with the show of the the Staffordshire Agricultural Society, in discussing a paper which had been read on the management of stock, Mr. W. T. Lamb as a practical hint, said, he once had four cows lying dead in his yard at the same time from milk fever. He got the advice of veterinary Surgeons, but it was of no use to him. (Laughter) At last, while he was travelling, he got a recipe from a gentleman which he had found most effective, so much so that he had never lost a cow since from that cause. This remedy was a quarter of a peck of Linseed put into sop at night and given in the morning, and a similar quantity put into sop in the morning and given at night. He was perfectly satisfied that if a cow's bowels were kept open in this way, it would never drop. Other people in his district whom he had told of the remedy, had adopted it and had found it as efficacious as he had.—*Agricultural Gazette*,

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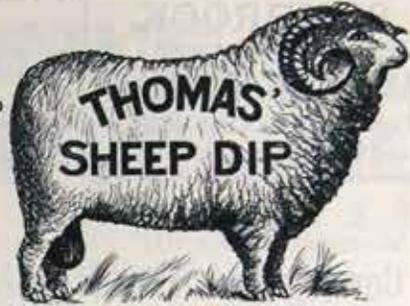
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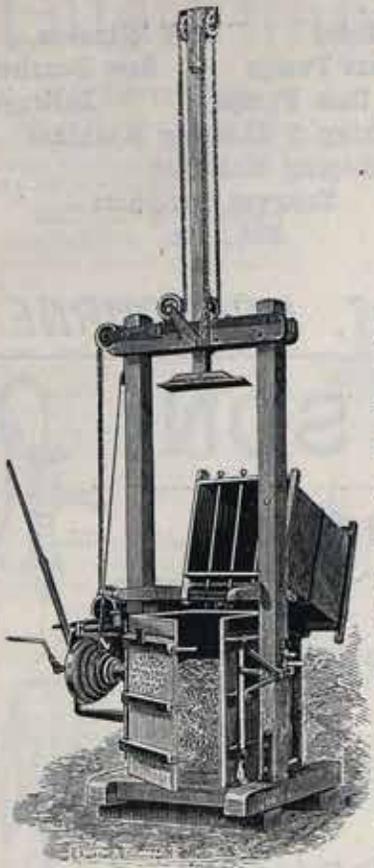
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The rope works on the large part of the Fusee, when the pressure is light, and passes down to the taper end as the pressure increases, being worked by a lever fixed on the centre spindle.

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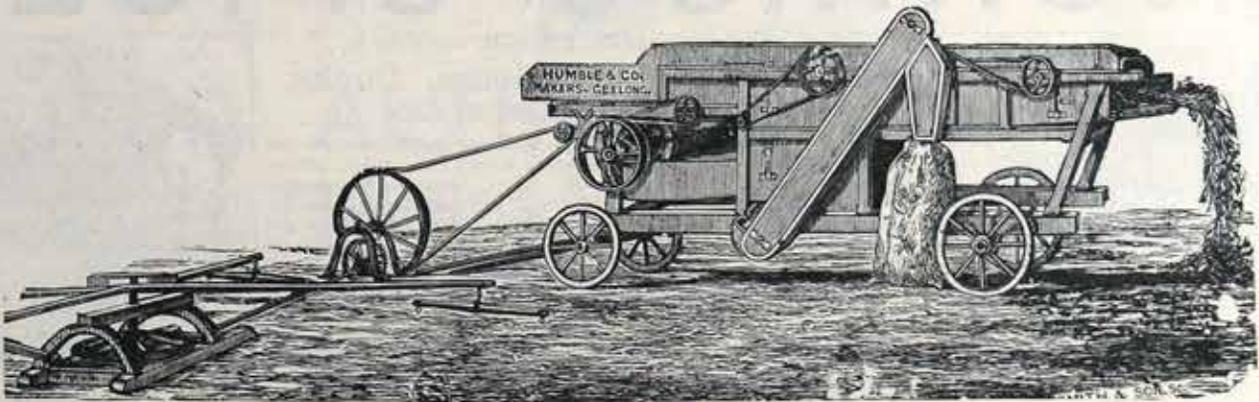
Special attention is directed to the fastening of the Packs before the Wool is put in, which is done in an exceedingly quick and simple manner: four pieces of wood are fitted into the recesses of doors, which hold the Pack securely in position and to the side catches for fastening the doors, which are held in position by a vertical bar, and relieves them simultaneously.

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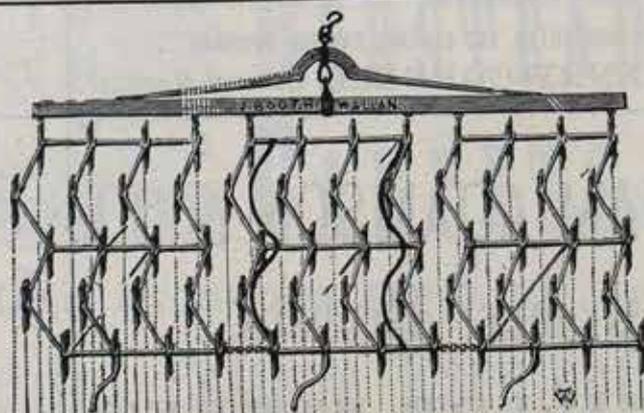
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HARROWS made to suit all kinds of soil, fitted with Iron or Steel Tynes.

These Implements are constructed on his well-known W pattern, which ensures every tyn
cutting its own ground, and also reduces the draught to a minimum. During the season 1884
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secured 12 first and 2 second prizes out of 15 shows, thus proving their superiority.

J.B. having made a speciality of Harrow Making, the farming public may rely on securing
a satisfactory Implement at a Moderate Price, by applying to him or to any of his Agents
throughout the Colonies. Illustrated Catalogue and Price List free on application.

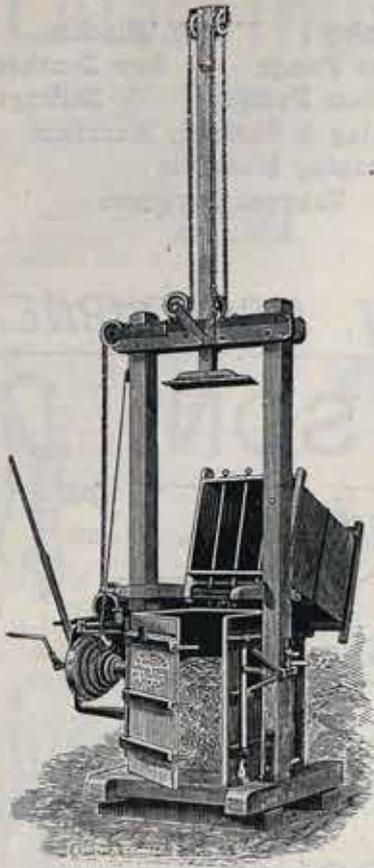
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First Order of Merit awarded this Press at the Melbourne International Exhibition, 1880.

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THE usual screw is dispensed with, and the pressure brought to bear by means of a strong rope or chain, working in sheave pulleys overhead, attached to a Ram, and winding on a fusee, which is made in the shape of a suddenly tapered screw.

The rope works on the large part of the Fusee, when the pressure is light, and passes down to the taper end as the pressure increases, being worked by a lever fixed on the centre spindle.

The top Box is hinged to side Brackets, and turns down to the floor, which greatly facilitates the putting in of the wool, and renders any second floor unnecessary, and when filled is easily placed back in position.

When the bale is pressed and the sides sewn, the Ram is lifted by a small rope from the Fusee, turned by a handle.

It will be understood how very much quicker the power is brought into application by this means than by the ordinary screw press, and double the work is got through by the same number of men.

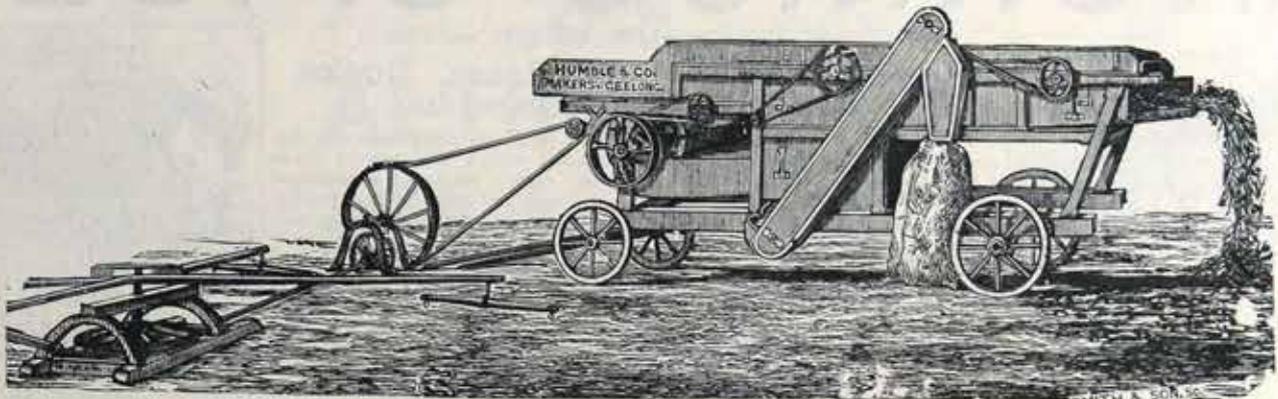
Special attention is directed to the fastening of the Packs before the Wool is put in, which is done in an exceedingly quick and simple manner: four pieces of wood are fitted into the recesses of doors, which hold the Pack securely in position and to the side catches for fastening the doors, which are held in position by a vertical bar, and relieve them simultaneously.

The side door is also held in its place by a catch, which at any time can be relieved instantly, the door falling back and allowing the bale to be removed.

At the Melbourne Exhibition competition this Press turned out 3 Bales of Scoured Wool in 28½ minutes, being considerably less than any other Press, although one had the advantage of being driven by steam.

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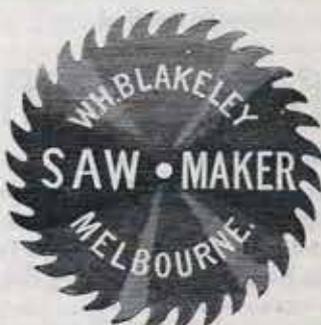
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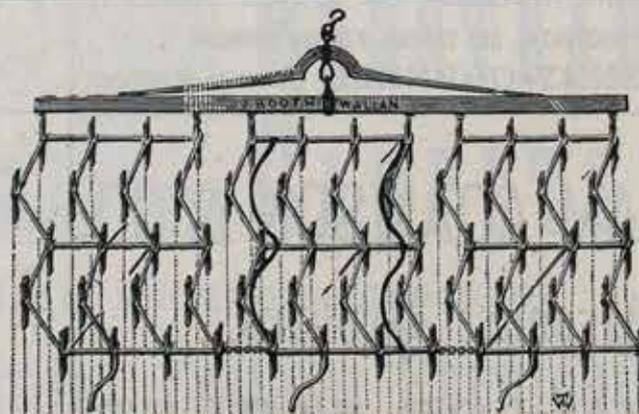
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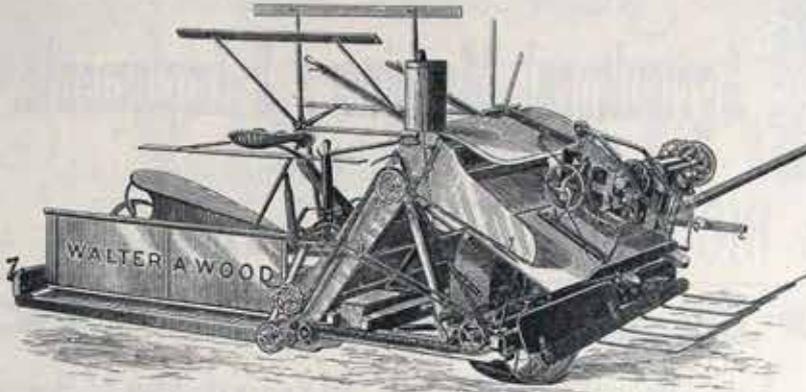
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AND A MACHINE

which fulfils in every respect in practical use, all that is claimed for it.

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- Certainty of binding,
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- Absence of side draught,
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With Transport Gear and Patent Sheaf Carrier.

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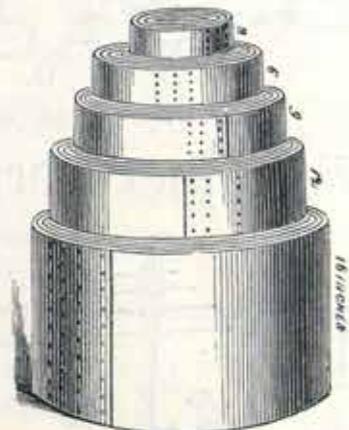
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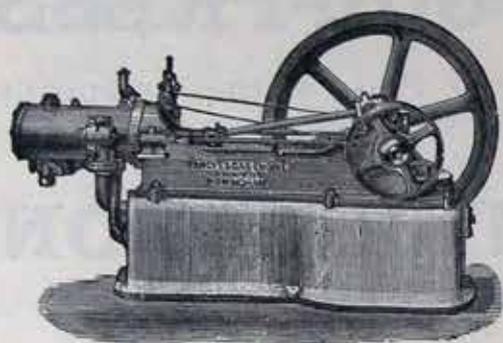
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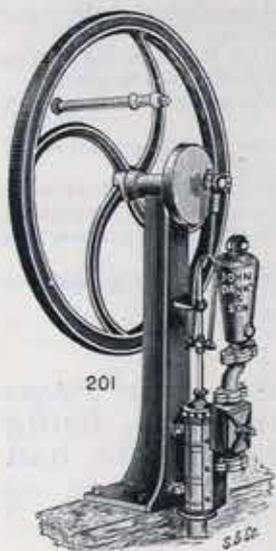
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VOL II.—No. 18. [Read as a Newspaper.]

MELBOURNE, JANUARY 14TH, 1887.

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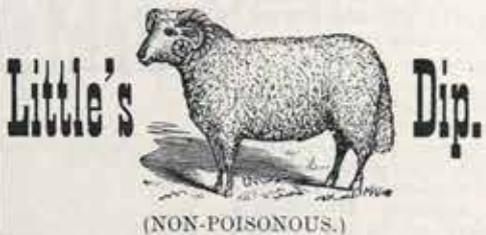
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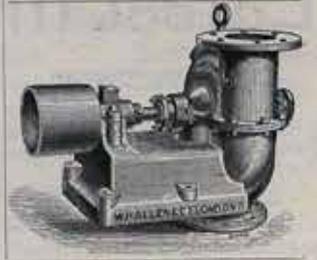
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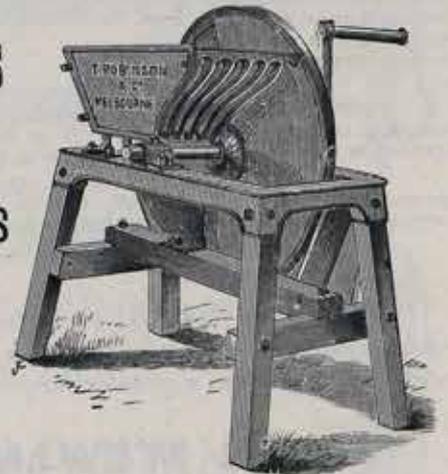
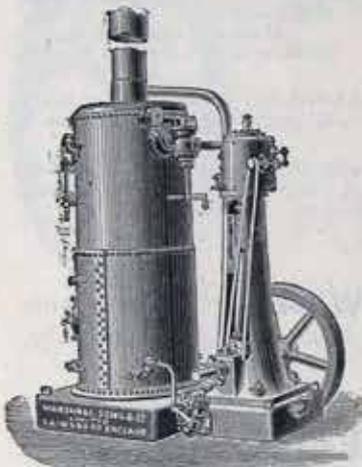
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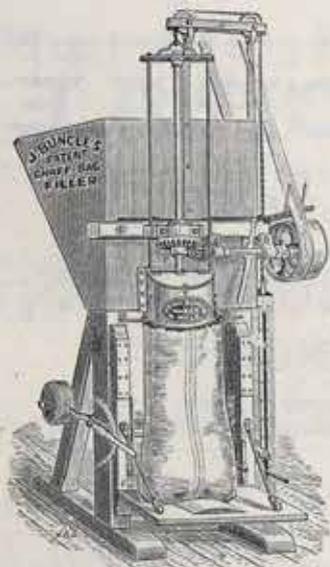
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BUNCLE'S Patent Chaff Bag Filler.

JOHN BUNCLE, in stating what is well known, viz., the great competition in the Hay, Corn, and Chaff Trade, begs at the same time to call attention to his endeavour to lighten the toil and increase the profits from such a business, by designing and manufacturing a machine for the above purpose, and one which cannot be approached by any other maker at present, or recommended to equal in **Simplicity, Durability, and thorough Adaptability and Cheapness** combined as in the above Machine. The **BAG FILLERS** are manufactured complete, ready to be sent to wherever ordered or in any of the colonies, either to fix in stores in connection with the fixed Chaffcutters, or to be attached to his well-known Travelling Chaffcutters previously supplied, and now supplied either with

or without Baggers. A few attempts have been made by some to supply such a want, but probably not having a theoretical as well as a practical knowledge of machines, have not been able to reduce the complicated movements in their machines, and which are perfectly unnecessary—as witness the Unique Simplicity and correctness in design, and the admirable working of **BUNCLE'S PATENT BAG FILLER** compared with the few others tried at work.

For the information and convenience of customers, a machine is kept constantly set up ready to show at work in **BUNCLE'S PARKSIDE IRONWORKS**, and many customers have witnessed **80 to 90 lbs.** of Chaff put in a bag in 15 seconds!!! which, after making allowances for time removing the full bag and replacing an empty one, would easily on an average keep **Four of Buncle's No. 1 Chaffcutters**—well, if there is any doubt, say Three Machines clear of all the Chaff they cut (medium length.) Of course the Machines are arranged to put in as light weight as you like, or you can fill up and burst all your Bags—to pieces. As a trade requirement (in addition to filling bags) the necessity for a **Mixing Machine** is a long felt want, the laborious and unsatisfactory way at present adopted cannot much longer be endured, and there is no necessity for it!! as **J. Buncle** can arrange to "Blend" the worst and the best samples "To a Hair" at the least possible expense with the best results.

The season is now coming on when all those who intend having the latest improved Machines should forward their orders as early as possible, to prevent disappointment in the day of their need.

J. Buncle's Machines have, as usual, been awarded First Prize at all the leading shows wherever he exhibited last year (1885), and the many improvements introduced and constantly copied by other makers, is the best proof of the value of the continued consideration in all that affects the profits and welfare of his customers.

Chaffcutters with 14-in. wide mouthpieces and Newest Designs, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

Sirs and Gentlemen, yours respectfully,

Parkside Iron Works, North Melbourne.,

JOHN BUNCLE.

Catalogues Post Free on Application.

MCCALMAN, GARDE & CO.

MANUFACTURERS OF ALL KINDS OF

Agricultural Implements,

Beg to inform the Farming Community that they are the **SOLE MAKERS** of the

MCKAY'S PATENT COMBINED HARVESTER.

Single, Double, and Treble Ploughs.

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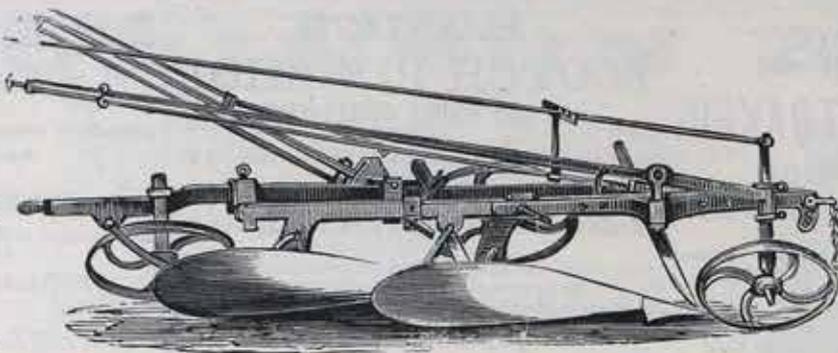
Horse Hoes,

Scarifiers,

Harrows,

Horse Rakes,

Field Rollers.



Squatters' Ploughs

For dam sinking.

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For road making.

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All Kinds of Implements kept in Stock to select from at their Manufactory,

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Guaranteed Instrument, 25/-

RAIN GAUGES, from 15s
Standard Instruments of all Kinds.

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ENGLISH
LEVER WATCHES

still hold their ground
against all competitors as
the most durable and trust-
worthy timekeepers in the world.

The favorable opinion formed of Gaunt's
watches by the Australian public has been
endorsed by the jurors of the several Exhibi-
tions in which he has competed, and his last
crowning success, the obtaining **HIGHEST
AWARD FOR HOROLOGY** at the Melbourne
International Exhibition, should convince the most dubious
that his watches cannot be excelled. Seven Gold and other
Medals. Price from £6 6s. to £10 10s. Get the opinion of any
of your friends who has one of my watches.

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FRANKLIN STREET, WEST MELBOURNE,

MANUFACTURER OF THE WELL-KNOWN

Williams' Rack & Pinion Wool Press

Rack and Gear Steel Press for the use of large stations.

Lever & Chain Press, with Folding Top Box, for the use of smaller stations
Lever and Chain Farmer's & Selector's Press. Price, £22 10s.

As the season for this latter kind is now approaching, those requiring them
should lose no time in sending their orders. Owing to the general satisfaction
given by those supplied for last season, orders are now freely coming in, and a
large demand is looked for. The following is a fair sample of a large number of
Testimonials to hand for those supplied last season:—

MR. PRICE WILLIAMS—

BALLYROGAN, JAN. 23RD, 1885.

Dear Sir.—I have much pleasure in informing you that the Farmer's Wool Press I
purchased from you last October, gave me every satisfaction. We turned out very compact
small bales, about 34 cwt., but could have them heavier if we wished with once down. By
what the Wool Brokers tell me, they would clear themselves in two seasons to anyone having
twelve bales. Since done with the Wool, I have had it in constant use as a Cheese Press, and
I reckon it worth half its cost for that. We have weights on the levers. Any number of
Cheeses can be put in at once. It would make a good Press for Hay or Straw, and for Grapes
or Apples it is just the thing. I can highly recommend it as a most useful, substantial, and
cheap article.—Yours truly,
HUGH GORDON.

McDougall's Sheep Dip

USED THROUGHOUT THE WORLD.

McDOUGALL'S SHEEP DIP.

PERFECT SAFETY, NON-POISONOUS.

A Dip with 20 Years' Record and Second to None in the
Market.

As certain as arsenic in its effects in exterminating all insects, and
without its danger. It is the only true specific for scab.
Finely stimulates the growth of Wool.

Trial Once Made, Always Used.

PRICE, 5/6 PER GALLON, 5 GALLON DRUMS.

Direct Agents—

GOW BROTHERS,

8 MARKET BUILDINGS,

WILLIAM STREET.

McDougall's Sheep Dip

VICTORIAN RIFLE CLUBS.

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SADDLER,

15 POST OFFICE PLACE & 11 BOURKE ST. WEST,

is the GOVERNMENT CONTRACTOR, and the Only Saddler
Appointed for supplying the Regulation Riding
Saddle, Bridles, Leggings, and Wallets.
Any of the above will be supplied in any quantities to Members
of RIFLE CLUBS at the Contract Prices. Apply early.

DANIEL TOPP,

Late J. J. Walker, Wholesale & Retail

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D. T. wishes to call particular attention to his Colonial-made
Rough and Smooth Bullockhide, Hogskin, Bush and Town,
Saddles, which for Shape, Price, and Quality, cannot be equalled.

TRADE SUPPLIED.

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Seed Merchant,

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Grasses—Lucerne, White Clover, Red Clover,
Mangolds, &c.

FORWARDED on APPLICATION.

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(In which are amalgamated the Australasian Agency and
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WOOLBROKERS.

Capital, £3,000,000.

HEAD OFFICE—MELBOURNE.

MAKE LIBERAL CASH ADVANCES on the ensuing CLIP
of WOOL and on STATION SECURITIES.

They hold AUCTION SALES of WOOL twice each week
during the season, and at frequent intervals during the
winter months.

AUCTION SALES of TALLOW, HIDES, SHEEPSKINS,
etc., are held three days each week throughout the year.

AUCTION SALES of WHEAT, OATS and FLOUR are held
each Wednesday during the grain season.

Three Months' Free Storage allowed on Grain.

Liberal Advances made at bank rates on receipt of produce
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Full rates of interest allowed on fixed deposits, current
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W. G. SMITH, Proprietor.

FIRST-CLASS ACCOMMODATION.

Ales, Wines & Spirits best in the market.

GOOD STABLING.

PORTA & SONS,

Steam Bellows, Knife & Washboard Works,

152 & 154 LITTLE LONSDALE STREET EAST,

Near Spring Street,

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MR. WALTER BEILBY'S
HIGH-CLASS FOX TERRIERS.

The English Prize-winners, imported to strengthen my
collection, are not equalled by all the kennels in Australia.

CHAMPION RICHMOND JACK.

THREE TIMES WINNER OF THE FIFTY-GUINEA GRAND CHALLENGE CUP.

CHAMPION DECKER.

This celebrated English winner, has sired more prize-takers,
than any fox terrier in the colony. Vide Nat. Ag. Soc. and Vic.
P. and Dog Society's Prize Lists—1833, 1834, 1835.

Satire (by Joker); **Sagacity** (by Spades); **Leaguer** (by
Corinthian); **Daphne II.** (by Plunderer); **Melbourne**
Hill and **Dame Sans Mero** (by the Belgravian); **Arius**
(by Tackler.)

The above lot are from the very best strains, direct male
lines, and only equalled, by about six kennels in England.

THE COLONIAL-BRED STOCK ARE CHIEFLY FROM THE ABOVE.

MELBOURNE STEVEDORE (by Decker.)

A WINNER EVERY TIME EXHIBITED, PROVING HIMSELF THE BEST
COLONIAL-BRED DOG IN THE COLONY. Vide 1834,
1835 Prize Lists.

MELBOURNE JOKER (by Leaguer, ex Wilfrida,
imp.), by Rompe, by Brockenhurst Rally, ex Satire.

MELBOURNE RAGE (Brother to Melbourne Joker).
Winner of three Prizes, Exhibition Building, 1835.

MELBOURNE NELL (by Diamond Jack, ex Alice.)

SHELFORD RUBY (by Decker, ex Shelford Fury).

Guaranteed Pedigrees with young stock. Photos, 13d. stamps.

ADDRESS—9 DARLING STREET, SOUTH YARRA.

NATIONAL

Agricultural Society

OF VICTORIA.

NOTICE is hereby given that the Preliminary
General Meeting of the Members of the
National Agricultural Society of Victoria
will be held at the Office, Kirk's Bazaar,
Bourke-street West, on THURSDAY, 20TH
JANUARY, 1887, at 2 o'clock p.m., to arrange
the business, and receive notices of motion
for the Annual General Meeting, to appoint
Auditors, and to nominate gentlemen to
fill the places of retiring office-bearers.

THOMAS PATTERSON,

SECRETARY.

NATIONAL

Agricultural Society of Victoria.

Shorthorn Derby Sweepstakes, 1889.

Hereford do do 1889.

Ayrshire do do 1889.

Jersey (late Alderney) do do 1889.

A Sweepstakes of £1 each (10s. at time of nomination,
and 10s. at date of general entry for Show), with
£5 added in each case for Heifers calved between 1st
July, 1886, and 1st July, 1887, to be divided and
awarded as 1st, 2nd, and 3rd Prizes, for three-year
olds, at the Society's Show, 1889.

Nomination of Calves of each breed respectively
will be received on payment of a nomination fee of
10s. each. Calves to be nominated within one month
of date of birth. Nominators to fully describe the
color of each calf entered, and to state the name of
the sire, dam, and sire of dam, together with the
date of calving. Entry forms on application.

THOMAS PATTERSON,

Kirk's Bazaar, Melbourne.

SECRETARY.

ROSS & WESTERN

IMPORTERS OF

Builders', Cabinetmakers' & General Ironmongery

LAMPS, LAMPWARE, & GASFITTINGS.

28 LITTLE COLLINS ST. EAST,

MELBOURNE.

A large assortment of Carriage and Buggy Lamps
always on hand.

£1 to £4 per day to be made by persons
of either sex, in their own
localities, at work for use. New
business. All met with wonder-
ful success. Any one can do the work. Capital not
required. We will start you. Outfit worth £1 mailed
free. The employment is particularly adapted to the
region in which this publication circulates. Boys and
girls earn nearly as much as men. Full particulars
and instructions mailed free. Now is the time—don't
delay, but write to us at once. Address Stinson &
Co., Portland, Maine, United States.

JOHN HEDRICK & CO.,

FARMERS' AGENT,

Grain, Produce, Insurance & General Commission Agent

10 QUEEN STREET, MELBOURNE.

Loans and other Financial Arrangements Negotiated.

Bulk Stocks of Grain held by Farmers can be sold by
Auction or privately from samples sent by Post, avoiding
storage charges.

References—Greig & Murray, 10 Queen St.

Notices.

All communications for the Editor to be
addressed to the Society's Office, Kirk's Bazaar,
Bourke Street West, Melbourne.

Business communications to the Publishers,
Somerset Place, 6 Little Bourke Street West.

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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
requested to forward to the editor the dates on
which their respective exhibitions will be held,
also copies of their prize schedules as soon as
they are published.

FEBRUARY.

- 3.—Dandenong.
- 17.—Mornington, at Cranbourne.

MARCH.

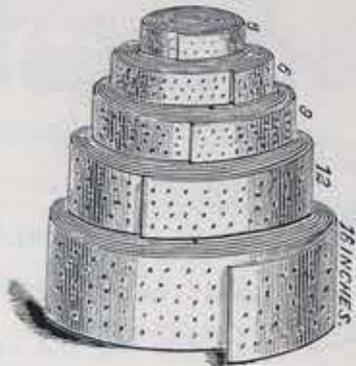
- 3.—Ballan.
- 9.—Baringhup.
- 10.—West Bourke, at Lancefield Road.
- 11.—Grantville.
- 16.—Dunolly.
- 17.—Bass.
- 23.—Daylesford.
- 24, 25.—Warragul.

APRIL.

- 8.—Ballarat (grain).



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WELL-STRETCHED
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MACAULAY ROAD,

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Special Lists for BELTS for IRRIGATION PURPOSES.

A Large Stock of the "PREMIER" BELT LUBRICANT, and Well-Seasoned BELT LACES, kept in Stock.

TESTIMONIAL.—[copy.]

UNION FLOUR MILLS,
Brunswick-street, Fitzroy,
March 17th, 1886.

Messrs. Frank Vial & Co.,
Macaulay Road, Hotham.

Gentlemen,—In reply to your enquiry respecting the (23") twenty-three inch double belt supplied by you to ourselves, we beg to state we have been working it for a period of seven months, and we find it to be all we could desire, as also is the other belting which we had from you.

We therefore feel great pleasure in recommending your belting to anyone requiring the same.

We are, Gentlemen, yours truly,
(Signed) W. S. KIMPTON & SONS.

Other Testimonials received too numerous to print, which with Price Lists, can be had on application.



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WON

EVERY FIELD TRIAL

IN VICTORIA

DURING SEASON

1885-1886,

IN WHICH
THEY HAVE
COMPETED.



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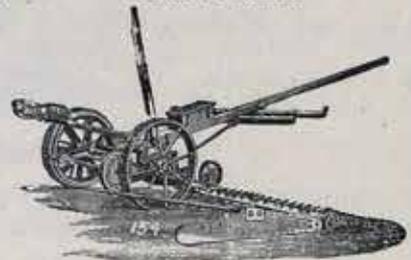
MOWERS

AND

REAPERS.

PARAGON, CHALLENGE
DIAMOND, ENCLOSED GEAR

WINNERS OF THE ROYAL AGRICULTURAL
SOCIETY'S PRIZES.



I. G. FOSTER, SOLE AGENT FOR VICTORIA,
4 A'BECKET STREET, MELBOURNE.

AIRD & McCRAE

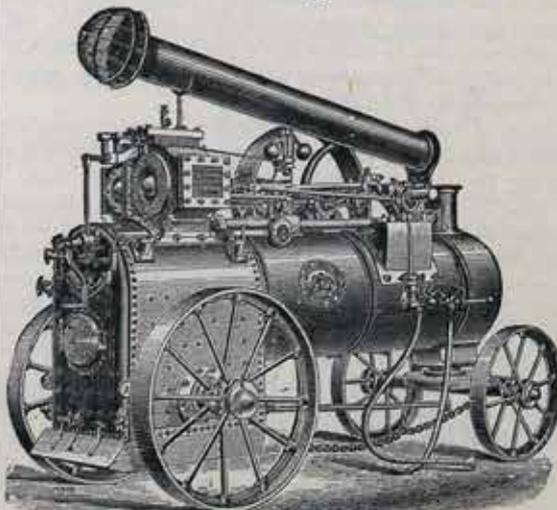
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Compound Engines

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Semi-Portable or Fixed Engines

From 20 to 100 I.H.P.

Threshing Machines

Saw Benches

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Seed Drills, &c.

Messrs. GARRETT & SONS' ENGINES afford marvellous economy of fuel and water, and enormous power in proportion to their dimensions, and are strongly recommended in preference to the ordinary Double Cylinder.

AIRD & McCRAE, as Stock and Station Agents and Machinery Merchants, are prepared to supply Plant for Irrigation Works, and when necessary, obtain services of Eminent Engineers for the purpose of taking levels and advising generally.

as their reputation for producing enormous yields. At Christmas time we saw a crop of these oats, which had been sown with considerably less than the usual recognised quantity of grain, yet nothing finer could be wished. They were as thick as they could grow—almost too thick—considerably over six feet high, even throughout, and splendidly headed. As this is now the third year these oats have been grown in Victoria, the appearance of this crop confirms what was said in the last report of the Council—viz., “It would appear the Society has been instrumental in introducing a valuable addition to the cereals of the colony.”

Silage.

In the last number of the Journal of the Royal Agricultural Society of England, the results of some valuable experiments by Dr. Voelcker are given. The question to be determined was “Will bullocks fatten as well on silage as on a mixture of roots and hay chaff?” Four beasts were fed on roots and hay, with cake and corn, and four with similar cake and corn, but with sour silage made of meadow grass in place of the hay. The quantities of food per head daily were, in the first case, 45 lb. of swedes (afterwards exchanged for mangels), 11 lb. of hay chaff, 3 lb. of decorticated cotton cake, and 5 lb. of maize meal; in the other case, 50 lb. of silage, 3 lb. of the cotton cake, and 5 lb. of maize meal. The silage fed animals drank 39 lb. of water per head daily; the root fed only 19 lb. The first experiment in 1885 lasted 113 days. The average daily gain in live weight per head was 2 lb. 1 oz. with silage, and 2 lb. 5 oz. with roots and hay. In a second experiment sweet instead of sour silage was employed. In 54 days the bullocks on sweet silage showed an average daily gain per head of 1 lb. 7 oz., and those on roots and hay chaff 1 lb. 12½ oz. In another experiment, lasting 82 days, a silage made of green oats and preserved for 18 months in the silo was tried against roots and straw chaff, in conjunction with a similar allowance of cake and meal, and gave these results:—The cattle on the oat silage gained on an average nearly 2 lb. of weight per head per day; those on roots and straw chaff, 1½ lb. per head per day. In another experiment, lasting 28 days, bullocks on oat silage gained 2 3-7 lb. per head daily; and others on roots and straw chaff, 1 3-7 lb. In another trial, lasting 42 days, bullocks fed in a shed gave 1½ lb. increase of live weight per head per day on oat silage, against 3-7 lb. on hay, the quantities of food being in the first case 49 lb. of silage and 40 lb. of water per head per day, and in the other case 19½ lb. of hay and 68 lb. of water per head per day. This result showed that oat silage is very superior as a food to good meadow hay, and that it will keep good in the silo for two years. The experiments also showed that the quality of silage depends very much on the kind of green crop from which it is made.

IS THIS A FACT?—We have it on the testimony of a reliable man (says a contemporary), that buttermilk mixed with fine sand and applied to new woodwork outside will stand for many years, and gives the most complete imitation of stone if it is possible to get, and with it absolute preservation of timber.—*Pacific Rural Press.*

Meetings.

Council.

The ordinary monthly meeting of the Council of the National Agricultural Society of Victoria was held on Tuesday, January 11th, 1887.

Present.—Dr. Plummer, President (in the chair), with Messrs. F. Peppin, J. M. Peck, D. Mitchell, W. Learmonth, A. Patterson, T. Brunton, R. Clarke, W. Thomson, C. Lynott, J. Bond, J. Jones, J. Hurst, D. Munro, T. Learmonth, J. Garton, J. Currie, J. Finlay, and the Hon. James Buchanan, M.L.C.

The minutes of the previous meeting were read and confirmed.

COUNCIL'S LIST OF NOMINATIONS FOR OFFICE-BEARERS.

The president stated it had occurred to him that it was questionable whether, in accordance with the rules of the Society, a gentleman holding the appointment of trustee was eligible for the position of president or vice-president. He was president while also holding the office of trustee, and Messrs. Gibb and Lobb were trustees and also vice-presidents. As the question affected persons other than himself, the president wished the Council would rule in the matter.

Mr. Thomson thought it was certainly irregular.

Mr. Peppin moved that the Society's hon. solicitor be consulted to ascertain if the Council had done anything illegal, and if so, what course to pursue. Seconded by Mr. Munro, and carried.

The retiring office-bearers—who were Dr. Plummer, and Messrs. Francis Henty, D. Mitchell, D. R. McGregor, J. Jones, T. Learmonth, J. G. Brisbane, J. Buchanan, J. Finlay, James Garton, T. Brunton, A. Patterson, J. Hearn, J. Malcolm, and David Munro—were all nominated for re-election, with the exception of Mr. Patterson, who wished to retire from the Council.

The following fresh nominations were also made—viz., Messrs. W. Wragge, T. Harmer, John Blyth, F. W. Peers, George Ramsden, Daniel White, William Rose, John Hearn, Joseph Bell, and David Black.

FINANCE.

The Finance Committee's report submitting the monthly statement of accounts, and recommending payments amounting to £41 13s. 6d., was read.

Mr. Currie moved the adoption of the report. Seconded by Mr. T. Learmonth, and carried.

CORRESPONDENCE.

Letter read from J. H. Tone, secretary of the Ovens and Murray (Wangaratta) Agricultural Society to Dr. Plummer, president, as follows:—“At a meeting of the committee of this Society, held on the 13th instant, a general desire was expressed that the thanks of this Society should be accorded to you for your untiring efforts and invaluable services on behalf of the agricultural interests of the colony, and, in accordance with a resolution to that effect, I have now the honor to convey the Society's thanks, and to request that you will accept its recognition of your exertions.”

The letter was received with applause.

Mr. Thomson moved that it be recorded on the minutes. Seconded by Mr. Peck, who stated that it was exceedingly grati-

fying to the Council to hear from an important provincial Society such an expression of appreciation of their president's exertions on behalf of the agricultural interest. The motion was carried unanimously.

From J. Kelleher, stating that he had in his possession a cure for pleura-pneumonia in cattle, which he would like to have tested by a committee of experts, appointed by the society, in order to give the matter publicity. He had already tried it on the farms in his district sufficiently to be thoroughly assured of its efficacy as a cure for the disease.

The letter was received, and was referred to a committee.

From Alexandra Society, enclosing a resolution affirming the desirableness of establishing a Farmers' Co-operative Association, and asking the Council's favorable consideration, and, if approved, their co-operation.

Mr. Munro moved that the letter be acknowledged, and that it be stated the matter was outside the province of the Society. Seconded by Mr. Thomson, and carried.

Mr. Finlay stated that a similar institution had already been floated.

REPORTS.

The Show Extension Committee reported that, after having fully considered the question of the time over which the Society's annual exhibition should extend, as well as the arrangements in connection therewith, they recommended that the show should commence on Tuesday with machinery, all of which should be on the grounds on that day, when also it should be judged, in the event of prizes being offered. That all live stock and other exhibits should come in on Wednesday, which should be the general judging day, and remain on the grounds till Saturday afternoon at 5 p.m., when they might be removed. That a fair for the sale of live stock and other exhibits be held on the Monday and Tuesday following, during which days the machinery should remain on the grounds.

Mr. Peck moved the adoption of the report, seconded by Mr. Mitchell and carried.

A progress report was submitted by the Parade Committee to the effect that they have roughly indicated the new trotting course, which will be a considerable modification of the old one, if the present idea is carried out. The ends of the old course have been shortened, so that the track will be more circular, and will occupy less of the grounds. The architect and the secretary will definitely mark out the course as indicated, and the committee will again inspect it to see that it is in the best possible form for the objects for which it is required, before any of the surface of the ground is broken.

Mr. Garton moved the adoption of the report, seconded by Mr. Finlay and carried.

Mr. Munro moved that a committee, consisting of the President, Messrs. Currie, Finlay, McGregor and the mover, be appointed to approve of the Council's annual report. Seconded by Mr. T. Learmonth and carried.

NOTICE OF MOTION.

Mr. Thomson gave notice that at the next meeting he would move that the following motion be rescinded:—“That in the opinion of the Society the federation scheme should be completed, and worked on an independent basis.”

The Journal
OF THE
National Agricultural Society
OF VICTORIA.

MELBOURNE, JANUARY 14th, 1887.

The Breeding of Hack Horses.

THE scarcity of good upstanding hacks is a subject of very general remark amongst horsey men. Apparently the art of producing such animals is lost. Any way it is only occasionally that a really first-class hack is met with. Perhaps it may be said that the reason for this is that all light horses of a superior description are bought for India. There is some truth in the statement, but horses suitable for India are also becoming scarcer; so much so, that an altogether inferior class of animal to the original "waler" is shipped away, simply because there is nothing better available to send. Horses of the "waler" description, with plenty of breeding and style, yet up to 15 stone, were common enough over 30 years ago, but are not to be found now. The causes are various. When the diggings broke out heavy horses were required for carting, so that all sorts of mares were put to big draught horses. We have known a mare which was tried, and considered good enough to win a Melbourne Cup, which was mated for years with heavy cart horses. There is at present working in a lorry in the city a big draught mare—the result of four successive draught crosses—whose great, great grand dam we remember well as a beautiful animal of a stamp worth any money to-day as a hack. Thus, much of the material from which good hacks were produced, was destroyed as far as that purpose was concerned. Then while this process was going on, the breeding of light horses was neglected. Inferior sires were used—in fact anything was considered good enough—so that our light stock degenerated to a lot of weeds. The practice of breeding from racing failures, no matter what may be their size or conformation, if considered thoroughbred, has also tended to keep our light stock weedy. Now a weedy thoroughbred that cannot race is about the most unprofitable animal a man can breed. It must be admitted that many of even our successful racing thoroughbreds are very small. Take Briseis—the first mare that ever won a Melbourne Cup—with Sibyl, who ran second, as examples. It would be hopeless to attempt to breed a weight-carrying hackney from either by mating with a thoroughbred, as they are too small. Of course they can be put to more profitable use, but when the great bulk of our light mares are even smaller than they are, and lack their high quality, how are we to improve them or utilise them to the best advantage? A good many have tried to answer this question. Some have advocated crossing our mares with the American trotting horse, to give size and weight. So far, such experiments have proved rank failures in almost every case. We never could see how a coffin-headed, donkey-eared, ewe-necked, slab-sided, ragged-hipped, coarse-tailed horse could im-

prove anything, but were told to wait. In Australia we have some regard for the beautiful, although we may be prepared to sacrifice a good deal for the sake of size and pace. We have heard it said that now we have good metalled roads, we should have something to drive that would "spank" along; so that if we got the great trotting speed of the Americans, we might be satisfied with less beauty than we had been accustomed to in the "good old sorts." Then Colonel Williams, from India, went round our studs, and told us that Suffolk Punches and American (or Kentucky) horses were the animals to improve our breeds. Afterwards Mr. E. M. Curr took him (the Colonel) to task, and wrote him down most unmercifully, probably with good cause. Mr. Curr advocates the use of the Arab, and the Arab alone, as the means whereby saddle horses of a superior class can be produced. On account of Mr. Curr's well-known experience, his opinion is worthy of regard, but although the Arabs might have, and no doubt did produce excellent results when they were used on the mares available 30 or 40 years ago, and when their progeny were grown under the circumstances to which Mr. Curr refers in his book on the saddle horse, still, it cannot be denied that Arab sires imported of late years have been useless to put to our light mares, except to breed galloways or weeds. Now, while so many look away from home for the means of producing superior hacks, we believe we have the necessary material at hand, in limited quantity, for utilising our light weedy mares to the best advantage, and for being the means of producing the class of horses we so much require. The way to set about it is to select a particular stamp of medium-sized draught horse as a sire. He must have a fine head—not a pony head—but a deep-mouthed, clean head, carried high and well-set on to an arched neck, good shoulders, short back, well sprung ribs and long quarters, all topping four square-set short legs, with clean flat bone and sound feet. In addition to this, he should have a firm, hard appearance, good action, and a big heart—for he must be "game." A horse of this description mated with light mares, no matter how weedy they may be, will get a class of stock which, with their tails cut, make good cobs, really useful saleable animals. Weedy mares are thus employed to much greater advantage than if mated with the ordinary available blood horse, for their progeny is worth more money—a weedy thoroughbred, we repeat, being about the worst property a man can own. A thoroughbred horse of a stamp for which the foregoing description of a draught sire will suffice, with the necessary modification for difference of type, should then be put to the fillies produced as stated. The progeny of these cob fillies by this thoroughbred sire will be first-class hacks and hunters—the horses everyone is trying to produce. The sire gives the style and quality necessary, while the dam produced in the way recommended gives the necessary size to the progeny without imparting any trace of coarseness beyond what would be characterised as "substance." This is not to be wondered at, for it must be remembered the grand dam from which a commencement was made was a thoroughbred, or, at any rate, a blood mare. This course of procedure

is not a haphazard or speculative recommendation, for we have had opportunity of proving it to be correct in practice. Of course, the draught horse used must be a specially selected animal. We know such an one as described, whose stock out of light mares, and even out of weeds, are invaluable. They are gamer, faster-paced, except in the gallop, and better jumpers than stock out of the same mares by what may be ranked as really good thoroughbred horses. His fillies, put back again to thoroughbred horses, are producing animals of a very superior class—in short, "the good old sorts." We have—in a few isolated cases—seen the same results produced in a similar way, though not in such a marked degree as in the case above alluded to, thus showing that in order to carry out the idea satisfactorily, the greatest care is necessary in the choice of the draught sire to be used, as well as in the choice of the thoroughbred which is put on his fillies.

Mr. Curr says:—"Experience teaches that to breed animals of any sort, saddle horses inclusive, with certain fixed qualities highly developed, it is necessary to begin by selecting, as far as practicable, sires and dams in which the qualities desiderated already exist, to some extent at least, and to go on gradually increasing and developing them by selection, feeding, use, and the careful exclusion of all strains of blood in which such qualities do not exist."

He then proceeds to show that the Arabs possess all the necessary qualities, and argues that they should be used exclusively. This may be so, but what we want is not to know what to do if we possessed certain animals which we do not. What we really want to know is how to take the actual stock of the country, and with the material available produce the best results. This we consider is the practical common sense way of dealing with the matter; and it is what we have endeavoured to show how to do in this article.

Preliminary Meeting.

We direct the attention of members to the advertisement on page 5, calling the preliminary general meeting of the National Society for Thursday, the 20th inst., at 2 p.m. At this meeting notices of motion will be received for the annual general meeting (which will be held on the 17th February). Auditors will be appointed, and gentlemen will be nominated to fill the places of retiring office-bearers. Owing to various causes a number of old members are retiring, some of whom have been connected with the Society from its commencement. There will, therefore, be more than the usual number of new office-bearers required; so that it will be well for members to come to the meeting with lists of carefully selected names, in order that a good general list may be prepared from which to choose at the annual meeting the successors to the veterans who, by their continuous exertions, have aided in bringing the Society to its present position.

Triumph Oats.

The Triumph Oats imported to Victoria by the Council of the National Society in 1884 still retain their distinctive character, as well

Veterinarian.

A Veterinary College.

Several letters and a leading article have lately appeared in the *Argus* advocating the establishment of a Veterinary College in Melbourne. The article says:—

"The benefits of a college are so self-evident as hardly to require enumeration. Instead of being left to ignorance or chance, the lower animals would be treated in the event of accident or sickness by a highly-trained body of men, and some of them that now die in pain, to the loss of the owners, might be saved. A systematic knowledge of the diseases to which they are subject would be obtained and taught, and the true remedy would be determined, not by guess or local traditions, but by experiment and enquiry. Similarly, the risks of different districts and the illnesses which are specially prevalent in various localities would be carefully treated, with the result probably of an improvement in the management of stock. Until recently, for example, only a few careful observers knew how common tuberculosis is among cattle, and fewer still tried in any way to guard against its spread. Again, a man who goes to a new part of the country has often to learn by a bitter experience things which, in the event of systematic investigation, could easily be made familiar to him. There can be no doubt that with the accumulation of knowledge on such points, stock breeding might be made more perfect, and the diseases which prevail among cattle lessened. The rules laid down in the books, though they may be of some value, are altogether insufficient. Not only is the literature meagre at best, but climate and soil make such a difference as to render independent and skilled inquiry necessary. The animal cannot be relieved more than the human subject unless the work of investigation is constantly carried on. It would be as wise to suppose that people coming to the colony would instinctively know all about hydatids as that they can be acquainted with the forms which disease may take under new conditions among their stock. The utility of regular colleges is proved by the results which have followed from them in England and on the Continent. Though veterinary surgery is a profession of very modern growth, splendidly equipped institutions, with a considerable number of students, are to be found in London and Edinburgh and Glasgow. These are fulfilling a useful function, and a similar college, if it were once opened in a colony like Victoria, would probably soon be regarded as indispensable to the pastoral industry.

"While the college would be directed principally to the training of professional men, whose duty would be to cure and prevent diseases, it would involve certain other advantages. In a large city like Melbourne, where alone it could be satisfactorily worked, it would serve as an infirmary for sick and injured animals, and, as these would be brought to it in increasing numbers, a flood of light might be thrown on the less known ailments to which they are liable. The diseases common to man and the lower animals, and the means by which they are propagated from one species to another, would be systematically studied. Curious physiological and anatomical specimens would necessarily multiply, and from the purely scientific point of view these would often be of the deepest interest. Mr. Dick, who founded the Veterinary College of Edinburgh, was able to bequeath a fine museum to the city, and a similar collection would rapidly be formed here. From every point of view, therefore, it is legitimate to ask the help of the State for such an institution as our correspondent advocates. The Government may fairly be requested to extend the support which they now give to scientific study."

So long ago as the 8th August, 1873, the following motion was passed by the Council of the National Agricultural Society, viz:— "That in consequence of the increasing prevalence of disease amongst stock, it is deemed advisable that steps be taken to initiate a veterinary class with a view of affording the sons of stockowners, farmers, &c., an opportunity of being instructed in the means of preventing and curing disease. That application be made to the Government for its co-operation and assistance in establishing a

veterinary hospital in Melbourne where stock will be treated at a moderate scale of charges, and to afford students the opportunity of witnessing the practice." A committee, consisting of Dr. Plummer, Dr. Thomson, Mr. (now Sir) Samuel Wilson, Mr. Graham Mitchell, and Mr. Frederick Search was appointed to give effect to the resolution, but through want of encouragement the matter was not brought to a satisfactory issue. In the following year a proposal was made to establish a veterinary school in Melbourne for these reasons:—

1. An annually increasing loss is being sustained by the Colony through disease amongst stock, arising in a great measure from preventable causes, and a want of a general knowledge of the Veterinary Act.

2. The necessity which exists for an establishment where the sons of stockowners, &c., could be instructed.

3. Such an establishment, having a museum, library, laboratory, dissecting room, &c., would be the means of collecting valuable information in reference to indigenous diseases, climatic influence on contagious diseases, mode of prevention and cure, and have an important bearing on the health of the community, &c.

This proposal was very influentially signed, such names as the following being attached, viz.:—Robert Simson, W. J. Clarke, John O'Shannassy, C. B. Fisher, S. G. Staughton, A. Plummer, G. Carmichael, T. Henty, W. McCulloch, J. P. Manifold, W. Pearson, H. N. Simson, Francis Robertson, and others.

This document was submitted to the Lands Department, but, although it was expected a site for a college would be secured, the net result of all efforts so far is that the matter is no further advanced than when it was initiated by the National Society over 13 years ago.

The necessity for such an institution has certainly increased as the years have rolled on, so that it is to be hoped the present agitation will not be dropped till a Veterinary College has been established.

Abortion in Cows.

Various theories have been put forward from time to time to account for the tendency in a herd of cows to abort or "slink calf," and though scientific men differ in opinion as to the disease being contagious, it is firmly believed to be so by the great majority of practical farmers. Various precautions have been tried, without effect, and as we are very much in the dark on the subject, any new theory, though it may seem to some fanciful, should not be passed over without notice.

It would appear that at length some means of stemming the evil has been found. In 1885 M. Nocard, who is professor in the veterinary school at Alfort, was commissioned by the French Department of Agriculture to investigate the prevalence of abortion in cattle, especially in the Nivernais breed, and to study how it might be prevented. In pursuance of his instructions M. Nocard has drawn up a report which has just been given publicity in the pages of the *Recueil de Médecine Veterinaire*. While the space at our command would be inadequate to allow of our giving a full account of his experiments and observations, we believe that the conclusions to which they have led him will be well worth the attention of our readers.

Epizotic abortion, sums up M. Nocard, appears to be a microbial disease of the foetus and its envelopes, and not a malady of the mother.

M. Nocard, however, hesitates to affirm absolutely that this is so. He awaits the completion of experiments still in progress

before pronouncing a more definite opinion on the subject, which he reserves for a second report. The immediate aim of these experiments is to reproduce the disease in healthy cows, by inoculating them with microbes obtained from the aborted animals, the animal liquor, etc., and of the affected animals.

The experimenter believes he has already acquired certain knowledge, which is sufficient to suggest various practical preventive measures, and which he, therefore, hastens to publish.

The contagion, he thinks, is communicated through the genital organs of the dam, which, however, seems to be none the worse for the presence, sometimes prolonged, of the microbes. While believing that the contagion is imparted by this channel, he has not yet conducted sufficient experiments to prove that the microbes may not pass into the organism of the mother, through the digestive and respiratory organs, the action of which they may be able to resist, and thence pass to the foetus.

Should M. Nocard's inference, however, be correct, namely, the communication of the contagion through the genital organs—it would be comparatively easy to take effectual prophylactic measures.

1. The ground of the cow-house should be scraped every week, thoroughly cleansed, and watered with a solution of sulphate of copper (blue vitriol) in the proportion of 40 grammes to a litre.

2. Once a week the following mixture should be rigorously injected into the vagina of the pregnant animals with a horse syringe. The liquid should be thus composed:—Distilled water, 20 litres (if distilled water cannot be procured rain water may be substituted); glycerine, 100 grammes; alcohol, 36 degrees strength; bichloride of mercury, 10 grammes. Dissolve the bichloride of mercury in the alcohol and glycerine. Mix this solution with the water, and stir well. This mixture (the bichloride is, as we need scarcely warn our readers, a violent poison) should be kept in a wooden barrel, vase, or bucket, out of reach of children and animals.

3. Every morning the vulva, the anus, and the under side of the tail of all the pregnant animals should be carefully washed with a sponge.

4. Should an animal abort, she should be delivered immediately by hand aid, the foetus and afterbirth should be immediately destroyed by fire or boiling water, and the uterine cavity should be washed out with eight or ten litres of the above liquid slightly warmed, and introduced through a caoutchouc tube inserted by the hand.

These delicate and difficult manipulations should, of course, be performed by a veterinary surgeon.

M. Nocard's experiments have necessarily been on a restricted scale, and will need more general trial for their complete corroboration. Nevertheless, he believes the measures he has indicated are sufficient to banish the disease, and they have, in fact, done so hitherto where they have, upon his advice, been put in practice.—*The Farmers' Gazette*.

Dr. Plummer, the chairman of the Council of Agricultural Education, has offered £10 10s. to be expended in the purchase of prizes for successful students at the Dookie Farm School. The exact distribution of the amount will be left to the principal of the College, but the idea of the donor is to give prizes to those who make most progress during the year in practical farm work and general education. Dr. Plummer has promised the amount annually.

Fall Management of Stallions.

THE proper treatment of the stallions after the close of the season's service is a very important question to breeders, particularly such as own stock horses for which they wish to make a reputation. The following sound suggestions concerning stallion management, from J. H. Saunter's excellent treatise on "Horse Breeding," is commended to the attention of all those who have the care of stallions, especially such as are just entering the breeding ranks. The condition of the stallion for next season's business will depend largely upon the manner in which he is kept from the close of the present one until the next season commences. In most cases the period from the 1st of October to the 1st of March is one in which the stallion is not called upon to do duty in the stud, and usually but little is done after July 1st. It is a period of rest or recuperation from the drain resulting from the season's service, but it should not be a season of pampered and overfed indulgence, as is too often the case.

When it is convenient to do so, the very best possible treatment that can be resorted to during this period is to use the stallion at light work. If a draught horse that has been as they ought to be, broken to work, let him be driven moderately by the side of a quiet mare or gelding, and worked regularly up to the 1st of February, and fed enough grain to keep him strong and healthy, but not fat. Oats will be much better food for him than corn, but if it is found that he is becoming too thin, or if the work is comparatively heavy, corn may be used part of the time with good results.

If the stallion is a trotter or roadster, by all means drive him on the road. If you can use him regularly as a business horse, so much the better; and, as in the case of the draught stallion, feed him enough to keep him strong and hearty, and work him right along as though you intended that he should earn his living. This I am satisfied from experience is the best treatment for stallions of any breed, and will result not only in bringing the horses to the beginning of the next season in better condition than any other, but the probabilities are that a horse so treated will get more and better foals than one that is not worked during this period.

In many cases, especially in large breeding establishments and with thoroughbred stallions, the course recommended above is practically out of the question. The next best thing, then, if the horse must perforce remain in comparative idleness during the period mentioned, is to provide him with a large paddock, the larger the better always, and let him have the run of it all times during pleasant weather, stabling him only at nights and during storms; and when kept under these conditions, it will be best to dispense almost entirely with grain food of all kinds.

A run to grass during the late fall, if it can possibly be provided, will be one of the very best things that can be had; but this will rarely be the case. The main reliance in most cases must be good hay; but I greatly prefer corn fodder when it can be had, as it furnishes a complete change of diet from what the horse has been accustomed to, a change that will prove highly beneficial to the general health of the horse. It reconstructs him, as it were, and makes a new horse of him after a few months of such treatment, and is certainly the next best thing to a run at grass, before recommended. But while he is kept on this food due attention must be paid to his bowels, lest he becomes too constipated, a condition that can usually be prevented or remedied should it occur by the use of an occasional bran mash.

The necessity of this change in diet from grain to coarse and bulky food, like hay or corn fodder, is increased in proportion to the degree of confinement to which the horse

must be subjected. There is nothing that will so soon destroy the health and vigour of the horse as close confinement and high feed; and the man who expects to keep his horse in show condition the year round, will find that he has undertaken a difficult job. It will work in some cases for a year or two, but, like constant indulgence in intoxicating liquors in man, it will, in the end, sap the strongest constitution. A strong vigorous horse may be able to stand the deleterious influence for a few years, but it is only a question of time with the best.—*Coleman's Rural World.*

The Breeding and Management of Geese.

BY D. BRAGG, IN "LIVE STOCK JOURNAL ALMANAC."

THIS is a subject which cannot be too much ventilated and discussed, and brought prominently before amateur fanciers, farmers, and others who have the need, the accommodation, and the taste for the pleasant and profitable occupation of goose-breeding.

To the farmer and stock-breeder a flock of geese, in my estimation, almost amounts to a necessity. "Oh, they foul the pastures!" I have often heard remarked. But my answer is, they nevertheless tend greatly to preserve the health of all grazing stock, and are therefore undoubtedly the farmer's benefactor and friend. Allow geese the run of the pastures, and they will strip the seeds off the strong rye-grass so prevalent on newly-laid rotation land, and thereby destroy the ergot of rye, the primary cause of many serious ailments in horses, abortion in cows, &c. Few, if any, of our domestic birds possess such a combination of merit, usefulness, and natural worth, yet the fancier pure is their greatest supporter, improver, and friend, as in horses, cattle, sheep, pigs, and poultry. To the fancier of each are due all the praise and honour for the great perfection to which our domestic animals of the present day have been brought, from the magnificent herd of the noble duke to the humble cotten's pig.

Fortunately, perseverance and application is the goose-fancier's motto. In the past he has had good reason to complain of the general neglect and scant encouragement held out to him by the great majority of agricultural and poultry shows; but I fervently anticipate, from the splendid encouragement and example shown this season by our greatest national institution, the Royal Agricultural Society of England, that the year of 1885 will prove the turning-point in his favour, and tend to promote an extended cultivation of his useful hobby. I hope, however, in the future this society will act more independently, by not following too much in the wake of the few leading shows which graciously patronise geese, but will separate the classes, and provide prizes and specials for two or three of our leading varieties. No pen of birds seem more attractive at a show to the general public than a pair of monster geese, and as they form such an important and substantial addition to the food supply of the country, such a seasonable luxury at our jovial Christmastide, I think it most important, and only in accordance with the professed object of our shows of domestic animals, to give geese every encouragement possible.

The varieties of geese on which it is my intention to treat in this paper are the Toulouse and the Embden. From the length of time and extent they have been bred in this country they may fairly be called our two pure English breeds. Of the half-dozen foreign introductions we have, I may only say, passing, that few are useful, some ornamental, and others curious.

Although the breeding and management of the Toulouse and Embden are in many ways identical, yet they differ in one or two essential points characteristically. I will, therefore, describe them separately, taking the Toulouse first.

The noble bird, both male and female, should be very massive in all proportions, with deep, perfectly divided, double breast, touching the ground and extending well in front of legs. This gives the bird, when standing at ease, a square appearance; but it is capable of raising the body to a majestic height, and presenting a bold front. Head and bill very strong, and joining with a uniform curve, which gives the head a pleasing and intelligent expression; throat, "dewlapt;" colour of bill and feet, dark

orange; head, neck, back, and thighs, a dark-shaded brown-grey, the outer edge of each feather distinctly and boldly laced with a very light (almost white) shade of grey; breast of the same colour, but descending evenly lighter beyond the legs, from which to tail is perfectly white, presenting an attractive contrast. The grey feathers on thigh should form a perfect three-quarter circle; tail white, with broad grey band across centre of top; wing-flights very dark-shaded, self-coloured grey.

The Toulouse breed are very uniform in colour, the male and female being alike to a feather. A flock of fifty mature birds is a very striking sight.

Geese live to a great age. The white Embden, I believe, outlive considerably the grey Toulouse. One of the former I have known to breed successfully at the reputed age of thirty years. It will be a very favoured exhibition specimen, however, of either variety, that will see twenty summers, but the great majority just live to grace the festivities of one Christmas.

In starting a breeding pen get the birds together before the new year. Three geese are the limit for one gander. It is always better, however, two provide two Ganders, liberating only one at a time, and keeping the other in reserve, as impotence in Ganders is not uncommon; and if the eggs are tested early disappointment may be averted. If the two Ganders are liberated alternately during the season it answers very well. The gander generally makes one goose his special favourite, but he will seldom neglect the others.

The Toulouse goose may almost be classed as a non-sitting variety. They are wonderfully good layers, though rather late in starting, rarely in this district (Southwaite, Cumberland) before the middle of February, and continue laying so late in the season that should they then show an inclination to sit, which is generally slight, if at all, it is not worth while risking eggs with them. Thirty eggs in a season is only a fair average for one healthy goose to produce. Exceptional birds I have had lay up to fifty. Thirty goslings reared from one goose in a season is one account I have. One hundred eggs, all fertile, from three geese is another; but overfed exhibition geese will of course fall short of this.

It is a successful plan to use hens to incubate the eggs, and also to let them rear the goslings. Arrange the nest ground, and moisten freely in a dry season, and, in any case, on the twenty-eighth day—two days before the eggs are due to hatch. An ordinary-sized hen will cover five goose eggs, so that if two or three hens are set about the same they should produce a nice little brood, which may be given to one hen. As the strong rays of a brilliant sun are fatal to goslings, place them in a dry place under the shade of trees, in a bottomless roomy coop, on grass previously cut short. A boarded floor does not answer for young goslings—they are unable to hold their feet, sprawl out their legs, and get permanently crippled or die. The front should have a good, open, easy entrance, to allow and encourage the goslings to use it freely. Form a park round the coop with low wire netting, and change the run frequently, according to its size and number of occupants. If removed when the grass is wet, or in showery weather, a little hay should be placed inside the coop, to keep them dry and comfortable. My food, at first, is principally wheat and oatmeal, the one scalded and dried up with the other; when older, boiled whole wheat dried up with ground oats and barley. Boiled potatoes, dried up with the same, is a nice change occasionally. At two months old and after, raw grain of different kinds until the stubbles are ready. Raw potatoes cut up and thrown on the grass they are very fond of. Feed at a regular time and place, and never allow geese or goslings to sit on water during night. Goslings should have their water renewed frequently, and although they require a constant supply, their drinking vessels should not be so large that they can get bodily into them. The very best drinking vessels for water-fowls are the fountains recommended for chickens and poultry.

Toulouse goslings grow bone very fast, and being loose in skin they soon fill the eye and the exhibition pen. But they are very deceptive weighers when young and raw. Even under favourable circumstances many pure strains of them will not gather flesh and fat until fully matured, when they can then be fed to an enormous size and weight unsurpassed or unequalled by any other variety. They are, therefore, not so well adapted for early maturity, and are seldom fit for the table before Christmas, previous to which they dress very loose, and blue in appearance, and are quite out of season—as "green as Michaelmas goose." Used, however, as a cross with any other variety of

is essential in a female, in order to avoid danger to both herself and her offspring in the production of her young; and it is indicated chiefly by the width of her hips and the breadth of the space between the thighs. The breadth of the loins is always proportionate to that of the chest and the pelvis. The comparative smallness of the head facilitates parturition, and generally indicates superiority of breed; and a head with small horns, or with no horns whatever, occasions considerably more economizing of food than a head with large horns. The length of the neck ought, in order to permit an easy collecting of food, to be proportionate to the animal's height. The muscles and the tendons, in order to permit an animal to travel or to work with ease and power ought to be large. The bones, as compared to the muscles, ought to be small; for not bones but muscles are the seats of strength; and large bones generally indicate imperfection in the organs of nutrition.

A question of great niceness and difficulty, and one which has been the topic of much discussion and antagonism among agricultural writers, is, "Whether the breed of live stock be susceptible of the greatest improvement, from the qualities conspicuous in the male, or from those conspicuous in the female parent?" The Highland Society, about twenty years ago, proposed this question as a subject of prize essays; and afterwards adjudged four essays upon it to be worthy of premiums, and published them in their Transactions. Mr. Boswell, of Balmuto, the author of one of the essays, asserts that the male is most influential, supports his opinion by an appeal to facts, and concludes "that the male is the parent, from motives of sense and sound polity, which we can alone look to for the improvement of our breed of live stock." The Rev. Henry Berry, the author of another of these essays, teaches that improving power in breeds is attributable, not to sex, but to high blood, or to animals, whether male or female, which have been long and successfully selected and bred with a view to particular qualifications; yet concludes "that, with our present scanty stock of information on this difficult question, one only rational course can be adopted by breeders, viz., that of resorting to the best male, a simple and efficacious mode of improving such stocks as require improvement, and the only proceeding by which stock already good can be preserved in excellence." Mr. Christian, of Mill of Forest, another of the essayists, asserts that the offspring bears the closest resemblance to the parent, whether male or female, which exerts the greater influence in the formation of the foetus, and concludes that no individual animals, either male or female, can be trusted to for improvement, and that the best breed and most perfect animals of both sexes ought, in every instance, to be selected. Mr. Dallas, of Edinburgh, the fourth essayist, asserts that the male is the more powerful for external qualities, and the female the more powerful for internal qualities, and infers that the male ought to be selected for the improvement of color, coat, or outward form, and the female for the improvement of lactiferousness, hardiness, temper, and freedom from tendency to any description of internal disease.

The opinions of Mr. Boswell and Mr. Berry, if mutually combined, or if made to modify each other, appear to contain the whole or very nearly the whole of the truth upon this question; and the opinions of Mr. Christian and Mr. Dallas are altogether, or very nearly altogether, fanciful—the one in theory and the other in fact. The power of blood, or of regular systematic, untarnished breeding through a series of generations, appears to be so great as wholly to supersede mere sexual or constitutional power, and though peculiarly mighty in the male, is also not a little distinguished in the female. A cow possessing excellencies by pure descent from a high ancestry holds them as essential elements of her constitution, and will transmit them in all their breadth and beauty to her progeny; while a bull, possessing by tarnished descent from a near ancestry or merely by a cross of breeds on the part of his immediate parents, holds them as only secondary properties of his constitution, and may propagate them in very a marred and mutilated condition. The mare of Arabia is the grand object of the Bedouin's attention, and is constantly and carefully maintained in a condition of eminent excellence; and she, in consequence, bears all sway in propagation, and often transmits her peculiar properties in defiance of antagonist ones in her mate. Still the male, by nearly the unanimous verdict of both practical and scientific observers, has, *ceteris paribus*, far more influence than the female; so that, when simply equal to her in descent and in some minor modifying circumstances, he at once maintains his excellencies by a mightier energy, develops them with a superior force, and propagates them with both a fuller breadth and a higher certainty.

He also possesses a higher money value than the female, and becomes connected with a vastly larger number of offspring; and for both these reasons, as well as for the sake of his greater constitutional influence, he demands the prime attention of every breeder.

A farmer who commences to breed either cattle or sheep, ought to make, first, a deliberate decision as to the precise excellencies which he wishes his flock to possess, and next a very careful selection of a male who exhibits these excellencies in the fullest development, and in freedom from accompanying defects. If he breed, at one time, with the view of obtaining animals with one set of properties and at another time with the view of obtaining animals with a different set of properties, he is almost certain to miss the attainment of both the sets of properties, or at best to obtain them in a very deteriorated condition. But if he decide on precise properties, and use only males which purely and prominently possess them, and steadily prosecute the establishment of them in all his stock, he is morally and even physically certain of becoming the owner of flocks which shall exhibit them in perfection. Yet the selected males ought not alone to possess the desired properties full and uncontaminated, but to be the descendants of a series of progenitors who also thus possess them; and if they are themselves sires, their offspring must likewise and most especially thus possess them; for, unless a counteracting power can be distinctly ascribed to the dams, the offspring already existing is, in all respects, a type of that which may afterwards be produced. When a breeder of cattle, as usually happens, has not a sufficiently numerous flock to need more than one bull, he ought to observe well what faults are most prevalent among his cows, and to use all circumspection that none of these faults exist in the male which he selects; for unless he use these precautions, he may not only perpetuate, but seriously augment, the defects which depreciate his stock. When a farmer breeds upon a large scale, and uses several males at once, he can, with nicer aim and more certain effect, conduct the work of improvement; and he ought, probably, to select his males with slightly different groupings of good properties, and to appropriate each male to a specific or classified number of females with studied design to correct or remove particular imperfections. Most breeders of sheep use more than one ram; and all who make even moderate endeavours to improve their flocks, assign to each ram those and only those ewes whose defects are most likely to be reduced by his characteristic excellencies.

Lord Spencer's rules for the selection of males, though in some degree a repetition of what we briefly stated on the subject of "points," are well worthy of being quoted. "The first things to be considered in the selection of a male animal are the indications by which it may be possible to form a judgment as to his constitution. In all animals a wide chest indicates strength of constitution; and there can be no doubt that this is the point of shape to which it is most material for any breeder to look in the selection either of a bull or a ram. In order to ascertain that the chest of these animals is wide, it is not sufficient to observe that they have wide bosoms; but the width which is perceived by looking at them in the front should be continued along the brisket, which ought to show great fullness in the part which is just under the elbows; it is also necessary that they should be what is called thick through the heart. Another indication of a good constitution is, that a male animal should have a masculine appearance: with this view, a certain degree of coarseness is by no means objectionable, but this coarseness should not be such as would be likely to show itself in a castrated animal, because it thus might happen that the oxen or wethers produced from such a sire would be coarse also, which in them would be a fault. Another point to be attended to, not merely as an indication of a good constitution, but as a merit in itself, is, that an animal should exhibit great muscular power, or, rather, that his muscles should be large. This is an unusual accompaniment of strength of constitution, but it also shows that there will be a good proportionate mixture of lean and fat in the meat produced from the animal, the muscles being that part which in meat is lean. A thick neck is, in both bulls and rams, a proof of the muscles being large, and there can hardly be a greater fault in the shape of a male animal of either sort, than his having a thin neck. I am inclined to say, that in the new Leicester breed of sheep, which is the breed to which I am accustomed, a ram's neck cannot be too thick. Other indications of muscle are more difficult to observe in sheep than in cattle. In a bull there ought to be a full muscle on each side of the back-bone, just behind the top of the shoulder-blades; he ought also to have the muscles on the outside of the

thigh full, and extending down nearly to the hough. It will seldom happen that a bull having these indications will be found deficient in muscle. As I am writing for the use of farmers, it is quite unnecessary for me to attempt to give a description of what is considered a well-shaped bull or ram; it is also obviously impossible to express in words what is meant by good handling. It is sufficient to say, therefore, that no male animal is fit to be used at all as a sire whose handling is not good, and that the more perfect his shape is the better.

The system of breeding within near degrees of consanguinity, or, in farmers language of breeding in-and-in, so as to perpetuate a stock of sheep or cattle solely from its own bulls and rams, has been the topic of much discussion, and was long the subject of divided and unsettled opinion. The degrees of consanguinity vary according to the size and circumstances of different flocks; but may in a general view, be regarded as strictly parallel to those which prohibit marriage among the human species. The celebrated improver, Bakewell, after bringing his Leicester sheep and his long-horn cattle to perfection, always bred from his own stock, and thoroughly succeeded in preserving it from every appearance of degeneracy. Mr. Mason, of Chilton, successfully pursued for a time the same course; other distinguished breeders have also, with various degrees of success, and for periods of various length, pursued it; a considerable number of breeders of the present day, particularly in England, still practise it, and regard it as the best; and several naturalists have appealed for the vindication of it, to facts in the economy of wild animals, and especially to the instance of the exceedingly prolonged consanguineous propagation of the flock of wild cattle at Chillingham Park. "Mr. Bakewell," says Mr. Culley, "has not had a cross from any other breed than his own for upwards of twenty years; his best stock has been bred by the nearest affinities; yet they have not decreased in size, neither are they less hardy, or more liable to disorders; but, on the contrary, have kept on a progressive state of improvement. But one of the most conclusive arguments that crossing with different stock is not necessary to secure size, hardiness, &c., is the breed of wild cattle in Chillingham Park, in the county of Northumberland. It is well known that these cattle have been confined in this park for several hundred years, without any intermixture, and are perhaps the purest breed of cattle of any in the kingdom; and though bred from the nearest affinities in every possible degree, yet we find them exceedingly hardy, healthy, and well formed, and their size, as well as colour, and many other particulars and peculiarities, the same as they were five hundred years ago." Mr. Napier quotes this passage, and appears to concur in it; and Mr. Hayward argues at much length, on a diversity of grounds, and in formal opposition to Sir John Sinclair, in support of the doctrine which it inculcates. Yet the true law of either improving or undeteriorating propagation, so far as we can deduce it from a vast mass of conflicting observations, is that consanguineousness of breeding, viewed apart from other controlling or modifying circumstances, acts indifferently in the wild state of animals, and has a deteriorating tendency in the exact ratio of domestication. Mr. Bakewell, by a choice selection of individuals, improved his breeds up to the highest possible pitch, which became identical with the utmost possible degree of domestication; and he afterwards preserved his flocks from degenerating, only by careful attention to the utmost attainable properties of pairing, and especially by a constant and costly provision of the fittest climate, the amplest shelter, and the richest food. But had he either permitted his improved breeds promiscuous intercourse, or allowed them to live under the ordinary conditions of common pasturage on a common farm, he would probably have witnessed a deterioration almost as rapid as the previous improvement. His breeds, too, were but newly formed,—they, under his own management, came for the first time into the possession of the characteristic properties which constituted them varieties of their species; and they, therefore, in all or any of their tendencies to degeneracy, were no more parallel to the long established good breeds of the present day than a hybrid plant of the first generation is parallel to a hybrid of the fourth or the sixth generation.

To be continued.

CURING SHEEPSKINS FOR MATS.—Pulverise and mix well together a spoonful of alum and two of saltpetre. After sprinkling the powder on the flesh side of the skin, lay the two flesh sides together, leaving the wool outside; fold up as dry as possible, and hang in a dry place. In two or three days take it down and scrape it with a blunt knife till clean and supple.

geese, the produce mature and fatten very rapidly.

I may here remark that the bean on the end of the bill, which should be fleshy-white in colour, is frequently very dark during the Toulouse gosling's early stages, but this clears off to the natural colour as it matures. This frequently alarms the amateur breeder, more especially as it is not peculiar at all.

One difficulty for the amateur to encounter in all young geese is the difference in sex. Experienced breeders can often determine the difference fairly accurately from appearance and voice; but the only reliable plan is to catch each bird and examine. Although this gives a little trouble, it is very easily overcome by any one if taken in hand.

And so many of the above remarks apply to the management of geese and goslings generally, in referring to Erubdens it only remains necessary for me to point out where the two varieties materially differ.

The Embden in colour—both male and female—is a pure and spotless white, which, with access to suitable water, they preserve untarnished throughout the year. Legs and bills a dark orange colour, the latter not so strong as in the Toulouse, nor so curved. Their carriage is tall and erect, breast and shoulders wide, the former very deep, and although a tighter skinned and feathered bird than the Toulouse, their breast, in the first specimens, touch the ground, and are very double.

Embden are fair layers of fine, rather long-shaped eggs, and although I have seen it stated to the contrary, they are, in my experience, much earlier layers than the Toulouse. They also differ from the latter variety in being good and reliable sitters and mothers. They generally lay from twelve to fifteen eggs before coming broody. If not allowed to sit they will soon lay again, so that it is a good plan to place the first batch of eggs under hens, and allow the goose to hatch the second lot herself. It is not unusual, however, for an Embden goose to hatch and rear two separate lots of goslings in a season. Moderately late-hatched water-fowls do not deteriorate in size, as in poultry, if allowed time, but often mature to the largest and finest specimens of the year.

I occasionally permit my Embden geese to hatch their second lot of eggs, but seldom allow the goose to rear the goslings, for the simple reason, in a "fancier's" point of view, that the goslings become more domesticated, and can be forced to maturity earlier if brought up with hens. The goose, however, will rear them successfully if first confined with her brood in a sheltered place on a meadow or permanent grass in a large, roomy coop or crate, with a corrugated roofing sheet or two over the top, to keep off the strong sun or rain. After a week or ten days' liberal treatment the downy goslings will be strong enough to crop the grass and follow their mothers, which may now be liberated during the day, but always confined in a dry, comfortable building at night; and if they are fed before going out and on coming in, it is all the needful attention required. If reared in this way in preference to the first method mentioned, the goslings become better foragers and more self-supporting.

Embden goslings mature and furnish very quickly, and if liberally fed are soon ready for the table, although if allowed they will grow and increase in weight up to Christmas, making on a very general average 50 lbs. the pair. They are naturally better foragers than the Toulouse, and will fatten much more rapidly on the same quantity of food. As a table bird they are also superior in quality to the Toulouse at any stage of their existence. Although of late years Embden geese have lost ground in public favour, the Toulouse being preferred, still, with the above combined good qualities, they retain many admirers, and I am glad to notice they are again coming to the front, and are likely soon to occupy their former position with the economist.

The great stumbling-block to the more extended cultivation of the Embden with the fancier is a general ignorance of their merit, and the consequent injustice too often done to the young birds when exhibited along with those of the Toulouse variety. It should be borne in mind that Toulouse goslings must be much larger in appearance than those of the Embden to equal the latter in weight. To my mind it is within reason to compare the difference between these two varieties of geese—the Embden to the light-feathered Dorking, and the Toulouse to the loose-feathered Coochin.

To fatten geese, place them, in lots of ten and twelve which have been reared together, in an unused, quietly-situated house, some six or eight weeks before they are required for eating. If the light is subdued all the better. Let one

attendant wait on them from first to last. Feed sparingly at first, and on their accustomed food; they will all the sooner take to their change and surroundings. Over-feeding must be avoided at any time, and cleanliness is of the first importance. Keep a constant supply of clean water before them, arranged so that they can get their heads in only. Keep a tub of rough sand and gravel before them, and litter the house with straw. Feed twice daily, and accustom them as soon as possible to a variety of good soft food, such as whole wheat and barley boiled and dried up with oatmeal, rice boiled in milk and mixed with wheat and barley-meal, cooked potatoes mixed with meal occasionally. Scalded Indian meal, dried up with fine wheat flour, adds greatly to their weight if given frequently during the last ten days. A little spice may be used, and, if the geese are eating the soft food, give freely a little barley or other grain in their drinking water. A cabbage hung up for them to pull at is a useful change.

It is of the utmost importance that the attendant should move cautiously and quietly about his work, never alarming or catching the geese; and it is better to kill or take each lot off to the market at once, otherwise, their number being broken, the remaining ones will feed indifferently, and lose weight.

To kill, stick with a knife through the neck, which breaks at once.

In this paper it has not been my intention to uphold the one variety in favour of the other, but, as a breeder of both, to give my personal experience unbiassed as to their relative merits. I have often weighed the matter in my own mind, and have come to the conclusion that where economy, usefulness, and a fancier's interests are combined, the pleasure and profit in breeding the two varieties are equally balanced. Others who have had experience of both, I expect, will bear me out in the justice of my remarks. If, however, I seem to have upheld the one variety more than the other, it is because I have leaned to the weaker side.—*The Planter and Farmer.*

Breeding.

(Continued).

The general object of improved breeding is to diminish or remove the effects of live stock, and to acquire and perpetuate desirable properties; the general art is to make such a selection of both males and females as is most likely to promote the object; and the general principle is the governing law of the animal kingdom—the very obvious yet much forgotten maxim—that like produces like, or that every variety, as well as species of animal, propagates its own kind. The simple observation, that domestic animals produce a progeny exactly similar to themselves, formed the basis of all the proceedings of our first great modern improvers of British live stock. Bakewell, in particular, inferred from this observation, that, by bringing together a male and a female both possessed of one set of good properties, he should obtain these properties, perhaps in an increased degree, in their offspring,—and that by propagating from males and females of the same properties through a series of generations, he should eventually establish a breed possessing these properties as a permanent and distinguishing characteristic. When he carried this process into effect, and found it to be successful, with respect first to his long horns, and next to other breeds of cattle, the term "blood" began to be used as a designation of it; and, in all subsequent periods, whenever a breed with any valuable characteristic can be referred to a number of ancestors of admitted excellence, this term is currently and emphatically applied. The principle of the improving process—that every variety of domestic animal propagates its own peculiar properties—is the pervading law of all scientific and successful breeding, holds true with regard to both the male and the female, and extends, not only to constitution, shape, and organic peculiarities, but to nosological tendencies and habits, and to almost every property, no matter how minute, which effects an animal's economical adaptations and market value. The exceptions of this law—even in spite of the seemingly dull and unimaginative character of the cow, the ewe, and some other domestic animals—are only such as arise from the occasional ascendancy of the mental power over the organic operation, and, like the vastly more frequent, exceptions in the human subject—more frequent, perhaps, in the very ratio of the superiority of the human mind to the brutish—must be wholly ascribed to the play of imagination. "One of the most intelligent breeders I ever met with in Scotland," says Mr. Boswell, "told me a singular fact with regard to what I have now stated.

One of his cows chanced to come in season while pasturing on a field, which was bounded by that of one of his neighbours, out of which an ox jumped, and went with the cow, until she was brought home to the bull. The ox was white, with black spots and horns. The cow's owner had not a horned beast in his possession, nor one with any white on it; nevertheless, the produce of the following spring was a black and white calf with horns." A still more remarkable instance is familiar to most readers of sacred scripture, as having occurred in the pastoral history of Jacob. Yet notwithstanding all such exceptions, the tendency of each variety of domestic animals to propagate its own peculiarities, down to even the minutest point, is so prevalent and powerful as to be strictly a law, and perfectly accounts, not only for all the successes, but also for all the failures and for most of the apparent anomalies, in the progress of breeding improvements. "Let it be supposed" remarks Youatt, "that the cattle of a certain farmer have some excellent qualities about them; but there is a defect which considerably deteriorates from their value, and which he is anxious to remove. He remembers that 'like produces like,' and he looks about for a bull that possesses the excellence which he wishes to engraft on his own breed. He tries the experiment, and to his astonishment it is a perfect failure—his stock, so far from improving, have deteriorated. The cause of this every-day occurrence was, that he did not fairly estimate the extent of the principle from which he expected so much. This new bull had the good point that was wanting in his old stock; but he, too, was deficient somewhere also; and therefore, although his cattle had in some degree improved by him in one way, that was more than counter-balanced by the inheritance of his defects. Here is the secret of every failure—the grand principle of breeding. The new-comer, while he possesses that which was a desideratum in the old stock, should likewise possess every good quality that they had previously exhibited—then and then alone, will there be improvement without alloy."

Three of the good properties, or "points," as they are technically called, which breeders desiderate in all the species of live stock, are rectangularity of shape, robustness of constitution and tendency to rapid attainment of maturity.—Rectangularity of shape is not understood with literal exactness, and never supposes the total absence of curvature, or the absolute filling up of the angles, and is more remotely exemplified in some species than in others; still, it constitutes an excellent abstract model, and distinctly indicates the development and novelties of form which are requisite for making increasing approximations to perfection. The rectangle of the side figure of each animal is a parallelogram, and excludes the head; and that of both the front figure and the head figure is not far from being a square. A full-grown ox of prime breed fills the rectangles better than any other form of cattle on a farm; and a fat ox fills them better than a lean one. A Leicester tup with full wool fills them better than a tup of the same breed newly clipped. The gelding fills them better than any other form of the horse. But the hind view of the horse, unlike that of the ox, is always broader than the front view; and the hind view of the female is broader than the hind view of the male. Robustness of constitution implies good appetite, healthy digestion, free from tendencies from disease, great power of endurance, sturdy health, steady growth to maturity, and facile ability of performing the offices which belong to the particular animal in the economy of the farm; and it is indicated by very numerous features in each animal, and by very diversified ones in the different species. The principal organs or parts of the body, particularly the lungs, the chest, the pelvis, the head, the neck, the muscles, and the bones, must be carefully considered in order to secure the possession and the due balance of the desirable properties. The comparative largeness of the lungs determines the comparative strength and health of the whole constitution,—it determines, in particular, the comparative power of taking up nourishment from food, and the comparative facility and rapidity of fattening; and it is therefore of very great importance, and is itself determined, or rather indicated, by the external form and size of the chest. The capacity of the chest depends more on its form than on the extent of its external circumference; for it may have an equal circumference in two animals, and yet enclose much larger lungs in the one than in the other. The form of a truly capacious chest, containing large and powerful lungs, approaches the out-line figure of a cone, and has the apex of this figure situated between the shoulders, and the base of it situated towards the loins. A capacious pelvis, or lower cavity of the abdomen,

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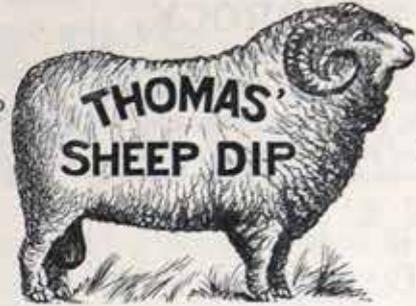
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RESTORATION OF FERTILITY.—In an article in the *Country Gentleman*, by Sir J. B. Lawes, under this heading, the world-renowned scientific farmer, has some very interesting facts about the amount of nitrogen and carbon in the soil. He said: As there can be little doubt that the organic substances which we find in our soils had their origin in the atmosphere, we have only to leave the impoverished soil alone a sufficient number of years in order to enable the natural vegetation to restore the lost organic matter; and, looking to the vast period of time during which vegetation of some sort must have existed on the earth, there does not appear to me to be any difficulty in accounting for the large stores of carbon and nitrogen which we find in our soils and sub-soils.

AGE OF ANIMALS.—A bear rarely exceeds twenty years, a wolf twenty, a fox fourteen or sixteen. The average of cats is fifteen years, of a squirrel or hare seven or eight years, and a rabbit seven years. Elephants have been known to have lived to the great age of 400 years. When Alexander had conquered Porus, king of India, he took a great elephant which had fought valiantly for the king, and named him Ajax, dedicated him to the sun, and let him go with this inscription:—"Alexander, the son of Jupiter, hath dedicated Ajax to the sun." This elephant was found with this inscription 350 years after. Pigs have been known to live to the age of thirty years; the rhinoceros to fifty. A horse has been known to live to the age of seventy-two, but averages twenty-five to thirty. Camels sometimes live to the age of 100. Stags are long-lived. Sheep seldom exceed the age of ten. Cows live about fifteen years. An eagle died at Vienna at the age of 104 years; ravens frequently reach the age of 100. Swans have been known to live 300 years; pelicans are long-lived. A tortoise has been known to live much above 190 years.

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WATER TANKS,

PLAIN AND GALVANIZED,
100, 200, 300, and 400 GALLONS.
Taps fitted to any size required.

HOUSEHOLD, ENGINE, AND BLACKSMITHS' COAL,
BEST QUALITY.

Horse Feed of all Kinds, Wholesale and Retail.
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SADDLERS,
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Have always on hand a Superior Stock of Saddlery, consisting of Double and Single Buggy Harness; also, Carriage, Gig, and other Harness; English and Colonial-made Ladies' and Gents' Saddles and Bridles, Carriage, Buggy, Hunting, Jockey, and other Whips, from the best English Makers.

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ESTABLISHED 1837.

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Old-established Agricultural Implement and Farm Waggon Manufactory.

Celebrated for the excellence and durability of all work sent out.

Makers of the First Iron Plough in the Colony.

BUY NONE OTHER THAN

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Patent

FIRE BRICK LINED FURNACES



For Copper Washing Boilers with Everlasting Bottoms, will Boil in Half the Time of the Ordinary Furnace, with Half the Fuel

To be had of all Leading Ironmongers.

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AN ENORMOUS STOCK OF

Beautiful Cottage Furnishings

AT

VERY LOW PRICES.

CALL AND INSPECT.

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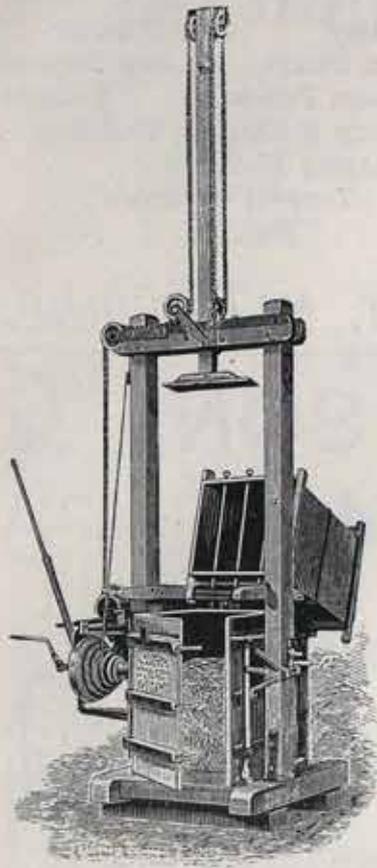
74, 76 & 78 ELIZABETH STREET MELBOURNE.

D. FERRIER'S PATENT LEVER WOOL-PRESS

First Order of Merit awarded this Press at the Melbourne International Exhibition, 1880.

HUMBLE & NICHOLSON

Makers, Geelong.



The usual screw is dispensed with, and the pressure brought to bear by means of a strong rope or chain, working in sheave pulleys overhead, attached to a Ram, and winding on a fusee, which is made in the shape of a suddenly tapered screw.

The rope works on the large part of the Fusee, when the pressure is light, and passes down to the taper end as the pressure increases, being worked by a lever fixed on the centre spindle.

The top Box is hinged to side Brackets, and turns down to the floor, which greatly facilitates the putting in of the wool, and renders any second floor unnecessary, and when filled is easily placed back in position.

When the bale is pressed and the sides sewn, the Ram is lifted by a small rope from the Fusee, turned by a handle.

It will be understood how very much quicker the power is brought into application by this means than by the ordinary screw press, and double the work is got through by the same number of men.

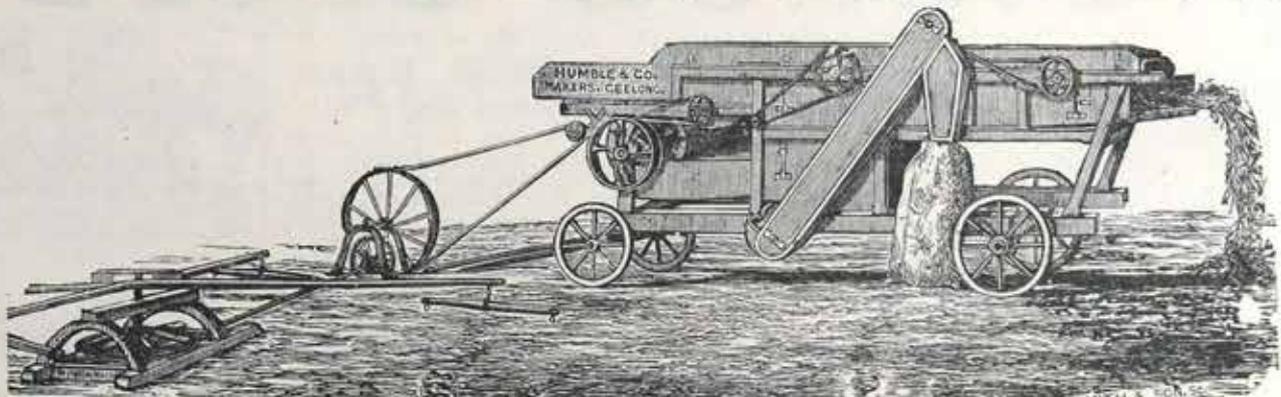
Special attention is directed to the fastening of the Packs before the Wool is put in, which is done in an exceedingly quick and simple manner: four pieces of wood are fitted into the recesses of doors, which hold the Pack securely in position and to the side catches for fastening the doors, which are held in position by a vertical bar, and relieves them simultaneously.

The side door is also held in its place by a catch, which at any time can be relieved instantly, the door falling back and allowing the bale to be removed.

At the Melbourne Exhibition competition this Press turned out 3 Bales of Scoured Wool in 28½ minutes, being considerably less than any other Press, although one had the advantage of being driven by steam.

HUMBLE & NICHOLSON, ENGINEERS.

THRESHING MACHINE



FOUR-HORSE POWER THRESHING MACHINES.—These Machines are found to be very convenient to farmers who wish to thrash their own grain; or in some cases where three or four neighbours combine. They will thrash from three to four hundred bushels per day with horse power; or if worked with steam power, about six hundred bushels daily.

We have been making these Machines for the last seventeen years, and have been awarded a large number of prizes at the different Shows, including the National Show at Melbourne and other places. The above is strongly made with Wrought Iron Drum, Steel Spindle; all bearings of the best material, no time or expense being spared to turn them out in a substantial manner.

HUMBLE & NICHOLSON,

VULCAN FOUNDRY, GEELONG.

Manufacturers of TAYLOR'S PATENT REFRIGERATORS
And Cold Dry-Air Apparatus,

ALSO

TAYLOR'S RABBIT EXTERMINATORS,

The most effective when used with the chemical dust, which is supplied by Vulcan Foundry.

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IMPORTERS OF
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Manufacturers of Galvanized Iron Spouting,
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Grain & Flour Merchants,
COMMISSION AGENTS, &c.,
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Chaff, Hay, Butter, and
General Produce Merchants,
GEELONG.

CAULFIELD CUP.
WHITE & ALLAMBY
Have replenished their Stock in view of ensuing season. Best ENGLISH GOODS ONLY kept in stock.
AMERICAN HARNESS,
Single and Double, Carriage, Brougham, Gig, and Buggy, in ALL of which none but the best English and American Leather is used in making up.
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(Below Langland's Foundry.)

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Nurserymen & Seedsmen,
Have Removed to Larger Premises,
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All Vegetable and Agricultural Seeds tested to see they grow.

Lists of Seeds or Plants Free on Application.

by Special Appointment to the Marquis of Normandy, K.C.M.G. & under the Patronage of His Excellency Sir H. B. Loch, K.C.B

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STEAM CARRIAGE WORKS,

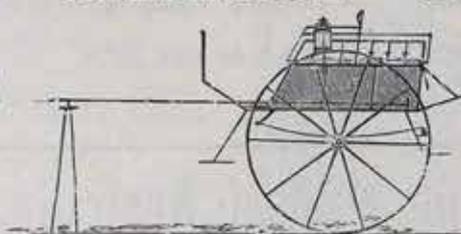
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And 6, 8, 10, 12, 15, 17, 19 & 21 STEWART STREET, MELBOURNE.

Awarded GOLD MEDAL for Special Merit at London Exhibition of 1873, and TWO GOLD MEDALS for best Carriages at Melbourne Shows of 1883 and 1884, and THIRTY-TWO MEDALS (1st Prizes), at Exhibitions and Shows of 1872, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, and 85. Also, THREE FIRST AWARDS OF MERIT (1st Prizes), at International Exhibition of 1880.

NOTICE.—Referring to above, D. WHITE desires to inform his numerous Customers and the Public generally that he has secured and completed EXTENSIVE ADDITIONS TO HIS COACH FACTORY, and with the increased accommodation and Steam Plant, and the Largest Stock of Seasoned Timber in Melbourne, is now prepared to meet the increasing demand for his well-known Carriages and Vehicles. The new premises are in Stewart Street, immediately opposite the present Factory. Patentee of the Improved Carriage and Buggy Hood Apparatus, for raising or lowering the Hood from the inside. Every description of Vehicle built from the best imported Materials and Well-seasoned Timber.

FITZROY CARRIAGE COMPANY.

Ladies' Pony Phaetons,
Victoria Phaetons, and
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English Design Carriage our Speciality.



One reason why we sell the greatest number is that our Customers are pleased to recommend us.

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Our Motto—"Not how large our Establishment, but HOW EXCELLENT OUR WORK."
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BREEDER AND DEALER
IN
High-class Poultry
1 & 2 EASTERN MARKET, MELBOURNE



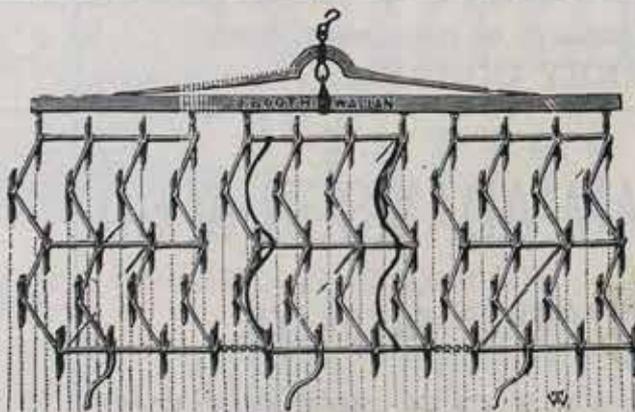
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Champion Prize Taker at past Shows. Exchanges made any way. Fowls Eggs for Sitting. Orders despatched to any part of the colony on receipt of P.O.O.

STEVENSON & ELLIOT,
By Special Appointment to
H.R.H. the DUKE OF EDINBURGH, K.C.B., and
Carriage Builders

To His Excellency the Governor Sir HENRY LOCH, K.C.B., and all the late Governors for the past 25 years.
Have a large selection of CARRIAGES and BUGGIES, their own build, constructed upon the most improved principles and elegant modern designs, in which are used the best workmanship and materials procurable, comprising Landaus, Broughams, London Victorias, Mall Phaetons, Waggonettes, Bretts, Single and Double-seated Buggies, Dogcarts, &c.; also Plain and Fancy Farmers' Waggon, built specially for country use.
A variety of Second-hand Vehicles kept in stock. Heraldry executed in correct style.

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5 SILVER MEDALS.

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HARROWS made to suit all kinds of soil, fitted with Iron or Steel Tynes.
These Implements are constructed on his well-known W pattern, which ensures every tye cutting its own ground, and also reduces the draught to a minimum. During the season 1884 and 1885 these Implements in competition with the leading Colonial-made and Imported Harrows, secured 12 first and 2 second prizes out of 16 shows, thus proving their superiority.
J.B. having made a speciality of Harrow Making, the farming public may rely on securing a satisfactory Implement at a Moderate Price, by applying to him or to any of his Agents throughout the Colonies. Illustrated Catalogue and Price List free on application.

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THE WALTER A. WOOD
Latest Improved Twine Binding Harvester

ITS EFFICIENCY.

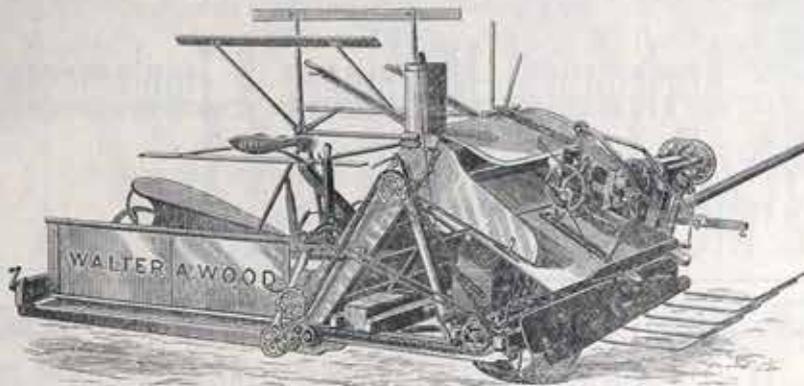
The above Harvester and Binder is again placed before the Farming Public, and those who are in want of a Reliable Binder,

AND A MACHINE

which fulfils in every respect in practical use, all that is claimed for it.

The Wood Harvester

has been before the public for years, and has proved in past Harvests, as it will do in the coming one, that it is the Premier Machine of the World, and the most wonderful and greatest labor-saving, time-saving, and money-saving machine ever brought to the notice of the farming public.



ITS EXCELLENCE.

We have claimed in former years, and still claim so in the present one, that the

WOOD MACHINE

- Excels all others in point of
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- Durability,
- Non-liability to get out of adjustment,
- Ease of management,
- Certainty of binding,
- Uniformity in size of sheaf,
- Delivery of sheaf,
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- Simplicity of construction.
- Ease of adjustment.
- Lightness of draught.
- Security of knot tied,
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- Clean Cutting.
- Absence of side draught.

With Transport Gear and Patent Sheaf Carrier.

IMPROVEMENTS.—The Harvester and Binder has been greatly improved, which will add to its efficiency in the field in every respect, under all difficulties. It is impossible to describe them in this space for 1886, but we will post free on application a catalogue showing all the improvements in this year's machine as over last year's.

BOOK ORDERS AT ONCE.—Our first shipment of Binders having arrived and been disposed of, we would ask intending purchasers NOT TO DELAY, but to send their orders in at once, as it will be impossible for us, "notwithstanding the special arrangements made by us," to fully supply the season's demand at the rate at which the orders are coming in.

To prevent **DISAPPOINTMENT**, we will supply the Binders according to priority of application.

We are enabled this year to sell our best selected HEMP AND MANILLA TWINES at a lower rate than heretofore, and would caution consumers to see that they get our Twine, which is more even in quality, stronger, and gives a greater length to a pound weight than any other kind.

JAMES M'EWAN & CO., SOLE AGENTS, MELBOURNE.

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Saddlers by Appointment to His Excellency Sir H. B. Loch, K.C.B.

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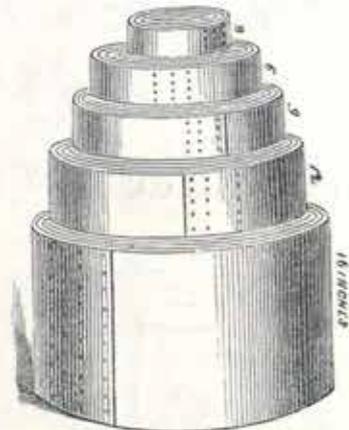
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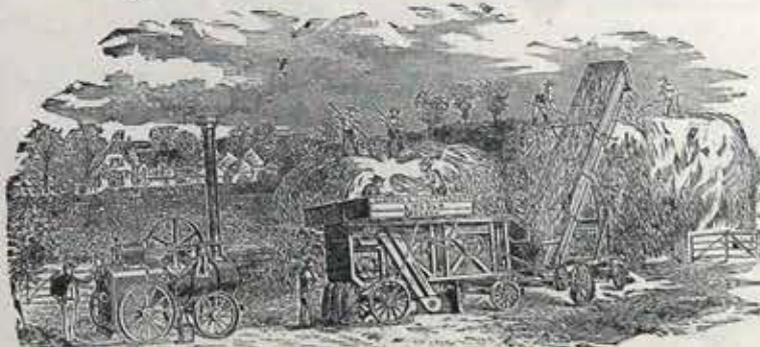
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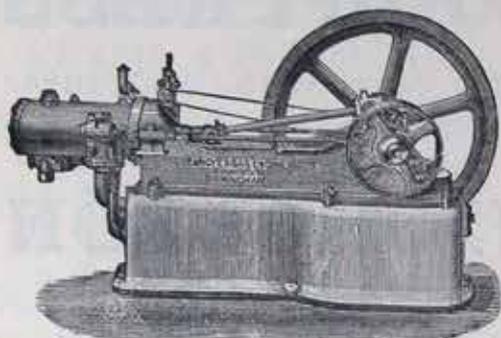
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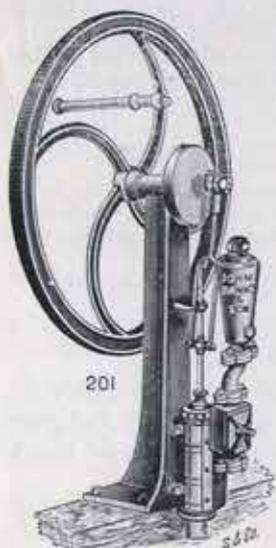
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2, 3 & 4 H.P.

Extra Large Firebox and Boiler.



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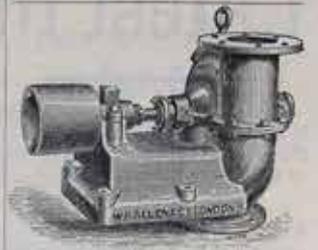
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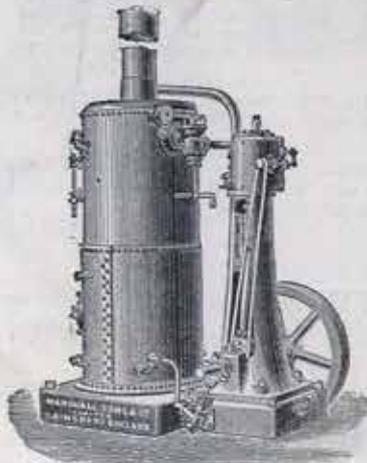
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VICTORIA

Vol. II.—No. 19. [Repd. as a Newspaper.]

MELBOURNE, FEBRUARY 11TH, 1887.

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Then 'twere well done 'twere quickly done."

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It is the Best, Cheapest, and Safest Dip in
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Hydraulic Hay Pressers, Chaffcutters,

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The Greatest of all Dairy Improve-
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Single, Double, and Treble Ploughs.

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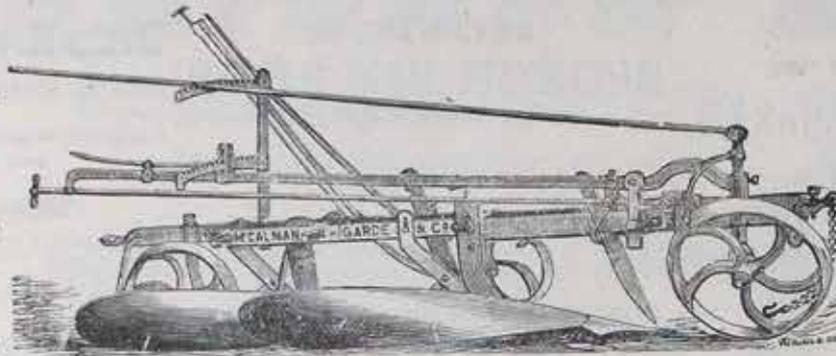
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Squatters' Ploughs

For dam sinking.

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Special Ploughs

Made to any design.

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All Kinds of Implements kept in Stock to select from at their Manufactory,

BLACKWOOD STREET, NORTH MELBOURNE.

METEOROLOGY.

Farmer's Barometers, with Thermometers,
Guaranteed Instrument, 25/-

RAIN GUAGES, from 15s
Standard Instruments of all Kinds.

THOS. GAUNT,

Watchmaker, Jeweller and
Optician,

4 Bourke Street East,
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297, 299, 239 & 241,
George Street,
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THOS. GAUNT

GAUNT'S
ENGLISH
LEVER WATCHES

still hold their ground
against all competitors as
the most durable and trust-
worthy timekeepers in the world.

The favorable opinion formed of Gaunt's
watches by the Australian public has been
endorsed by the jurors of the several Exhibi-
tions in which he has competed, and his last
crowning success, the obtaining HIGHEST

AWARD FOR HOROLOGY at the Melbourne
International Exhibition, should convince the most dubious
that his watches cannot be excelled. Seven Gold and other

Medals. Price from £6 6s. to £10 10s. Get the opinion of any
of your friends who has one of my watches.

THOS. GAUNT, 14 BOURKE ST. EAST, ROYAL ARCADE.

ROBERTSON & MOFFAT,

LARGEST

Furnishing Warehouse

IN AUSTRALIA.

Furniture Showrooms—

16, 18, 20, 22, 24, 26, 28, 30, 32 POST OFFICE PLACE,

PRICE WILLIAMS,

FRANKLIN STREET, WEST MELBOURNE,

MANUFACTURER OF THE WELL-KNOWN

Williams' Rack & Pinion Wool Press

Rack and Gear Steel Press for the use of large stations.
Lever & Chain Press, with Folding Top Box, for the use of smaller stations
Lever and Chain Farmer's & Selector's Press. Price, £22 10s.

As the season for this latter kind is now approaching, those requiring them
should lose no time in sending their orders. Owing to the general satisfaction
given by those supplied for last season, orders are now freely coming in, and a
large demand is looked for. The following is a fair sample of a large number of
Testimonials to hand for those supplied last season:—

MR. PRICE WILLIAMS—

BALLAROGAN, JAN. 23RD, 1886.

Dear Sir,—I have much pleasure in informing you that the Farmer's Wool Press I
purchased from you last October, gave me every satisfaction. We turned out very compact
small bales, about 3½ cwt., but could have them heavier if we wished with once down. By
what the Wool Brokers tell me, they would clear themselves in two seasons to anyone having
twelve bales. Since done with the Wool, I have had it in constant use as a Cheese Press, and
I reckon it worth half its cost for that. We have weights on the levers. Any number of
Cheeses can be put in at once. It would make a good Press for Hay or Straw, and for Grapes
or Apples it is just the thing. I can highly recommend it as a most useful, substantial, and
heap article.—Yours truly,
HUGH GORDON.

McDougall's Sheep Dip

USED THROUGHOUT THE WORLD.

McDOUGALL'S SHEEP DIP.

PERFECT SAFETY, NON-POISONOUS.

A Dip with 20 Years' Record and Second to None in the
Market.

As certain as arsenic in its effects in exterminating all insects, and
without its danger. It is the only true specific for scab.
Finely stimulates the growth of Wool.

Trial Once Made, Always Used.

PRICE, 5/6 PER GALLON, 5 GALLON DRUMS.

Direct Agents—

GOW BROTHERS,

8 MARKET BUILDINGS,

WILLIAM STREET.

McDougall's Sheep Dip

The American Carriage Company.

SHOW ROOMS AND MANUFACTORY:

36, 38 & 40 BRUNSWICK STREET, FITZROY.

The Largest Manufacturers of Fine Light Vehicles in Australia.

We sell the Cheapest, Lightest, Strongest, Most Durable and Convenient Buggy in the Market.

A Large Quantity of thoroughly seasoned Second Growth American Ash and Hickory always kept in stock.



Every vehicle we manufacture is fully guaranteed to be as represented, material used throughout is the finest procurable, and in every essential point it is unexcelled by even the highest priced vehicles.

Any conceivable style of Vehicle built to order at shortest notice.

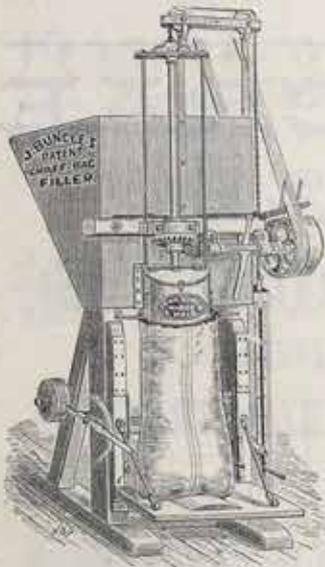
Customers may depend upon having their orders turned out in a thoroughly workmanlike manner, and on the latest and most approved style, as none but the very best skilled workmen are employed on the premises.

N.B.—The Trade supplied on the Most Liberal Terms.

M. E. GILBERT, Manager.

BUNCLE'S

Patent Chaff Bag Filler.



JOHN BUNCLE, in stating what is well known, viz., the great competition in the Hay, Corn, and Chaff Trade, begs at the same time to call attention to his end-avowr to lighten the toil and increase the profits from such a business, by designing and manufacturing a machine for the above purpose, and one which cannot be approached by any other maker at present, or recommended to equal in **Simplicity, Durability, and thorough Adaptability and Cheapness** combined as in the above Machine. The **BAG FILLERS** are manufactured complete, ready to be sent to wherever ordered or in any of the colonies, either to fix in stores in connection with the fixed Chaffcutters, or to be attached to his well-known Travelling Chaffcutters previously supplied, and now supplied either with

or without Baggers. A few attempts have been made by some to supply such a want, but probably not having a theoretical as well as a practical knowledge of machines, have not been able to reduce the complicated movements in their machines, and which are perfectly unnecessary—as witness the Unique Simplicity and correctness in design, and the admirable working of **BUNCLE'S PATENT BAG FILLER** compared with the few others tried at work.

For the information and convenience of customers, a machine is kept constantly set up ready to show at work in **BUNCLE'S PARKSIDE IRONWORKS**, and many customers have witnessed **80 to 90 lbs.** of Chaff put in a bag in **15 seconds!!!** which, after making allowances for time removing the full bag and replacing an empty one, would easily on an average keep **Four** of **Buncle's No. 1 Chaffcutters**—well, if there is any doubt, say **Three** Machines clear of all the Chaff they cut (medium length.) Of course the Machines are arranged to put in as light weight as you like, or you can fill up and burst all your Bags—to pieces. As a trade requirement (in addition to filling bags) the necessity for a **Mixing Machine** is a long felt want, the laborious and unsatisfactory way at present adopted cannot much longer be endured, and there is no necessity for it!! as **J. Buncle** can arrange to "Blend" the worst and the best samples "To a Hair" at the least possible expense with the best results.

The season is now coming on when all those who intend having the latest improved Machines should forward their orders as early as possible, to prevent disappointment in the day of their need.

J. Buncle's Machines have, as usual, been awarded **First Prize** at all the leading shows wherever he exhibited last year (1885), and the many improvements introduced and constantly copied by other makers, is the best proof of the value of the continued consideration in all that affects the profits and welfare of his customers.

Chaffcutters with **14-in.** wide mouthpieces and **Newest Designs**, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

Sirs and Gentlemen, yours respectfully,

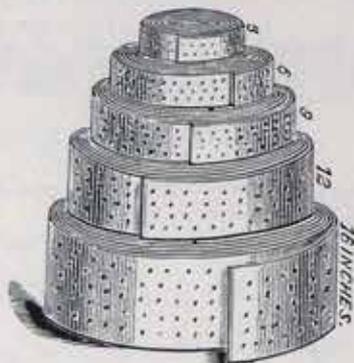
Parkside Iron Works, North Melbourne.

Catalogues Post Free on Application.

JOHN BUNCLE.



DOUBLE OAK-TANNED,
WELL-STRETCHED
MACHINE BELTING.



FRANK VIAL,
"UNIVERSAL"
LEATHER BELT FACTORY,
MACAULAY ROAD,
HOTHAM,

And at 59 MAIR STREET, BALLARAT.
TELEPHONE 659.

MANUFACTURERS OF
MACHINE BELTING
On the Most Approved
CONTINENTAL AND AMERICAN PRINCIPLES.

The "UNIVERSAL" BELTS are acknowledged by all who have used them to be the Best in the Market.

Special Lists for BELTS for IRRIGATION PURPOSES.

A Large Stock of the "PREMIER" BELT LUBRICANT, and Well-Seasoned BELT LACES, kept in Stock.

TESTIMONIAL.—[copy.]

UNION FLOUR MILLS,
Brunswick-street, Fitzroy,
March 17th, 1886.

Messrs. Frank Vial & Co.,
Macauley Road, Hotham.

Gentlemen,—In reply to your enquiry respecting the (23") twenty-three inch double belt supplied by you to ourselves, we beg to state we have been working it for a period of seven months, and we find it to be all we could desire, as also is the other belting which we had from you.

We therefore feel great pleasure in recommending your belting to anyone requiring the same.

We are, Gentlemen, yours truly,
(Signed) W. S. KIMPTON & SONS.

Other Testimonials received too numerous to print, which with Price Lists, can be had on application.



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WON
EVERY FIELD TRIAL

IN VICTORIA
DURING SEASON

1885-1886,

IN WHICH
THEY HAVE
COMPETED.

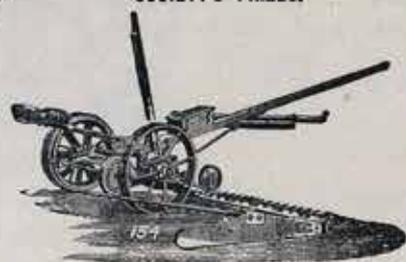


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MOWERS
AND
REAPERS.

PARAGON, CHALLENGE
DIAMOND, ENCLOSED GEAR

WINNERS OF THE ROYAL AGRICULTURAL SOCIETY'S PRIZES.



I. G. FOSTER, SOLE AGENT FOR VICTORIA,
4 A'BECKET STREET, MELBOURNE.

AIRD & McCRAE

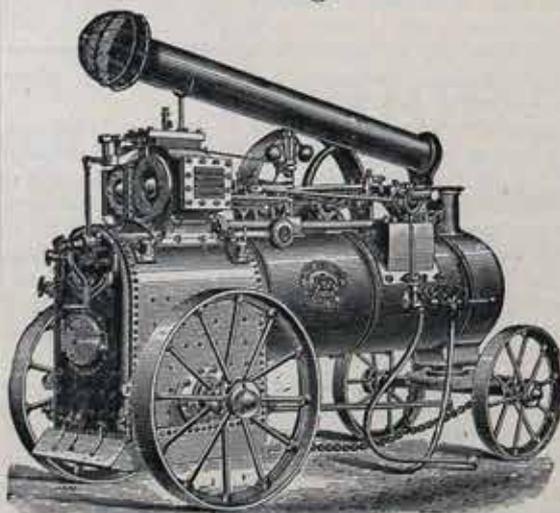
Stock & Station Agents,

MACHINERY MERCHANTS,

ROBB'S BUILDINGS,

COLLINS STREET WEST, MELBOURNE.

AGENTS FOR MESSRS. R. GARRETT & SONS,
Agricultural Engineers.



- Compound Engines
- Portable Engines
- Semi-Portable or Fixed Engines
- From 20 to 100 I.H.P.
- Threshing Machines
- Saw Benches
- Pumps
- Seed Drills, &c.

Messrs. GARRETT & SONS' ENGINES afford marvellous economy of fuel and water, and enormous power in proportion to their dimensions, and are strongly recommended in preference to the ordinary Double Cylinder.

AIRD & McCRAE, as Stock and Station Agents and Machinery Merchants, are prepared to supply Plant for Irrigation Works, and when necessary, obtain services of Eminent Engineers for the purpose of taking levels and advising generally.

VICTORIAN RIFLE CLUBS.

Members are informed that
W. H. HUNTER
 SADDLER,
 15 POST OFFICE PLACE & 11 BOURKE ST. WEST,
 is the GOVERNMENT CONTRACTOR, and the Only Saddler
 Appointed for supplying the Regulation Riding
 Saddle, Bridles, Leggings, and Wallets.
 Any of the above will be supplied in any quantities to Members
 of RIFLE CLUBS at the Contract Prices. Apply early.

DANIEL TOPP,

Late J. J. Walker, Wholesale & Retail
SADDLE AND HARNESS MANUFACTURER,
 29 BOURKE STREET WEST, MELBOURNE.

Manufacturer of every description of Saddles and Bridles; Gig,
 Carriage, Buggy, Spring Cart, Dray, American Express Wagon
 Scotch Tandem, Lewler and Outrigger Harness.

D. T. wishes to call particular attention to his Colonial-made
 Rough and Smooth Bullockhide, Hopskin, Bush and Town,
 Saddles, which for Shape, Price, and Quality, cannot be equalled.

TRADE SUPPLIED.

WM. ADAMSON,

Seed Merchant,

43 COLLINS STREET WEST.

SAMPLES AND PRICES.

Grasses—Lucerne, White Clover, Red Clover,
 Mangolds, &c.

FORWARDED on APPLICATION.

SCHUSTER & GLASER

(Late J. G. SACHS.)

Wagon & Lorry Builders,

WHEELWRIGHTS,

AND GENERAL BLACKSMITHS.

OPPOSITE HAYMARKET, ELIZABETH ST.,
 MELBOURNE.

WM. CAMERON,

Land Agent,

LOANS NEGOTIATED.

13 BOURKE STREET WEST, MELBOURNE.

ADVANCES ON WOOL, GRAIN, ETC.

R. GOLDSBROUGH & CO. LIMITED

(In which are amalgamated the Australasian Agency and
 Banking Corporation Limited and R. Goldsbrough & Co.)

WOOLBROKERS.

Capital, £3,000,000.

HEAD OFFICE—MELBOURNE.

MAKE LIBERAL CASH ADVANCES on the ensuing CLIP
 of WOOL and on STATION SECURITIES.

They hold AUCTION SALES of WOOL twice each week
 during the season, and at frequent intervals during the
 winter months.

AUCTION SALES of TALLOW, HIDES, SHEEPSKINS,
 etc., are held three days each week throughout the year.

AUCTION SALES of WHEAT, OATS and FLOUR are held
 each Wednesday during the grain season.

Three Months' Free Storage allowed on Grain.

Liberal Advances made at bank rates on receipt of produce
 into warehouse.

Full rates of interest allowed on fixed deposits, current
 accounts, and financial business of all kinds conducted.

Branch in Sydney: No. 93 Pitt-street.

Branch in London: 156 and 159 Leadenhall-street.

GOLDSBROUGH'S WOOL WAREHOUSE,

BOURKE & WILLIAM STREETS, MELBOURNE.

Shamrock Hotel,

NUMURKAH.

W. G. SMITH, Proprietor.

FIRST-CLASS ACCOMMODATION.

Ales, Wines & Spirits best in the market.
 GOOD STABLING.

PORTA & SONS,

Steam Bellows, Knife & Washboard Works,
 152 & 154 LITTLE LONSDALE STREET EAST,
 Near Spring Street,
MELBOURNE.

**MR. WALTER BEILBY'S
 HIGH-CLASS FOX TERRIERS.**

The English Prize-winner, imported to strengthen my
 collection, are not equalled by all the kennels in Australia.

CHAMPION RICHMOND JACK.
 THREE TIMES WINNER OF THE FIFTY-GUINEA GRAND CHALLENGE CUP.
CHAMPION DECKER.

This celebrated English winner, has sired more prize-takers,
 than any fox terrier in the colony. Vide Nat. Ag. Soc. and Vic.
 P. and Dog Society's Prize Lists—1883, 1884, 1885.

Satire (by Joker); **Sagacity** (by Spades); **Leaguer** (by
 Corinthian); **Daphne II.** (by Plunderer); **Melbourne
 Bill** and **Game Sans Merce** (by the Belgravian); **Arius**
 (by Tackler.)

The above lot are from the very best strains, direct male
 lines, and only equalled, by about six kennels in England.

THE COLONIAL-BRED STOCK ARE CHEFELY FROM THE ABOVE.

MELBOURNE STEVEDORE (by Decker.)
 A WINNER EVERY TIME EXHIBITED, PROVING HIMSELF THE BEST
 COLONIAL-BRED DOG IN THE COLONY. Vide 1884,
 1885 Prize Lists.

MELBOURNE JOKER (by Leaguer, ex Wilfrida,
 (imp.), by Rompe, by Brockenhurst Rally, ex Satire.

MELBOURNE RAGE (Brother to Melbourne Joker).
 Winner of three Prizes, Exhibition Building, 1885.

MELBOURNE NELL (by Diamond Jack, ex Alice.)

SHELFORD RUBY (by Decker, ex Shelford Fury).

Guaranteed Pedigrees with young stock. Photos, 13d. stamps
 ADDRESS—9 DARLING STREET, SOUTH YARRA.

NATIONAL

Agricultural Society of Victoria.

NOTICE is hereby given that the Annual General
 Meeting of the Members of the National Agri-
 cultural Society of Victoria will be held at the
 Office, Kirk's Bazaar, Bourke-street west, on
 Thursday, 17th February, 1887, at 12 o'clock
 noon, to receive the Annual Report and Balance
 Sheet, elect Office-bearers for the year, and dis-
 cuss the following motions, of which notice has
 been duly given:—

Mr. D. R. MCGREGOR—"That the last clause of by-law
 24, viz: 'such committees to consist of not more than
 five members, two to form a quorum,' be excised.

Mr. L. L. SMITH—"That in the opinion of this
 meeting it is desirable that the single judging
 system be adopted by the Society."

Mr. MURRAY J. JONES—"That the Secretary be
 instructed to write to the Royal Agricultural
 Society of England, expressing the thanks of
 this Society for the kindness and courtesy ex-
 tended to members of the Society during their
 recent visit to England."

THOMAS PATTERSON,

SECRETARY.

Melbourne, 2nd Feb., 1887.

NATIONAL

Agricultural Society of Victoria.

Shorthorn Derby Sweepstakes, 1889.

Hereford do do 1889.

Ayrshire do do 1889.

Jersey (late Alderney) do do 1889.

A Sweepstakes of £1 each (10s. at time of nomina-
 tion, and 10s. at date of general entry for Show), with
 £5 added in each case for Heifers calved between 1st
 July, 1886, and 1st July, 1887, to be divided and
 awarded as 1st, 2nd, and 3rd Prizes, for three-year
 olds, at the Society's Show, 1889.

Nomination of Calves of each breed respectively
 will be received on payment of a nomination fee of
 10s. each. Calves to be nominated within one month
 of date of birth. Nominators to fully describe the
 color of each calf entered, and to state the name of
 the sire, dam, and sire of dam, together with the
 date of calving. Entry forms on application.

THOMAS PATTERSON,

Kirk's Bazaar, Melbourne. SECRETARY.

ROSS & WESTERN

IMPORTERS OF

Builders', Cabinetmakers' & General Ironmongery

LAMPS, LAMPWARE, & GASFITTINGS.

28 LITTLE COLLINS ST. EAST,

MELBOURNE.

A large assortment of Carriage and Buggy Lamps
 always on hand.

£1 to £4 per day to be made by persons
 of either sex, in their own
 localities, at work for use. New
 business. All met with wonder-
 ful success. Any one can do the work. Capital not
 required. We will start you. Outfit worth £1 mailed
 free. The employment is particularly adapted to the
 region in which this publication circulates. Boys and
 girls earn nearly as much as men. Full particulars
 and instructions mailed free. Now is the time—don't
 delay, but write to us at once. Address Stinson &
 Co., Portland, Maine, United States.

JOHN HEDRICK & CO.,

FARMERS' AGENTS,

Grain, Produce Insurance & General Commission Agents

10 QUEEN STREET, MELBOURNE.

All Loans and other Financial Arrangements Negotiated.

Bulk Stocks of Grain held by Farmers can be sold by
 Auction or privately from samples sent by Post, avoiding
 storage charges.

References—Greig & Murray, 10 Queen St.

Notices

All communications for the Editor to be
 addressed to the Society's Office, Kirk's Bazaar,
 Bourke Street West, Melbourne.

Business communications to the Publishers,
 Melbourne Place, off Russell Street, Melbourne.

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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
 requested to forward to the editor the dates on
 which their respective exhibitions will be held,
 also copies of their prize schedules as soon as
 they are published.

FEBRUARY.

17.—Mornington, at Cranbourne.

MARCH.

- 3.—Ballan.
- 4.—Alexandra.
- 9.—Baringhup.
- 10.—West Bourke, at Lancefield Road.
- 11.—Grantville.
- 16.—Dunolly.
- 16.—Ararat.
- 17.—Bass.
- 18.—Bulu Bulu.
- 23.—Daylesford.
- 24.—Victoria, at Heidelberg.
- 24, 25.—Warragul.
- 30.—South Gippsland, at Port Albert.

APRIL.

8.—Ballarat (grain).

MAY.

20 to 25.—Agricultural Society of N.S.W., at
 Sydney.

be expected to last for ever. No one, either in or out of the colony, could have a better staff for this object than the Council had secured, in which respect they were ahead of many much older establishments. Oxford and other schools in England were looked back to with pride by those who graduated at them. He hoped that the pupils would follow the instructions of Mr. Pudney, and he also hoped that the day would come when it would be a proud thing for a man to say he had been a Dookie boy. Mr. Pudney suggested the prizes, and it was with the greatest pleasure he provided them. He would continue them as long as he lived, and in addition to those offered at that time, he would in future give one to the boy who had made the most general improvement, and another for the best general conduct during the year. Dr. Plummer then presented the prizes to the successful students. They consisted of valuable works on agricultural and scientific subjects, and an excellent case of mathematical instruments. At the conclusion of the distribution of the prizes three cheers were heartily given for Dr. Plummer, and three cheers also for the principal, Mr. Pudney.

If the Dookie School and School Farm continue to progress as satisfactorily as they apparently have done during the first session—and there is no reason why they should not—then not only will the establishment be a credit to the Council controlling it, but the pupils who have the privilege of being educated there may consider themselves fortunate indeed.

Pea-Thresher Trial.

THE field competition for the £100 prize offered by the Department of Agriculture for the machine best adapted for threshing peas was held last month on the farm of Messrs. Campbell Bros., in the Lancefield district, and was carried out under the direction of the West Bourke Agricultural Society. A number of visitors were invited by the Society to be present at the trial and see the country. They were met at the Romsey station and driven round the district, which was originally a heavily timbered one. It is worthy of remark—in view of the present interest in the forest question—that old residents notice a considerably diminished rainfall here, which they attribute to the destruction of the timber. There were eight machines entered for the trial, and four brought forward to compete. Rain had fallen during the previous night, so that the peas were rather damp in the morning, but a fresh breeze and warm sun made them dry enough for threshing by 1 o'clock. None of the machines, however, made first-class work. They were only a modification of the ordinary threshing machine, nothing very original having been brought out by the offer of the prize by the Government. The judges did not make any award, but recommended that the Department be requested to offer a similar prize next year. Although this trial has been a comparative failure it will do good, as competitors will be enabled to see wherein they fail, and will be assisted by the experience gained in perfecting a machine which will meet all requirements. In this

district where large quantities of peas are grown, the farmers can now get them threshed at 6d. per bushel by men working with the flail, who make good wages at this price. But in dealing with large quantities, a more expeditious method is required, hence the necessity for a machine which will put through a large quantity and enable the farmer to get them out of hand and safe from the weather. After the trial the Society entertained the judges, the competitors, and the visitors at a luncheon in Romsey, at which Dr. Plummer, the acting president of the Society, presided. In responding to the toast of the competitors, Mr. Jones, of Messrs. T. Robinson and Co., whose machine had been the most successful, admitted that the judges had done quite right in not making an award. He hoped, however, to profit by the experience gained, and believed that he would yet be able to produce a thoroughly effective machine.

Annual Meeting.

WE direct the attention of members to the advertisement on page 5, calling the annual general meeting of the members of the National Agricultural Society of Victoria for Thursday the 17th inst. Notice has been given of several motions for discussion at the meeting, amongst which is one in relation to the single judge system. Office-bearers for the year will also be elected by ballot on the same day. The poll will be open from 12 noon to 3 p.m.

The Dandenong Show.

The annual exhibition of the Dandenong and South Bourke Agricultural and Horticultural Society held last week, although showing a falling off in many of the classes, was a decided success in point of attendance. The first train from Melbourne was inconveniently crowded, and the same was the case with the second, in which there was a long stoppage and a change at Oakleigh. It would be well if the Society could arrange for a special train on Show Day in addition to the ordinary ones, as it would certainly be a convenience to the usual visitors, while it would likely—if properly advertised—have the effect of considerably increasing the attendance. Horse stock was the most prominent feature of the show. The Draughts were a large class, including some very good animals, but few of them were brought out in what is usually spoken of as show form. The latter remark applies also to the blood stock, of which there was a large entry. The Hunters, which were a good class, gave visitors a treat in some high jumping; while the Ladies' Hackneys were much admired. In the Trotters there were some really fast horses driven in harness, and some good ponies were paraded. Very few Shorthorn and Hereford cattle were shown, but there was a large and excellent class of Jerseys and some choice Ayrshires. An imported Angus polled bull, in good condition, was shown as an extra. He very justly attracted a great deal of attention. Very few sheep and swine were penned, and there was not a large collection of poultry.

The produce shed was not so well filled as usual, but there were some good exhibits of dairy produce, some attractive fruit and a fine collection of ladies' fancy work. At the luncheon, which was again held on the ground, Colonel Hutton, the popular president of the society, took occasion to refer to what was said in one of the Melbourne papers last year of his having proposed the toast of the judges without preceding it by that of the Queen. He stated that it was not usual in the army to propose this toast at a luncheon. He certainly thought that no one could justly accuse him of disloyalty, or of not having tried to do his duty to his queen and country. (Applause.) The only toast, in addition to that of the Queen, was the judges, to which Mr. L. L. Smith replied, taking the opportunity to refer to the notice of motion he had given for the National Society's annual meeting in relation to the adoption of the single judging system. As the day was all that could be desired for a show, the numerous visitors thoroughly enjoyed their outing.

Meetings.

Preliminary Meeting.

THE preliminary general meeting of the members of the National Agricultural Society of Victoria was held on Thursday, January 20th, 1887.

Present—Dr. Plummer, President, (in the chair), with a fair attendance of members.

APPOINTMENT OF AUDITORS.

Mr. D. Munro moved that Mr. John McDonald be re-appointed professional auditor. Seconded by Mr. J. Currie, and carried.

Mr. D. R. McGregor moved that Mr. J. Mackiehan be appointed honorary auditor. Seconded by Mr. J. Finlay, and carried.

NOMINATION OF OFFICE-BEARERS.

The list of nominations prepared by the Council in accordance with by-law 2 was read, and the following additional nominations were made, viz., Messrs. W. Glover, Mark Young, Walter J. Clark, William Bell, J. C. Cochrane, George Young, and I. G. Foster.

NOTICES OF MOTION.

Notices of motion for the annual meeting were then received as follows:—

Mr. D. R. McGregor—"That the last clause of by-law 24, viz., 'Such Committees to consist of not more than five members, two to form a quorum,' be excised."

Mr. L. L. Smith—"That in the opinion of this meeting it is desirable that the single judging system be adopted by the Society."

Mr. Murray J. Jones—"That the Secretary be instructed to write to the Royal Agricultural Society of England, expressing the thanks of this Society for the kindness and courtesy extended to members of the Society during their recent visit to England."

The meeting then closed.

The Journal

OF THE

National Agricultural Society

OF VICTORIA.

MELBOURNE, FEBRUARY 11th, 1887.

The Dookie Farm and Farm School.

THE close of the first term of the school established at Dookie, on which occasion there was a public presentation of prizes to the most successful students, afforded an opportunity for a visit to the Government Experimental Farm. The farm, which comprises 4,500 acres of undulating land, all fenced, subdivided, and watered, lies 18 miles due east of Shepparton, extending from the Broken River, on the south, to Mount Major, on the north; a distance of considerably more than three miles. The soil is mostly a deep, reddish loam, of a character similar to a great deal of that found in the Golbourn Valley. The steading is situated towards the northern end of the farm, near the bottom of a long sloping hill. On all sides a splendid view is obtained. Away to the south and east the densely timbered hills of the notorious Kelly country are seen, while beyond and above them tower the Bogong Ranges. On the north the wooded sides of Mount Major present a very interesting appearance, while from the highest peak of the Mount the hills stretch out in lessening height away towards the east. Such is the farm which lately came under the direction of the Council of Agricultural Education, established under the Agricultural Colleges Act, 1884, and such is the place in which the first Government Farm School in Victoria has lately been established. There can be no question that the farm is eminently suited for the purpose for which it is intended—as far as it goes—but it must be remembered that the climate is very hot and dry, so that the system of cultivation obtaining there would be altogether out of place in the cooler and moister districts of the colony. It is at once apparent that the Council should at least have two different leading Farm Schools, one north and one south of the dividing range. Although the area south of the dividing range is the smaller, yet, owing to its abundant rainfall, it is at present more suitable for working in small areas than the country north of the range. No doubt, it always will be the thus worked, so that a School Farm is wanted where suitable instruction—that is, instruction in the system necessary to be adopted under the different circumstances of soil and climate—may be obtained. The farm already established is, as before stated, exceedingly well suited for the northern areas, even under existing circumstances, while it has been ascertained that it is quite practicable to irrigate a great portion of it from the Broken River at a comparatively reasonable cost, so that opportunity may thus be obtained of instructing pupils in working irrigated land—a feature which should be worthy of the attention of the Council. When the farm came under the direction of the Council they appointed Mr. J. L. Thompson manager.

That Mr. Thompson has all the practical knowledge and thoroughness necessary to conduct a model establishment is at once apparent on looking round the farm, for everything is in the very best possible order. The first attraction on entering the grounds is the orchard, in which there are 700 olive trees, making most healthy and luxuriant growth. The trees were procured from Italy and planted in 1880. Last year they produced 50 gallons of oil, but as they are laden with fruit the quantity this year will be very much increased. There are 5 acres of vines, planted in 1880, and now covered with grapes, which it is estimated will yield 1,500 gallons of wine this year. The ground between the rows of vines (where not a weed was to be seen) was kept clean by the scarifier, and between the vines by the hoe. Apple, pear, plum, and fig trees are grown here with great success, all being pruned to a nice symmetrical form and appearing perfectly healthy. The castor oil plant also grows freely, while there was a quantity of saltbush which appeared quite at home. The cultivation amounts to about 240 acres, on which wheat of various kinds is the principal crop. A considerable quantity of the Mexican wheat was grown last year. It is now being sold freely at 10s. per bushel. The homesteading is that of the old farm, consisting of manager's dwelling, with workmen's houses, barns, stables, and a wine cellar and pressing-room. These latter are not approved by the present manager, who intends to have an alteration effected. Mr. Thompson has an office away from his house, in which he keeps his books and transacts his business, which he finds a very satisfactory arrangement. In this office, which is tastefully hung round with many samples of grain neatly labelled, and pictures of celebrated animals, Mr. Thompson was speaking of the mistake of using shrivelled grain for seed, and saying that the advocates of the idea were quite wrong, referring to a paper he had once written to strengthen his position. Immediately afterwards, when leaving the office, he pointed to the picture of a celebrated shorthorn female, apparently a splendid beast, he had given some high price for when he was on the farm before, and said that she had been "let go all to pieces, you wouldn't give a five-pound note for her now;" when one of the party remarked: "How about your shrivelled grain theory, is her blood not as valuable for breeding purposes as when she was fat and sleek?" There was no reply.

Mr. Thompson is just putting up a dairy on an original plan. The bottom story is entirely under ground, with a rounded bricked roof—a vault in fact—approached by a stairway, over which a roof will be built, the sides being latticed. The upper story or ground floor is also of brick, with three high-pitched roofs, two of wood six inches apart, with room for a draught to play between; the top one a foot above the others, of corrugated iron, projecting right over the walls. In this room there will be a cream separator with works attached. There is a trap door in the floor, through which cream may be let down to the room below. The cost of this building will be about £130, and with the separator and extras, about £200. In the farm yards, where there are some stacks, taut and trim, and artistically thatched, there is

a silo, in which 150 tons of silage are stored. This silage will be fed principally to dairy cows, which Mr. Thompson intends to purchase, and the refuse milk from the latter will be given to the pigs; a good piggery being in course of erection at some distance from the other buildings. In all the operations connected with the various productions and items mentioned, the pupils at the Farm School take part, so that it will be at once seen that they have an opportunity of gaining a very extensive practical knowledge of agriculture.

The Farm School, which is rather an imposing wooden building, stands well up on the slope of the hill, with an eastern aspect overlooking the farm buildings and orchard. It consists of a large hall 65 feet by 30 feet, with a raised platform, a large dining-hall, studies, and sleeping rooms for the pupils, each pupil having a separate compartment—separate, at least, to the height of 10 feet, the upper space being open to the ceiling, for the sake of ventilation. All the necessary out-buildings, such as kitchen, washhouse, &c., are at the back, detached from the main building—which cost about £3000. Dr. Plummer, the Chairman of the Council, was presented by Mr. M'Donald, the architect, with a framed picture of this building, which, as a representation of the first Government Farm School, will become very interesting hereafter. There are about forty pupils attending the school. They are of an age at which we have no one word in our language to definitely describe them, in which respect we are behind the native blacks, for they have the word *yan-yan*, which is peculiarly applicable to the pupils, being in the native language used to designate those who are between *boo-boop* (boy) and *koh-lan* (man). The breaking up of the school was, of course, the occasion of a holiday, when a capital programme of races and feats of various kinds, in which prizes were competed for by the pupils, was carried out. While these were going on Mr. Pudney, the principal of the college, a gentleman eminently qualified for his responsible position, took great pleasure in showing the visitors some beautifully-arranged collections of grasses, made by the pupils under his direction. One of these collections was specially admired, on account of the variety of specimens and the really effective way in which they were arranged. The sports were adjourned for a time, in order that the presentation of prizes might be made in the large hall, where there was a considerable number of visitors, including a sprinkling of ladies. In opening the proceedings, Mr. Pudney said it gave them great pleasure to have Dr. Plummer, the Chairman of the Council, and Mr. Martin present, as well as Mr. Knight, their local representative, and the ladies who graced the occasion. He thanked Messrs. Thompson and Sutherland, his coadjutors, for their hearty co-operation during their first term, and then called on Dr. Plummer, who said that two years ago the Government had granted the Council of Agricultural Education an endowment which would some day make them a wealthy body. Their first object was to carry out the idea of a farm and farm school, in which the sons of farmers and others would receive practical and scientific instruction which would enable them to take the place of men like himself, who could not

Correspondence.

Military Horses.

To the Editor of the Journal of the National Agricultural Society of Victoria.

SIR,—The Colony of Victoria is indebted to you for calling the attention of the farmers to the breeding of military horses—for Australia can beat the world for rearing good horses. It appears that our farmers have sold for Indian service every horse that is fit, and retained only rags and weeds to breed from. We might well call them worse than idiots were it not for the well-known fact that they are the over-taxed slaves of the townsmen, and are obliged to sell anything to pay the taxes. The grasping townsmen, who have pocketed the profits of farming and drained the best men and all the money into the towns, will have to farm with their capital, and employ the thousands whom they have attracted to the towns to live in idleness and discontent.

If they will farm this good land of ours I will make them a gift of my 50 years' experience. The rearing of military horses is sure to pay; and, besides, they will then have no need of protection against their own fathers and brothers; and their horses will protect them from their enemies. The way to begin is to serve nuggety draught mares of good action with thoroughbred entires—fast trotters; but never to breed from a weed, for like produces like. Never graze horses in a paddock that grows little else but dandelion and flat weed, for strong medicine cannot be used for diet. Never graze them on grass so short that they waste their teeth, ruin the pasture and fill themselves with a high percentage of earth. But let them have access to a great variety of plants, good water and shelter and they will have colts fit for any emergency on the farm or the battlefield.—I am, yours, &c.,

SCOTCH FARMER.

28th January, 1887.

American Trotting Horses.

To the Editor of the Journal of the National Agricultural Society of Victoria.

SIR,—A considerable portion of your leader, dated January 14th, on the subject of breeding I commend and endorse. But I cannot understand why you are so unduly rough on the imported American trotting stallion. I do not know any one of the American horses that answers your very cruel description, and, to show the absurdity of your criticism, I am prepared to show their produce against any other class of horse stock in Australia for quality, beauty, substance, and general utility; and you shall be the judge, provided that you or I shall forfeit £25 to the charities on the result of that judgment. As I know that, although you have erred in your remarks, you must ultimately give credit where it is so palpably due, I expect in the interest of fair play you will insert this in your next issue, that the question of horse-breeding may be well ventilated by those that choose to enter the lists, and as the subject is a matter of public moment I need not apologise for this trespass, but am, sir, yours, &c.,

JAMES J. MILLER.

Bayswater Stud Farm,

Scoresby, 30th January, 1887.

P.S.—Since writing the above, Architect, a 2 year-old son of Contractor, was awarded first prize in the thoroughbred class at Dandenong.

[We have excised irrelevant portions of our correspondent's letter, but have published all necessary for discussion of the point at issue. Surely "the interest of fair play" is best served by the avoidance of personalities in the ventilation of "a matter of public moment."—EDITOR.]

KEEPING VEGETABLE MARROWS IN WINTER.

—Allow the marrows to grow to a large size, but not to get ripe, as for seed. Then cut them off and hang them up in a dry place; when laid down they decay much sooner than when they are hung up. When wanted for use they are peeled, and the seeds taken out. They are then boiled and mashed like turnips, and they make an excellent addition to the list of winter vegetables. The young ones if gathered when frost cuts off the leaves, keep fresh for some time.

Veterinarian.

Veterinary Notes.

We learn from the "Veterinarian," that in Great Britain during the first eight weeks of the present quarter, seventy-seven fresh outbreaks of Pleura-pneumonia were reported, and 361 cattle attacked.

This shows a very considerable increase, as compared with the corresponding period of 1885, when there were only 31 outbreaks, or less than half, and 184 cattle attacked. Of the 77 outbreaks above-mentioned, 56 were in England and 21 in Scotland, and of the cattle attacked, 250 were in England, and 111 in Scotland.

The counties in England in which the disease has been most prevalent recently, are Cumberland, Essex, Hants, Kent, Lancaster, Middlesex, York (West Riding), and the Metropolis; while in Scotland it has been most prevalent in Aberdeen, Edinburgh, Forfar, and Lanark, it is also spreading in Perthshire.

We learn that the outbreak which has occurred in the Aston district of Birmingham, has already necessitated the slaughter of about 30 head of cattle, and the local committee has now ordered all the remaining cattle on the two infected farms to be killed, including several valuable dairy cows.

Pleura is said to have broken out in Jasper Co., Indiana, U.S. Further outbreaks have recently been reported in the United States, one in Lancaster Co., Pennsylvania, in a herd of 20 cattle, of which two died, some others were killed, and the remainder inoculated. The disease also exists in Belgium, France, and Switzerland at the present time. In Queensland and Victoria the disease is also prevalent.

Extraordinary Case of Sympathy.

Mr Willingham Fowler writes in the *Live Stock Journal*:—A very curious instance of this nature happened in my herd of Short-horns in the year 1879. My cow Zeal 12th was what I had always called a very "sympathetic" cow. Nothing escaped her notice, however trifling. When passing her in the field where she might be grazing, she would "set" herself, extend her nostrils, and snort, and anyone not knowing her peculiarities would be afraid of her attacking them; but this she would never do. She had bred well, however, and always carried her calves to full time, but in the year spoken of above, herding along with breeding cows was one of my Aylesby purchases, Flower of York, who had unfortunately dislocated her hip in the autumn of 1877. She had become so feeble as to be unable to rise when down, and I had given orders for her removal from the field, but to be taken out of it alive. Not happening to be about when the knacker came to fetch her, she was axed in the field, the cows gathering round the poor dying beast. As was natural, I reproved very strongly my man who allowed this to be done, and at the time told him what I feared—viz., that this cow, Zeal 12th, would, in consequence, cast her calf. This was on July 15th. Nothing of this nature, however, came about until the evening of August 24th, when my man came to tell me this cow was in season. Before seeing the cow I told him that nothing of the kind could happen, but that it would turn out to be what I had previously warned him of; and so it was. The same night she cast a roan bull calf, by Burghley, 36296, within two months of its natural time, fully developed for its months, and in every way a strong, healthy-looking calf, but having a hole in its forehead large enough to contain three of my finger-ends, and having three distinct rolls of what

appeared to be a mixture of blood and brains hanging from the hole down to nearly the nose, being altogether the *jac simile* of any beast axed for slaughter. With these facts before us, can we for one moment have any doubt about the "sympathy" doctrine? Need I add, the cow never bred again!

The Dairy.

Curing Cheese.

A cheese maker in Ohio states his experience in curing cheese as follows:—"I have been somewhat interested in curing cheese in the boxes. We have a room in the basement of the factory with a cement floor, and find cheese loses less in weight and has a much better flavour when cured in it than when cured in a room upstairs. Curing cheese in upper rooms and basements has been corroborated scores of times in our visits to cheese factories. It is the rule, in fact, that cheese in upper rooms dries out much more and cures less perfectly than in the closer apartments and damper air of rooms partly under ground. The temperature in basements, built as above described, fluctuates much less than in upper rooms—a circumstance which greatly enhances the value of lower rooms for curing cheese. Much variation in temperature always detracts from flavour. Every rise and fall in the warmth of the room in which cheese is curing, warps and impairs the development of flavour, and causes an extra shrinkage in weight. Moisture is essential to rapid curing and to the formation of flavour. Dry air and much light are objectionable. We have found the best curing in dark, close rooms, and as damp as they could be on account of mould. It was this that led to our little experiment in curing cheese in boxes, which, by the way, has proved a perfect success. We have just cut one of the cheeses so cured, now about six months old, and find the curing perfect—all that could be desired—and it was so considered by an expert who happened to be present when it was cut. Though skimmed at the rate of 1 lb. of butter from 50 lb. of milk, the flavour is perfectly clean and quite full and nutty like that of a well-made, whole-milk cheese, and would easily be mistaken for such by the average consumer. It is greatly superior to those cured on the open shelf. The result has proved so favourable we propose to experiment further another year, and hope others will do so too."

Salting Butter.

A dairyman in the United States of America, who generally manages to take honors at the dairy produce competitions, has been induced by one of the leading journals to publish his method of salting butter; and his success is found to be due entirely to a strict obedience of the rules followed by all the successful dairymen. He first describes the old methods that have been followed by generation after generation of churning the butter until it has formed into a solid lump, whereby a lot of cheesy matter is enclosed, and has either to be worked out—thus converting the butter into a kind of edible salve—or else it must be left in, when the butter soon acquires a bad flavour. His plan is to churn the cream only till the globules of butter are as large as mustard-seed, and never larger than grains of wheat. Then the butter is skimmed off the buttermilk, or—better still—the milk is drawn away from the churn, leaving the globules of butter behind. Then some cold water—about 55 deg.—is put in the churn, and is churned around very gently for a few turns. This water is drawn off, and more added, and so on for two or three times, till the water comes away clear. The butter is then taken out and laid upon a table, left to thoroughly drain, and salt of the finest and purest quality sprinkled on at the rate of half an ounce to the pound of butter, and then it has to be raked or turned over gently, so as not to disturb or break the granules. The butter is then ready to pack down in the jars or tubs. If coarse salt is used, the crystals will either cut the butter globules, or else remain undissolved, and make the butter taste gritty. The great secret in making butter—whether for use at once or for salting down, is to get all the buttermilk away without

The ordinary monthly meeting of the Council of the National Agricultural Society of Victoria, was held on Tuesday, 8th February, 1887.

Present: Dr. Plummer, President, in the chair, with Messrs. S. G. Staughton, W. J. Lobb, F. Peppin, J. M. Peck, D. R. McGregor, J. Hearn, C. Lynott, D. Munro, John Bond, W. Thomson, J. Garton, W. Learmonth, J. Gibb, J. Bunce, T. Learmonth, J. Hurst, J. Malcolm, T. Brunton, John Finlay, the Hon. J. Buchanan, M.L.C., and the Hon. C. Young, M.L.A.

The minutes of the previous meeting were read and confirmed.

The President reported that he had seen the Society's Hon. Solicitor *re* the trustees holding more than one office. Mr. McKean said it was the intention of the rules that they should not; but there was nothing in their having done so which invalidated the acts of the Council, or necessitated a special meeting to ratify past business.

ELECTION OF VICE-PRESIDENT *vice* F. HENTY, Esq.

Mr. Lobb moved that Mr. Henty, who had consented to come forward again, be re-elected; seconded by Mr. McGregor, and carried.

ELECTION OF MEMBER OF COUNCIL, *vice* ROBERT SIMSON, Esq.

Mr. McGregor moved that Mr. Thomas Harmer be elected; seconded by Mr. Lobb, and carried.

ELECTION OF MEMBER OF COUNCIL, *vice* SAMUEL GARDINER, Esq.

Mr. McGregor moved that Mr. John Blyth be elected; seconded by Mr. Garton, and carried.

Mr. J. McKean, the Society's Hon. Solicitor, attended the meeting to explain the position of the Society with regard to the Crown grant. He stated that the trustees had surrendered the deed in order that a fresh one might be issued, embodying clauses to the effect that the Society should obtain the sanction of the Governor-in-Council to borrow money on mortgage, up to, say £15,000; and that in the event of the Society failing to fulfil its obligations, the Governor-in-Council to have power to resume possession of the site, the mortgage being a first charge on the land. The Crown Solicitor did not approve of such clauses being inserted in the deed. Mr. McKean suggested that a deputation of the whole Council be appointed to wait on the Premier, the Minister of Lands, and the Attorney-General, in order to secure the fulfilment of the promise made before the deed was surrendered.

Mr. Thomson moved that in accordance with this suggestion a deputation be appointed; seconded by the Hon. C. Young and carried.

FINANCE.

The Finance Committee's report, submitting the monthly statement of accounts, and recommending payments to the amount of £53 1s. 6d., was read.

Mr. McGregor moved that the report be adopted; seconded by Mr. T. Learmonth, and carried.

AUDITORS' REPORT.

Messrs. John MacDonald and John MacKiehan reported that they had completed the audit of the Society's books and accounts for the past year, and had found everything correct and in order.

Mr. McGregor moved that the report be adopted, and that a vote of thanks be passed to Mr. MacKiehan for his services as honorary auditor; seconded by Mr. Bunce and carried.

ANNUAL REPORT.

The Council's Annual Report to the subscribers, which had been approved by a committee, was taken as read.

Mr. Lobb moved that it be adopted; seconded by Mr. Gibb, and carried.

PARADE COMMITTEE.

The Parade Committee reported that they had resolved that the course of the trotting track be altered only to the extent of making the present inside fence at the ends of the course the outside fence of the new track—that is practically that the course be shortened at each end to the extent of 30 feet.

The Committee also recommended that the Works Committee be requested to carry out the alteration and erection of fencing round the track as agreed to by the Council.

Mr. Peck moved the adoption of the report; seconded by Mr. Garton, and carried.

MAIN HALL COMMITTEE.

The Main Hall Committee reported that they had not yet proceeded with the business of erection of a main hall on the Show Grounds. They wished to have the question of the Society's site definitely settled before they took further action in the matter.

The president stated that this was a most important subject. The erection of a main hall for agricultural and dairy produce, wines, and miscellaneous exhibits was urgently required. He was assured that if the matter were gone into, the Society might rely on considerable assistance and hearty co-operation from the Wine Association.

The President at this stage of the meeting said it was the last Council meeting of his year. There had been 21 meetings during the year, and he had been present at every one. He wished to thank the Council for their kindness and courtesy to him during his term of office.

Mr. Munro in eulogistic terms moved that a cordial vote of thanks be passed to the retiring president for the manner in which he had conducted the business of the Society, and that the same be recorded on the minutes; seconded by Mr. Thomson.

The motion was put to the meeting by Mr. Gibb, one of the vice-presidents, and was carried with acclamation.

CORRESPONDENCE.

From J. G. Brisbane, stating that having gone to live at Colac, he begged to tender the resignation of his seat on the Council. Mr. Bunce moved that Mr. Brisbane's resignation be accepted with regret, and that the hearty thanks of the Council be conveyed to him for his past services to the Society; seconded by the Hon. C. Young, and carried.

The Secretary stated that the letter of Mr. Kelleher *re* a cure for pleura pneumonia, had been indefinitely referred to a Committee without naming any particular one. Mr. Peck moved that a committee consisting of the President, Messrs. Hurst, Staughton, Buchanan, and Graham Mitchell, the Society's Hon. Veterinary Surgeon, be appointed to deal with the subject; but before they

took action the Secretary to inquire further into the matter; seconded by Mr. Lobb, and carried.

From W. H. Palmer *re* the size of grain bags now in use. He had agitated in the matter, but unless the National Society, the Corn Exchange, and the Chamber of Commerce took it up, the present stir would die a natural death. He had received a letter from a bag manufacturer, quoting bags to hold 100 lbs of wheat at 3s. 2d. per doz., stating the heavy duty he had to pay on cloth preventing his making them at a lower price. The present quotation for corn sacks duty paid in Melbourne is 5s. 3d. per doz. This would make the cost of the cental bags about 1d. per bushel more than for ordinary corn sacks. Mr. Palmer was afraid this would prove a bar to their coming into general use, but could not pressure be brought, to bear to obtain the removal of the duty upon the cloth. If protection was the recognised policy of Victoria, it was an anomaly to admit corn sacks free, and put a heavy duty upon cloth from which corn sacks could be made in the colony.

Mr. Brunton said it was cruelty to men to have to lump the present heavy bags. We were 100 years behind America in our system of handling grain. He thought, however, that there would be some difficulty in the introduction of the smaller bags.

Mr. Thomson was of a similar opinion, stating that he believed the matter was one of those things that would have to be left to work its own cure.

Mr. Peck moved that the Society sympathise with Mr. Palmer in his effort to bring about a change in the size of the bags used for grain, as such a change was most desirable.

Seconded by the Hon. C. Young (who said he was afraid the eight hours' system did not produce men equal in stamina to those of years ago), and carried.

From F. G. Hughes, hon. secretary, asking permission to hold a military tournament in the Society's Show Grounds.

Mr. Gibb moved that the matter be left to a committee consisting of the Trustees of the Society. Seconded by Mr. Lynott, and carried.

DATES OF SHOW.

Mr. Thomson moved that the dates of the Show be fixed for the 23rd, 24th, 25th, 26th and 27th August. Seconded by Mr. Lynott, and carried.

GRAND CHAMPION PRIZES.

A committee of the whole Council was appointed to wait on the Hon. the Minister of Agriculture, to request him to again place £500 on the estimates for grand champion prizes of Australia.

MOTION.

The motion of which Mr. Thomson had given notice was postponed till next meeting.

The meeting then closed.

A "WRINKLE."—To prevent the splitting or bursting of cabbage, J. J. A. Gregory recommends to go frequently over the ground and start every cabbage that appears to be about to mature, by pushing them over sideways. Heads thus started are said to grow to double the size they had attained when about to burst.

Breeding.

(Continued.)

But the wild cattle of Chillingham Park are almost contrasts rather than parallels; for they have no properties whatever of "a breed,"—no qualities of a mere variety—no "points" whatever of the very numerous and diversified class which characterize the countless breeds of domestic animals, and distinguish them from the untamed brutes of the forest; and, of course, they could not degenerate—they could not lose or deteriorate properties which they did not possess. The acquisition of such properties as constitute a changeable variety is inseparable from domestication; the production of many and diversified groups of them is what constitutes the numerousness of the varieties of any species of domestic animals; the segregating of a group of good ones, to the exclusion of the bad, is what constitutes the art of breeding; and hence the very proportion to which high breeding is carried becomes, at the same time, both the proportion of domestication and the proportion of liability to deterioration from breeding in-and-in.

Consanguineous breeding operates with full advantage in forming a new breed, or in developing and establishing any attainable group of new properties which may be desirable; but it ought to be thoroughly abandoned the moment the new breed is fairly formed, and never practised for the perpetuation of a breed which is well established. It originated the good sheep and cattle breeds of Bakewell, and the excellent cattle breed of Colling; but it first degenerated, and then utterly destroyed, the new Leicester breed of cattle, and has, on multitudes of farms, impaired the constitution and deteriorated the value of the new Leicester sheep and short-horned cattle. After a breed is formed, the continuance of it by breeding in-and-in may, indeed, produce one generation or two generations of animals of extraordinary tendency of fatness, of remarkable form, and sometimes saleable at enormous prices; but it will just as certainly occasion the subsequent generations to be far more than proportionally degenerated in precisely the same properties. The bone of the in-and-in bred animal becomes very small in size, condensed in texture, and fine in form; the skin becomes very thin and porous, and ceases to afford any effectual protection against catarrh, consumption, and some other diseases; the hair of the ox becomes thin, short, and smooth, and the wool of the sheep thin, short, and watery; the body becomes finely rounded at its salient points, and looks as if smoothly and delicately stuffed within the skin; the carcass becomes greatly reduced in size, and possesses so powerful a tendency to fatten that, in all ordinary circumstances, it looks as if in constant condition for the shambles; the extremities become fine and delicate, the head and the feet small, the neck thin and drooping, the ears thin and broad, the head of the sheep bluish, almost bare, and exceedingly subject to excoriation by the sun and to attacks from the fly. The entire animal decreases in healthiness and activity, acquires tendencies to disease, becomes lean, dwarfish, and of a sickly appetite, and eventually loses the very capacity of propagation. The celebrated breeder Prinsep used strenuous and expensive efforts, but without effect, to prevent in-and-in bred cattle from diminishing in size. Sir John S. Sebright made many experiments by breeding in-and-in with dogs, pigeons, and farm-yard fowls, and found the breeds in every instance to degenerate; and a gentleman tried in-and-in breeding with pigs till he found the females either becoming totally barren, or producing an offspring so small and delicate as to die almost immediately after being born. Mr. Hayward, who strenuously pleads for in-and-in breeding, says respecting these instances: "It may be remarked that pigeons, dogs, and fowls, from their long domestication, are already as much removed from a state of nature as nature will admit of; and being bred and fed more to please the fancy than for any defined object, it frequently happens that the most desired qualities are the effect of disease or distortion; and therefore, on the principles laid down, it might be expected that weak, diseased, or defective males and females being selected and paired, would produce those that are still more so. In the case of the pig also, an effect is mistaken for a cause; these failures evidently arose from original defect, and a peculiar selection in pairing having been carried to an extreme, and not solely on the principle of breeding in-and-in." We hold this to be a full though extorted confession from one of the sturdiest advocates of consanguineous

breeding, that the system, as regards all domesticated animals, and especially those which have become divided into many varieties or breeds, is essentially and mightily mischievous. For since degeneracy actually follows, no practical man cares a rush whether this be ascribed to in-and-in breeding itself or to the mere accidents or accompaniments of in-and-in breeding; and absolutely all the properties which distinguish the domesticated from the wild animals of a species may, on certain principles of abstract or scientific reasoning, be pronounced distortions from nature, or diseased malformations; and, at all events, the most useful or the most agricultural of them possess the same tendency to deteriorate and disappear as those which address themselves chiefly to the fancy, or are most confessedly "the effect of disease or distortion." Every breeder, then, who possesses a good stock, and wishes to preserve it from degenerating, must, every second or third year, introduce to it a new bull and new rams, and banish from it the old. The new bulls and the new rams ought, as nearly as possible, to be of the same variety or shade of breed as the old, and from a pasturage and a climate strictly similar; they ought, in fact, to be quite the same in all respects as the old, with the simple difference of possessing no relationship, or at least a very distant one; yet when the stock is not of prime quality or is characterized by some observable defects, the new males ought, of course, to possess not only all the same excellencies as the flock, but also the additional ones which the flock wants. The practice of crossing might, at first sight, appear to be but the converse of that of breeding in-and-in, but it really involves additional elements, and will form a fit subject for separate discussion.

In order to prevent at once unsuitable pairing in properties, breeding at an improper age, and breeding at an unsuitable season of the year, the males of a breeding stock ought to be separately depastured from the females, and not permitted access to the latter except by rule and upon system; and, in order to prevent the transmission of such half-tender habits as might not be able to withstand the ordinary pasturing conditions of a farm, the males ought not to be kept under better shelter or in more luxurious circumstances than the females. If a heifer be put to the bull before she attain two years of age, she will not have a sufficient supply of nourishment for both herself and the fetus, so that both will suffer damage in constitution; and if she be not put to the bull till after she has attained three years of age, she may be in too high condition, and will probably not become pregnant. A heifer is generally in fittest condition between the age of two years and that of two and a half years. A bull ought never to be used at an earlier age than two years, and may be all the better if not used till three; yet, when not used till the latter age, he is in risk of becoming so ungovernable and dangerous that he must be killed. "Many contend," says Sir John Sinclair, "that the offspring of a bull, if well bred, becomes generally better till he reaches seven or eight years, and, indeed, till his constitution is impaired by age. This doctrine, however, does not agree with the practice of Mr. Vandergoes in Holland; nor can the question be finally decided without a regular course of experiments." The proper age of the ram is not regarded as, by any means, an affair of such nicety as that of the bull. But an important rule, in reference to every favorite ram, is to examine his progeny of the preceding year, to observe their good properties and their defects in comparison with those of their dams, and then to assign to him only such ewes as are likely to avoid the defects and to propagate all the good properties.—On all farms, but particularly in high and exposed situations, breeding ought to be attended to at such a season that the young may be produced when the supply of suitable food is most ample,—neither so early as to involve the young in the disasters of insufficient feeding, nor so late as to expose them, in too tender a condition of their body, to the storms and rigours of winter.

A natural law is believed to exist, occasioning an excess of males or of females in a flock, according to modifying circumstances which are, in a great degree, under the control of the farmer. This law is supposed to be that, when animals are in good condition, well fed, and restrained in breeding, or when, by any combination of circumstances, they are in the most favorable state for increase, they produce an excess of females; and when they are in a bad climate, or on stinted pasture, or have already had a numerous offspring, they produce an excess of males. But whatever be the precise nature of the law itself, some experiments which indicate and illustrate it are sufficiently obvious for many of the purposes of practical guidance. M. Charles Groude Bugreingues proposed, in 1826,

to the Agricultural Society of Séverac, so to deal with flocks of sheep that an excess of males or of females should be produced at option; he divided each of two flocks which were submitted to him into two equal parts, the one to produce an excess of males, and the other an excess of females; and he recommended that the divisions which were designed for the excess of females should be served by very young rams, and enjoy an abundance of pasture, and that the divisions designed for the excess of males should be served by vigorous rams of four or five years of age, and enjoy no more than a moderate pasture. In the first experiment, the division for excess of females were served by one ram of fifteen months and another of two years of age, and the two-year old ewes of it produced 14 males and 26 females, the three-year old ewes produced 16 males and 29 females, the four-year old ewes produced 5 males and 21 females, and the ewes of five years and upwards produced 18 males and 8 females, thus showing a complete triumph of the principle in all the ewes below five years of age, to the total amount of 76 females against 35 males, but at the same time showing a failure, or rather misapplication, of the principle in the case of the older ewes, in the proportion of 18 males to 8 females; and the division for excess of males were served by two strong rams of respectively four or five years of age, and the two-year old ewes of it produced 7 males and 3 females, the three-year old ewes produced 15 males and 14 females, the four-year old ewes produced 33 males and 14 females, and the ewes of five years and upwards produced 25 males and 24 females, thus showing a triumph of the principle in the aggregate of the division to the amount of 80 males against 55 females. The second experiment is reported by M. Girou as follows:—"During the summer of 1826, M. Courmoussouls kept, upon a very dry pasture, belonging to the village of Bez, a flock of 106 ewes, of which 84 belonged to himself, and 22 to his shepherds. Towards the end of October he divided his flock into two selections, of 42 heads each, the one composed of the strongest ewes, from four to five years old; the other of the weakest beasts under four or above five years old. The first was destined to produce a greater number of females than the second. After it was marked with pitch in my presence, it was taken to much better pasture behind Panosse, where it was delivered to four male lambs, about six months old, and of good promise. The second remained upon the pasture of Bez, and was served by two strong rams, more than three years old. The ewes belonging to the shepherds, which I shall consider as forming a third section, and which are in general stronger and better fed than those of the master, because their owners are not always particular in preventing them from trespassing on the cultivated lands, which are not enclosed, were mixed with those of the second flock. The result was that the first section gave 15 males and 25 females, the second 26 males and 14 females, and the third 10 males and 12 females." M. Girou also made similar experiments with horses and cattle, and found them issuing in similar results.

The secret of successful poultry-farming, although perfectly intelligible and clear, has not by the many been apprehended in this colony. It is mostly done by the rule-of-thumb in a come-lucky-go-lucky style, and as might be expected under such circumstances Nature's laws are frequently violated and great disappointment and loss ensue. There are well defined laws of nature which govern matters in every sphere of life and industry. When these laws are apprehended and intelligently applied, success follows as certainly as the night the day; when ignorance of these laws is conspicuous and operative failure accrues. The following from the *Marseville Appeal* is clearly given upon natural lines, and we heartily commend it to the attention of our readers. Poultry-farming will pay only as it is properly understood, and energetically and economically carried out. Our authority says:—"Vegetables of some kind and green feed are necessary to egg production, and should be given quite often, cooked vegetables being the best in all cases, mixed with meal, bran or shorts. Some meat should be given them about once each week, where the hens have no access to worms, or something as a substitute for these, their natural diet. Cooked meat is the best, or if given raw should be cut up fine, like mince meat, and fed from some clean dish or board, not thrown on the

breaking up the granulation of the butter. The salt should melt down upon the butter granules, and surround them, but must never be ground into the butter. A good many of the best makers are in the habit of giving the last washing in the churn with brine—which, of course, is made with pure clean salt.

Notes on Milk.

"VALUE, the true test of cheapness," is an adage which is as applicable to milk as to everything else. There is, probably, no article of common consumption in regard to which the real value of the material supplied bears so variable a relation to the price paid for it as milk, or over the verification of which the public exercise so much less control than they might do. Even good whole milk contains nearly 90 per cent. of water, and only 8 per cent. of butter fat. It is clear, therefore, that any reduction of the fat which may be made by skimming the cream, or any increase of the water which may be effected by a still more simple process of adulteration, must materially reduce the value of the milk. But even where no distinct adulteration of the milk is perpetrated, it will also be evident that a difference of one per cent. in the butter fat, which may easily exist between the genuine milk of two different cows, would amount to a great difference in value on each gallon of milk.

The complete analysis of milk is an operation which requires special skill, and is quite beyond the capability of an untrained person. Fortunately, however, it is possible, by very simple means, within the reach of any one, for every purchaser of milk to ascertain whether the milk with which his milkman supplies him is as good as that which he can obtain from other sources at the same price, and even to go further still, and to satisfy himself as to what is its absolute richness, and whether it varies much from day to day. By the first test the buyer of milk can make the same comparison in the case of milk which people ordinarily make in purchasing other articles of food, and can thus find out where he can obtain the best value for his money; by the second he can exercise a control on the actual article supplied to him, which is of more importance in the case of milk than of any other article of food—firstly, because it is itself so liable to variation, even when not fraudulently tampered with, and, secondly, because there is so much temptation to tamper with it on the part of those through whose hands it passes.

The following simple method of testing milk will enable any one to compare roughly the relative richness of any two samples of milk, and though it will not give the absolute value of either, it will show which is the richer of the two, and, consequently, which is the cheaper at the price paid for it. Take two clean glass tumblers and put half a pint of clear water into each; then drop twenty drops of one sample of milk into the one and the same number into the other. Stir them both well up, and observe in which of the two the opacity is the greater; that one will be the richer of the two. The determination of this point may be facilitated by dropping into the bottom of each glass a shilling, sixpence, or other coin, and comparing the distinctness of the view of it obtained by looking down on it through the water from a little distance above it. It must be noted that the accuracy of this test depends upon the several steps of the process being carried out with equality as regards both samples—e.g., the quantities of water must be the same, the milk must be dropped from the same dropper, and the distinctness of the impressions on the two coins used must be as nearly as possible the same. The milk may be dropped from a small, clean bottle, or, better still, from a glass dropping tube. In either case the bottle or tube must be

well rinsed with the second sample after it has been used with the first, so as to prevent any confusion in the results. In this, as in all other tests for milk, it is essential that the milk be fresh, that the samples be taken directly after they are supplied by the milkman, or that, if they are allowed to stand for any time, they be well shaken before being tested. A much more effective application of this mode of testing may be obtained by the use of the lactoscope—a simple appliance by which the absolute richness in butter fat of any sample of milk can be easily determined, with sufficient accuracy for ordinary purposes.—*Dr. Bond in The Farmer's Gazette.*

A Ploughboy.

MUCH has been said about farmers and laborers. I should like to make one or two remarks as to how the poor used to get on years back. I had a dear old father and mother, born in 1802, and I have often heard them talk about barley bread and hard times in the time of war. I haven't long read the *Agricultural Gazette* during the present times, but I see sometimes what reminds me of the past. The poor now cannot think how the poor used to live years ago on 8s. or 9s. per week. But in my time that was my father's wages, and nine children were born in eighteen years and six months, and all have lived to be married, and doing very well. So I think we ought to know something about the old times. Now let us see how they did live. Well, I never knew my father's table without meat on it one day (in the week), although I was No. 7 in the midst of the hard struggle. No! but there was something I do remember: All that were able had to help, and, thank God, I had to help, for it taught me how to help them and myself too, while father made nine shillings and mother made lace, and every child, as soon as able, learned to plait at the school—read part of the day and plaited part of the day. No running out of school for two or three hours in a day. Neither was the evening spent in the public-house by father. He was in his garden or putting his pigs straight, for he would always have one or two—one killed to pay rent and one to eat in the house. Firing cost but little, as we boys used to go in the woods. The "statesmen" would allow the poor the old wood, and there was the right of the common as well to cut gorse or heath which grew on them. We lived in one house many years, £4 10s. rent, with one rood of garden to supply vegetables, so that we did not want; and with all their trouble and trial they had good health until they were near eighty years old, and mother eighty-two; so if hard work kills any one it is some time at it. But I hope they are both now at rest.

Now a word on myself of my own life. As I have said, I was No. 7, and never had a day's schooling. I went to work at eight years old for a shilling a week, as there always was something to do for boys, such as bird-scaring, cow-keeping, or sheep-keeping, driving ploughs, and learning how to cultivate the land properly, and do labour in a proper form. But that we cannot get done now. If we did not do our work properly there was the old-fashioned way with whip-cord, which would soon learn us the way to do our work properly, and a very proper way, too. I do not regret it, although I had a taste of it. Now what is the difference? Why, the boys must go to school certain till they are fourteen years old, if they do not pass certain standards, and they will take good care not to do that too soon, for fear they should have to go to work. I think a more disgraceful law never passed. By all means give every child a good, plain education, according to their requirements, but not keep them to school to learn each other all the blackguard tricks, swearing more than men knew how to do in the olden times. Why, they think about getting married before they leave school!

How is it possible for carters to bring a boy up after he is fourteen to plough and look after horses? Can he get them up in the morning? Do they mind what he says to them? Does he dare to correct them with a whip? To all this I distinctly say no. If he laid hands on the boy his friends would abuse him and drag him before the bench; and the boy knows that, and tells him to do it himself, and very often a very unpleasant word or two with it. And I don't think they will be all able to get a black cloth coat on and a pen behind the ear.

Now, there is not a place, or any part of work, but I can turn my hand to on the farm; and

that is not all. As I have said, I began at one shilling a week. I can drive plough, hold plough, sow, reap, mow; and I have been gardener, coachman, grocer, publican, toll-collector, dairyman, cow-keeper, and now am in a farm of 250 acres on my own account, and, with all the bad times, I can get a good living. Why is it? Because I know how to do it; and, thank God, I have not to work now. These poor boys are sent to school, whereas they ought to be learning how to get a living. Honesty, industry, pushing out in the world with both eyes open, is the way to live, not to get behind a black pipe and a pint pot; the living don't often come there. Now I think I have done my part of work, and I am thankful to say I can do without it, although I have brought up a good family, all doing very well, and without any of the old fashion windfalls of a few hundreds, as some have, and that often kills them.—*C. B. in the Agricultural Gazette.*

Unexampled Prosperity.

There is no stock-breeding interest so prosperous to day, says the *Breeders' Gazette* (Chicago), as that of horse-breeding, and no branch of horse-breeding has been so uniformly prosperous in all parts of the country during the past twenty-five years as the breeding of draught horses. The senior editor of the *Gazette* has been actively interested in the production of horses of this type for over a quarter of a century, and during all that period he has not known the business to meet with a single reverse, neither has he known any one to engage in it with any sort of judgment but has made it profitable. He has thought again and again that the business was on the point of being overdone, and he has heard year after year predictions of disaster to those who have had the nerve to make extensive importations. But those importations have gone on increasing with each succeeding year, and to-day the demand does not appear to be anything near so fully supplied as it was ten years ago. The men who import these horses, no matter whether they be of the Percheron, Clyde, English Shire, or any other draught breed, find a ready sale for all the good ones that they bring, the stallion-keepers who buy them find a liberal patronage from the farmers in their vicinity, and those who breed mares to them find a ready sale for the produce at remunerative prices just as soon as they are old enough. The demand for large horses for use in our principal cities is so far in excess of the supply that the draught-horse-raising regions of our country are scoured by buyers from year to year, and the inducements held out are so great that farmers are tempted to sell even their best young mares, so that the process of "grading up" has gone on much more slowly than most people would think had been the case.

Coach-horses, too, are in good demand, and those who are so fortunate as to be able to breed them are making money. A good coach stallion has not had to wait long anywhere in America during the past five years to find a buyer, and no man who has bought a well-bred one has, so far as we have heard, lost money on him. The great sale of trotters at Glenview a month ago has fully demonstrated the prosperity of the trotting-breeding interest, and we may well say that the horse-breeding interest is prosperous all along the line.

But the draught horse breeders of our country have had more than a quarter of a century of uninterrupted prosperity, and those who have stuck to it have grown rich. Many a farmer has paid off his mortgage by the produce of a single good brood mare, and many a poor adventurer has laid the foundation for a handsome competence by the lucky purchase of a good draught stallion; and the prospect is as good now as it ever was for more farmers to pay off mortgages, and for more enterprising men to get a good start in the world in the same way. The outlook is as full of encouragement as ever, but to the novice we would just whisper one word:—Try and get a better horse than any that has yet been taken into your neighborhood, and take counsel from the experience of breeders of all other kinds of stock, and be sure that your horse, in addition to being good himself, is a well-bred one. Insist on merit in the horse himself, and then insist on a well-authenticated, genuine, good-pedigree—the two things combined forming the best possible guarantee that your purchase will not prove a disappointment.

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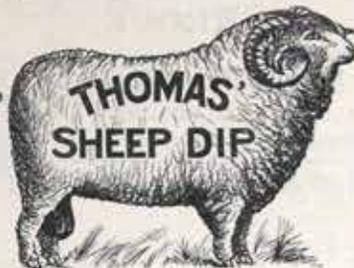
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ground in the dirt. In the absence of worms or meat, milk is the best substitute, and possesses the requisite parts to assist in egg production. Hens are fond of milk in any form, it is good for them sour or sweet, or in the form of buttermilk; for laying hens do not need much corn in warm weather, say twice each week, and have it cracked or ground. It is too heating and fattening for summer feed, but may be fed oftener in cold weather. Give cooked feed as often as you can, such as boiled vegetables, potato peelings, and such other kinds as you have, mixed up with bran, shorts, and meal. Feed wheat or some other grain for the evening meal, as they have the whole night to digest it. Change the grain feed often, and give fresh water daily, and your hens will repay you for the extra trouble and expense by a liberal "shelling out." — *Plauter and Farmer.*

To keep hams, wrap closely in paper and pack closely in plaster or ashes firmly, so as to prevent access of spores, which cause mould. A more elegant way is to put each ham in a canvas sack, sew up tightly, and then cover the sack with a thick coat of whitewash, in which some sulphate of iron (copperas) has been dissolved; then hang to dry in a cool place, and leave undisturbed till wanted. Another way is to merely wet the meat surface with a dilute solution, made by placing a teaspoonful of ordinary cooking soda in a pint of boiling water, adding 1 oz. of salicylic acid, and stirring till it is dissolved.

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For Copper Washing Boilers with Everlasting Bottoms, will Boil in Half the Time of the Ordinary Furnace, with Half the Fuel.

To be had of all Leading Ironmongers.

Works:
29 POST OFFICE PLACE, MELBOURNE.

CULLIS HILL & CO.

FOR

**FURNITURE.
BEDSTEADS.
CARPETS.**



AN ENORMOUS STOCK OF

Beautiful Cottage Furnishings

AT

VERY LOW PRICES.

CALL AND INSPECT.

CULLIS HILL & CO.

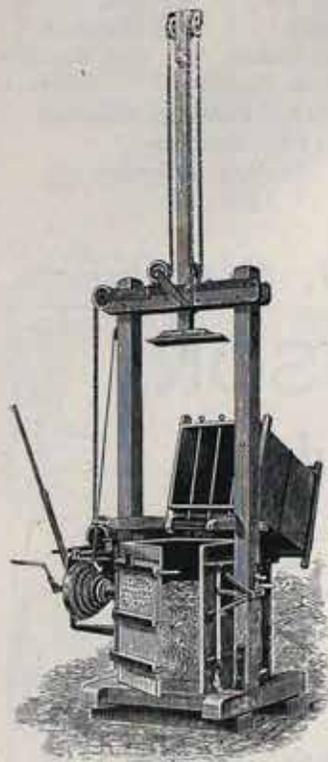
74, 76 & 78 ELIZABETH STREET MELBOURNE.

D. FERRIER'S PATENT LEVER WOOL-PRESS

First Order of Merit awarded this Press at the Melbourne International Exhibition, 1880.

HUMBLE & NICHOLSON

Makers, Geelong.



The usual screw is dispensed with, and the pressure brought to bear by means of a strong rope or chain, working in sheave pulleys overhead, attached to a Ram, and winding on a fusee, which is made in the shape of a suddenly tapered screw.

The rope works on the large part of the Fusee, when the pressure is light, and passes down to the taper end as the pressure increases, being worked by a lever fixed on the centre spindle.

The top Box is hinged to side Brackets, and turns down to the floor, which greatly facilitates the putting in of the wool, and renders any second floor unnecessary, and when filled is easily placed back in position.

When the bale is pressed and the sides sewn, the Ram is lifted by a small rope from the Fusee, turned by a handle.

It will be understood how very much quicker the power is brought into application by this means than by the ordinary screw press, and double the work is got through by the same number of men.

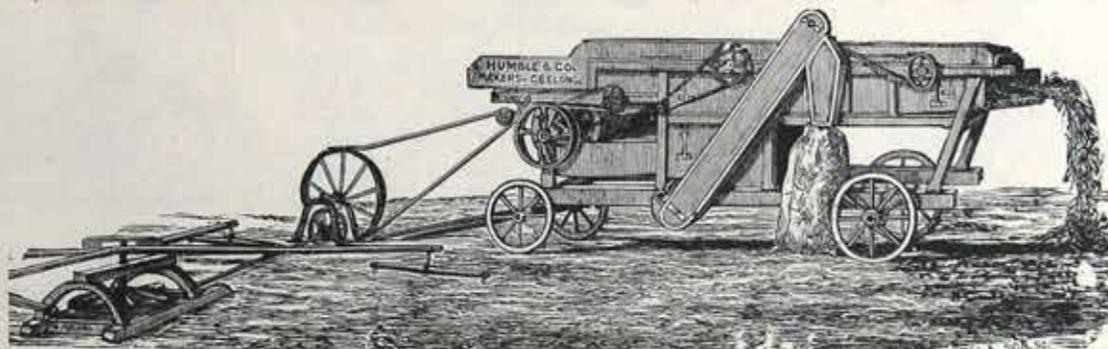
Special attention is directed to the fastening of the Packs before the Wool is put in, which is done in an exceedingly quick and simple manner: four pieces of wood are fitted into the recesses of doors, which hold the Pack securely in position and to the side catches for fastening the doors, which are held in position by a vertical bar, and relieves them simultaneously.

The side door is also held in its place by a catch, which at any time can be relieved instantly, the door falling back and allowing the bale to be removed.

At the Melbourne Exhibition competition this Press turned out 3 Bales of Scoured Wool in 28½ minutes, being considerably less than any other Press, although one had the advantage of being driven by steam.

HUMBLE & NICHOLSON, ENGINEERS.

THRESHING MACHINE



FOUR-HORSE POWER THRESHING MACHINES.—These Machines are found to be very convenient to farmers who wish to thrash their own grain; or in some cases where three or four neighbours combine. They will thrash from three to four hundred bushels per day with horse power; or if worked with steam power, about six hundred bushels daily.

We have been making these Machines for the last seventeen years, and have been awarded a large number of prizes at the different Shows, including the National Show at Melbourne and other places. The above is strongly made with Wrought Iron Drum, Steel Spindle; all bearings of the best material, no time or expense being spared to turn them out in a substantial manner.

HUMBLE & NICHOLSON,

VULCAN FOUNDRY, GEELONG.

Manufacturers of TAYLOR'S PATENT REFRIGERATORS

And Cold Dry-Air Apparatus,

ALSO

TAYLOR'S RABBIT EXTERMINATORS,

The most effective when used with the chemical dust, which is supplied by Vulcan Foundry.

SOLE MAKERS OF WALKER'S PATENT FIRE BARS

A. C. STURROCK,
WHOLESALE AND RETAIL
SEEDSMAN AND PLANT MERCHANT,
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Samples and Prices on Application.

CURRIE & RICHARDS,
IMPORTERS OF
Plain & Corrugated Iron,
Manufacturers of Galvanized Iron Spouting,
305 & 307 ELIZABETH ST., MELBOURNE.

D. WHITLEY & CO.
Grain & Flour Merchants,
COMMISSION AGENTS, &c.,
QUEEN STREET,
MELBOURNE.

JOSHUA BANNISTER & CO.,
Chaff, Hay, Butter, and
General Produce Merchants,
GEELONG.

CAULFIELD CUP.
WHITE & ALLAMBY
Have replenished their Stock in view of ensuing
season. Best ENGLISH GOODS ONLY kept
in stock.
AMERICAN HARNESS,
Single and Double, Carriage, Brougham, Gig, and
Buggy, in ALL of which none but the best
English and American Leather is
used in making up.
50 BOURKE STREET WEST.



W. H. BLAKELEY,
116 RUSSELL STREET,
Next Temperance Hall.

Agent for H. Disston and Son's Celebrated
Circular and Vertical Saws.

Importer of English and American Saws, Joiners'
Tools, and Files.
Circular and Mill Saws Re-toothed and Hammered.

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Lorry and Spring Dray Builder,
YARRA BANK ROAD SOUTH,
(Below Langland's Foundry.)

THOMAS LANG & CO.,
Nurserymen & Seedsmen,
Have Removed to Larger Premises,
66 BOURKE STREET WEST

5 Doors from Queen Street.

All Vegetable and Agricultural Seeds tested to see
they grow.

Lists of Seeds or Plants Free on Application.

By Special Appointment to the Marquis of Normanby, K.C.M.G. & under the Patronage of His Excellency Sir H. B. Loch, K.C.B.

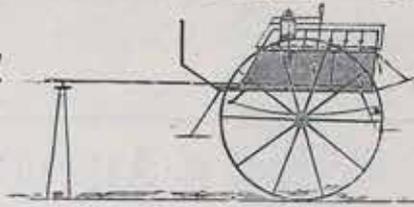
DANIEL WHITE'S
STEAM CARRIAGE WORKS,
244 AND 245 SWANSTON STREET,
And 6, 8, 10, 12, 15, 17, 19 & 21 STEWART STREET, MELBOURNE.

Awarded GOLD MEDAL for Special Merit at London Exhibition of 1873, and TWO GOLD
MEDALS for best Carriages at Melbourne Shows of 1883 and 1884, and THIRTY-TWO
MEDALS (1st Prizes), at Exhibitions and Shows of 1872, 73, 74, 75, 76, 77,
78, 79, 80, 81, 82, 83, 84, and 85. Also, THREE FIRST AWARDS
OF MERIT (1st Prizes), at International Exhibition of 1880.

NOTICE.—Referring to above, D. WHITE desires to inform his numerous Customers and the Public
generally that he has secured and completed EXTENSIVE ADDITIONS TO HIS COACH FACTORY,
and with the increased accommodation and Steam Plant, and the Largest Stock of Seasoned Timber in
Melbourne, is now prepared to meet the increasing demand for his well-known Carriages and Vehicles.
The new premises are in Stewart Street, immediately opposite the present Factory.
Patentee of the Improved Carriage and Buggy Hood Apparatus, for raising or lowering the Hood from the
inside. Every description of Vehicle built from the best imported Materials and Well-seasoned Timber.

FITZROY CARRIAGE COMPANY.

Ladies' Pony Phaetons,
Victoria Phaetons, and
every description
English Design Car-
riage our Speciality.



One reason why we
sell the greatest num-
ber is that our cus-
tomers are pleased to
recommend us.

Manager: A. C. HUMBY, Coachbuilder, by appointment; formerly with BARKER & Co.,
London, Coachbuilders to Her Majesty the Queen, H.R.H. the Prince of Wales, etc.

Our Motto—"Not how large our Establishment, but HOW EXCELLENT OUR WORK."

EVERY DESCRIPTION OF BUGGIES, &c., ALWAYS ON HAND.

Factory: 217 Smith St., Fitzroy. Temporary Show Room: 95 Bourke St. W.

Bristol Poultry and Fancy Bird Stores.

CHARLES FOX,



IMPORTER, EXHIBITOR,
BREEDER AND DEALER
IN

High class Poultry

1 & 2 EASTERN MARKET, MELBOURNE

LOWER QUADRANGLE (next Arcade.)
Champion Prize Taker at past Shows. Exchanges made
any way. Fowls Eggs for Sitting. Orders despatched to any
part of the colony on receipt of P.O.O.

STEVENSON & ELLIOT,

By Special Appointment to
H.R.H. the DUKE OF EDNBURGH, K.C.B., and
Carriage Builders

To His Excellency the Governor Sir HENRY LOCH, K.C.B.,
and all the late Governors for the past 25 years.

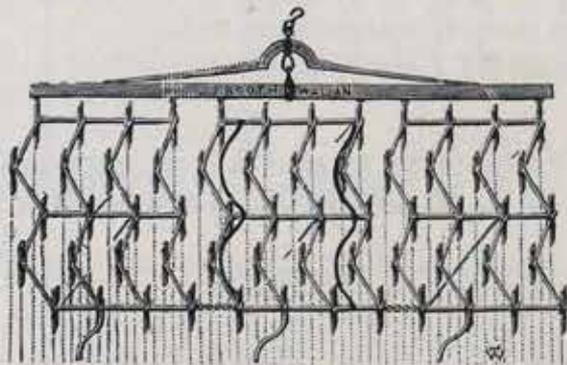
Have a large selection of CARRIAGES and BUGGIES, their
own build, constructed upon the most improved principles
and elegant modern designs, in which are used the best
workmanship and materials procurable, comprising Landaus,
Broughams, London Victorias, Mail Phaetons, Waggonettes,
Bretts, Single and Double-seated Buggies, Dogcarts, &c.;
also Plain and Fancy Farmers' Waggon, built specially for
country use.

A variety of Second-hand Vehicles kept in stock.
Hendry executed in correct style.

SHOWROOMS:

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1 GOLD MEDAL.



5 SILVER MEDALS.

J. BOOTH,
Harrow Maker,
RAILWAY STATION WALLAN.

HARROWS made to suit all kinds of soil, fitted with Iron or Steel Tynes.

These Implements are constructed on his well-known W pattern, which ensures every tyn
cutting its own ground, and also reduces the draught to a minimum. During the season 1884
and 1885 these Implements in competition with the leading Colonial-made and Imported Harrows,
secured 12 first and 2 second prizes out of 15 shows, thus proving their superiority.

J.B. having made a speciality of Harrow Making, the farming public may rely on securing
a satisfactory Implement at a Moderate Price, by applying to him or to any of his Agents
throughout the Colonies. Illustrated Catalogue and Price List free on application.

Note Address--RAILWAY STATION P.O., WALLAN.

1886. **The Harvest Field.** 1886.

THE WALTER A. WOOD
Latest Improved Twine Binding Harvester

ITS EFFICIENCY.

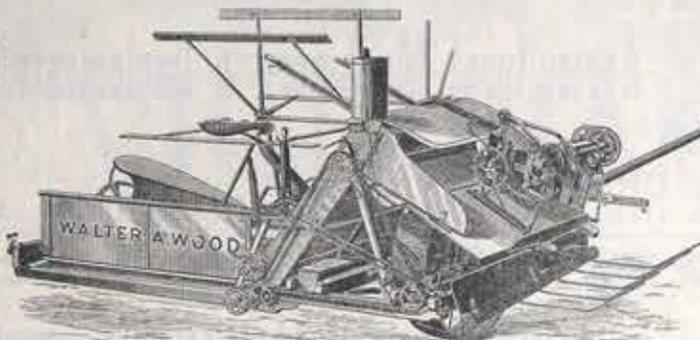
The above Harvester and Binder is again placed before the Farming Public, and those who are in want of a Reliable Binder,

AND A MACHINE

which fulfils in every respect in practical use, all that is claimed for it.

The Wood Harvester

has been before the public for years, and has proved in past Harvests, as it will do in the coming one, that it is the Premier Machine of the World, and the most wonderful and greatest labor-saving, time-saving, and money-saving machine ever brought to the notice of the farming public.



ITS EXCELLENCE.

We have claimed in former years, and still claim so in the present one, that the

WOOD MACHINE

- Exceeds all others in point of Mechanical construction,
- Simplicity of construction,
- Durability,
- Ease of adjustment.
- Non-liability to get out of adjustment,
- Ease of management,
- Lightness of draught,
- Certainty of binding,
- Security of knot tied,
- Uniformity in size of sheaf,
- Tightness of sheaf,
- Delivery of sheaf, Clean Cutting,
- Absence of side draught,
- Economy in cost of string per acre.

With Transport Gear and Patent Sheaf Carrier.

IMPROVEMENTS.—The Harvester and Binder has been greatly improved, which will add to its efficiency in the field in every respect, under all difficulties. It is impossible to describe them in this space for 1886, but we will post free on application a catalogue showing all the improvements in this year's machine as over last year's.

BOOK ORDERS AT ONCE.—Our first shipment of Binders having arrived and been disposed of, we would ask intending purchasers **NOT TO DELAY**, but to send their orders in at once, as it will be impossible for us, "notwithstanding the special arrangements made by us," to fully supply the season's demand at the rate at which the orders are coming in.

To prevent **DISAPPOINTMENT**, we will supply the Binders according to priority of application.

We are enabled this year to sell our best selected **HEMP AND MANILLA TWINES** at a lower rate than heretofore, and would caution consumers to see that they get our Twine, which is more even in quality, stronger, and gives a greater length to a pound weight than any other kind.

JAMES M'EWAN & CO., SOLE AGENTS, MELBOURNE.

MACHINE BELTING.

Saddlers by Appointment to His Excellency Sir H. B. Loch, K.C.B.

MACHINE BELTING.



BUCKETS.

FACTORY:  **TANNERY:**
 LITTLE BOURKE ST. FLEMINGTON.

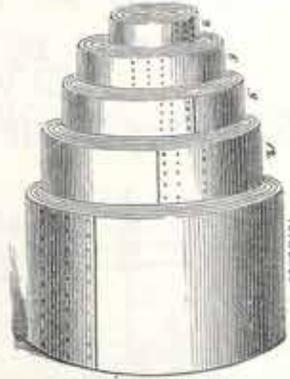
D. ALTSON & CO.

Saddlers & Tanners,

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Contractors for Machine Belting, Saddlery, &c., to the Government, War & Naval Departments of Victoria.

Prices and Samples posted free on application.



HOSE.

WELCH, PERRIN & CO.

Machinery supplied on
 Liberal Terms
 of Time-payment.



Send for Catalogues.
 POST FREE
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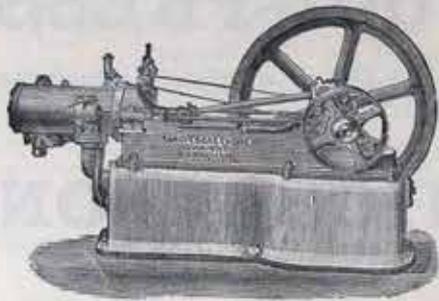
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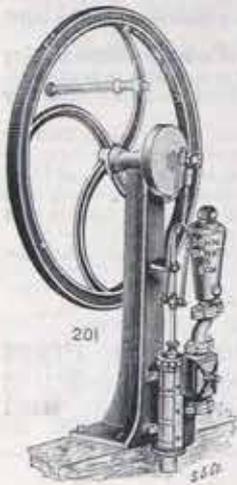
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| Gas Engines | Hydraulic Machinery | Crab Winches |
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JOHN DANKS AND SON, Engineers & Brass Founders,

MANUFACTURERS OF

PUMPS OF EVERY DESCRIPTION,

Fire Engines, Baths, Sanitary Ware, Gas Fittings,
Iron, Lead, & Compo. Pipes, Water Supply Goods.

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NORRIS'S SPICE

Is Unequalled for Giving LIFE, HEALTH, and Flesh to

Horses, Cattle, Pigs, Geese, Ducks,
Fowls, Pigeons, Dogs, &c.

Tried, Proved and Certified to be the Best Medicine for Horses ever discovered. Will coax the appetite when all other things have failed. Gives a bright eye to the Horse, makes his skin like velvet, his looks and temper good. Increases the quantity of milk in Cows, and enriches the quality. Fattens Pigs in half the usual time. Makes Geese, Turkeys, Ducks and Fowls as fat as butter, and double their value. Converts the commonest of Hay and Straw into a superior provender.



Sold by all Druggists, Grocers, and Storekeepers, in Tins, 1s., 2s., 5s., 10s., and 20s.

T. W. NORRIS & CO. (S. M. DALTON), Chemists, Sole Proprietors & Manufacturers.
MELBOURNE, VICTORIA.

N.B.—Ask for and insist on having NORRIS'S SPICE. Spurious Imitations are sometimes offered, BEWARE OF THEM.

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MELBOURNE PLACE,

RUSSELL STREET, Between Bourke and Little Collins Streets, MELBOURNE.

NATIONAL AGRICULTURAL SOCIETY.



VICTORIA

Vol. II.—No. 20. [Read as a Newspaper.]

MELBOURNE, MARCH 11TH, 1887.

GRATIS.

"If 'twere done when 'tis done,
Then 'twere well done 'twere quickly done."

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CHARLES D. STRAKER,

Three Crowns Hotel,

WEST MELBOURNE.

Caterer for the Victorian Racing Club, The National Agricultural Society of Victoria, and the Victorian Coursing Club.

Orders for Dinners, Pites, Dejeuners, Weddings, Suppers, on the Shortest Notice in Town or Country.

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Wholesale and Retail Tinsmith and Ironworker,
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19 POST OFFICE PLACE, MELBOURNE,
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Travellers' Scutborough & Deed Boxes, Baths, Tanks & Washing
Coppers, Cheese Tubs & Vats, Dairy Utensils, Colonial Orns.

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20 ELIZABETH STREET NORTH, CARLTON, 20

Opposite the Meat Market, Melbourne.

Churns, Cheese Vats, and all kinds of Dairy Utensils on hand
and made to order. Tallow Casks, Spirit Kegs, &c.

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Millers & Grain Merchants

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GRAIN STORES at JUNG JUNG, WAIL, LUPECK,
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at all the principal Railway Stations.

Jas. Fry & Company's Celebrated 5 Stars Flour.

Consignors of Wool and other Produce and Advances
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Every description of Agricultural Machinery and Implements,
by all the best Melbourne Manufacturers and
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Advances on Grain at Current Rates of Interest.
STORAGE ON VERY FAVORABLE TERMS.

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The Most Popular RESTAURANT in the CITY
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Accommodation for 500. Special Dinners.

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BY ROYAL LETTERS PATENT.



*It is the Best, Cheapest, and Safest Dip in
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NUMEROUS TESTIMONIALS.
PRICE—5/6 per gallon in 40 gallon casks,
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EASTWOOD BROS.
STEAM

Hydraulic Hay Pressers, Chaffcutters,

67 ELIZABETH ST. NORTH, MELBOURNE.

BUYERS OF COUNTRY HAY CHAFF.

Baths Hotel & Bathing Palace

26 BOURKE STREET, MELBOURNE.

Centrally Situated, with Accommodation for
One Hundred Visitors.

TURKISH, HOT OR COLD BATHS.

£87 Beverages of the Very Best Brands in the Market, and
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Billiards. Night Porter.

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Tailor, Practical Shirt Maker,

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Instructions for Self-measurement on application.

THE NEW HIGH ARM
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GOLD MEDALS,

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SURPASSES ALL OTHERS. A UNIVERSAL FAVORITE.

UNEQUALLED FOR RANGE OF WORK AND EASE OF
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IMPORTERS:

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AGENTS for RUDGE, HUMBER, MATCHLESS, and
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SIBLE PEGAMBULATORS, with Bicycle Wheels and
Rubber Tyres.

Catalogues Free on Application.

BUTTER AND CHEESE

J. BARTRAM & SON,

8 QUERN STREET, MELBOURNE.
Are cash Buyers of all Dairy Produce at highest market rates
Consignments received.

Account Sales promptly rendered.
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Also, Sole Agents for

De Laval's Cream Separator

The Greatest of all Dairy Improve-
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more and better butter. Highest
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space, time, labor and the number
of utensils. The construction is
extremely simple, and requires no
mechanical knowledge to keep in
working order. The cost saved in
less than a year. Can be driven
by horse gear. Full particulars
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The M'CORMICK REAPER & BINDER

Has been Awarded
105 FIRST PRIZES
In Australasia.

THE 1886 MACHINE IS UNRIVALLED.



RANSOMES' VERTICAL ENGINES

2, 3 & 4 H.P.

Extra Large Firebox and Boiler.



RANSOMES' PORTABLE ENGINES

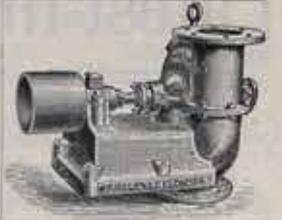
6, 8, 10, 12 & 14 H.P.

The Most Suitable Engine for Irrigation Purposes.

ALLEN'S Centrifugal Pumps

8, 9, 10, 12 and 15 inch.

Larger Sizes Imported Specially to Order.



M'LEAN BROS. & RIGG

Have in stock or to arrive shortly, all kinds of

Agricultural Machinery & Implements.

PLEASE SEND FOR ILLUSTRATED CATALOGUE.

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Agricultural Implement Manufacturers

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Sole Agents for

MARSHALL'S PORTABLE & VERTICAL ENGINES

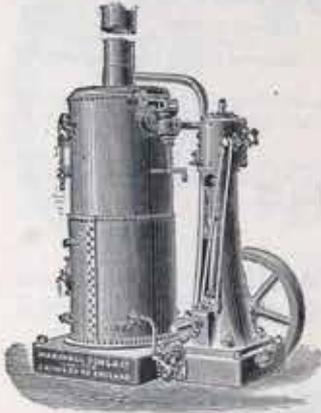
AND PUMPING MACHINERY.

HOWARD'S PRIZE REAPER & BINDERS,

The Strongest and Simplest in the Market.

Novelties in every description of Agricultural and Pastoral Machinery.

Send for our Illustrated Catalogue.



247 ELIZABETH ST., MELBOURNE.

G. F. PICKLES & SONS,

LIMITED,

5, 7, 9, 11, LATROBE STREET WEST, MELBOURNE;

And WILLIAMSON, MYERS & BULL STREETS, SANDHURST,

Manufacturers of High-class Buggies, Carriages, Phætons, PLEASURE AND BUSINESS WAGGONS.

Half a Hundred Leading Styles to Choose from.

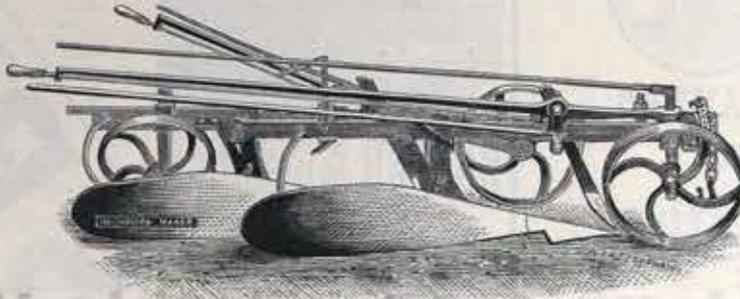


Thoroughly reliable in every respect. Absolute warranty on all grades.

H. J. Woodhouse

G. M. PICKLES, MANAGER.

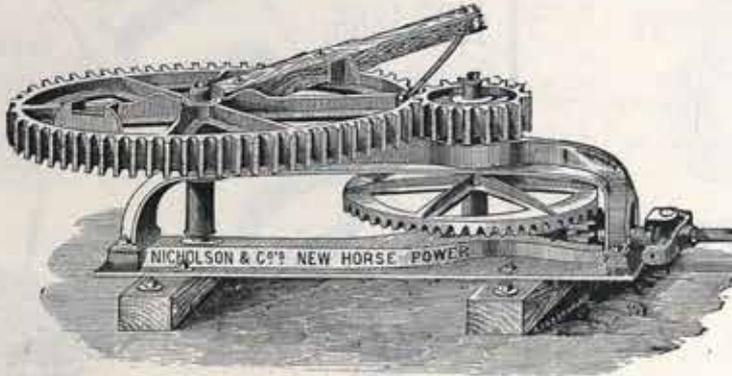
JOSEPH NICHOLSON & CO., AGRICULTURAL MACHINE MANUFACTURERS.



Winners
of the Champion
Prize of One Hundred
Guineas in the Inter-
colonial Match held
at the Werribee.
July, 1882.

Prices—
Doubles, £21.
Trebles, £28 & £29.

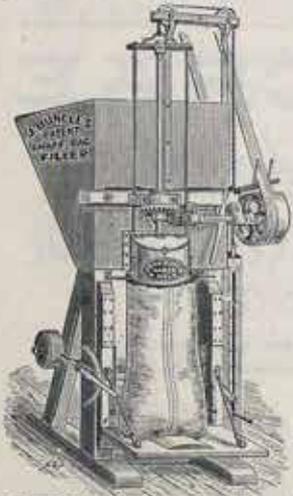
J.N. and Co.'s DOUBLE and TREBLE FURROW PLOUGHS are constructed of the best materials, and every care is taken to combine lightness with strength. The sizes of the furrows can be easily adjusted to any required width or depth. The implements are of great durability, and the draught is as light as that of any Double or Treble Ploughs manufactured.



Price, including two
Poles,
£18.

Price, including two
Poles,
£18.

This most useful Machine is made entirely of Iron, simple in construction, very strong, and easily managed. It is also fitted with a spring clutch, which prevents the poles from striking the horses' legs when the Machine is stopped. The pole or poles (as it can be used either as a Single or Double Horse-power) are fixed in such a manner that the pull is direct; the strain thus being reduced to a minimum, the speed is sufficient without the expense of an intermediate motion.



BUNCLE'S Patent Chaff Bag Filler.

JOHN BUNCLE, in stating what is well known, viz., the great competition in the Hay, Corn, and Chaff Trade, begs at the same time to call attention to his endeavour to lighten the toil and increase the profits from such a business, by designing and manufacturing a machine for the above purpose, and one which cannot be approached by any other maker at present, or recommended to equal in **Simplicity, Durability, and thorough Adaptability and Cheapness** combined as in the above Machine. The **BAG FILLERS** are manufactured complete, ready to be sent to wherever ordered or in any of the colonies, either to fix in stores in connection with the fixed Chaffcutters, or to be attached to his well-known Travelling Chaffcutters previously supplied, and now supplied either with

or without Baggers. A few attempts have been made by some to supply such a want, but probably not having a theoretical as well as a practical knowledge of machines, have not been able to reduce the complicated movements in their machines, and which are perfectly unnecessary—as witness the Unique Simplicity and correctness in design, and the admirable working of **BUNCLE'S PATENT BAG FILLER** compared with the few others tried at work.

For the information and convenience of customers, a machine is kept constantly set up ready to show at work in **BUNCLE'S PARKSIDE IRONWORKS**, and many customers have witnessed **80 to 90 lbs.** of Chaff put in a bag in 15 seconds!!! which, after making allowances for time removing the full bag and replacing an empty one, would easily on an average keep **Four of Buncle's No. 1 Chaffcutters**—well, if there is any doubt, say Three Machines clear of all the Chaff they cut (medium length.) Of course the Machines are arranged to put in as light weight as you like, or you can fill up and burst all your Bags—to pieces. As a trade requirement (in addition to filling bags) the necessity for a **Mixing Machine** is a long felt want, the laborious and unsatisfactory way at present adopted cannot much longer be endured, and there is no necessity for it!! as J. Buncle can arrange to "Blend" the worst and the best samples "To a Hair" at the least possible expense with the best results.

The season is now coming on when all those who intend having the latest improved Machines should forward their orders as early as possible, to prevent disappointment in the day of their need.

J. Buncle's Machines have, as usual, been awarded First Prize at all the leading shows wherever he exhibited last year (1885), and the many improvements introduced and constantly copied by other makers, is the best proof of the value of the continued consideration in all that affects the profits and welfare of his customers.

Chaffcutters with 14-in. wide mouthpieces and Newest Designs, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

Sirs and Gentlemen, yours respectfully,

Parkside Iron Works, North Melbourne.

JOHN BUNCLE.

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Single, Double, and Treble Ploughs.

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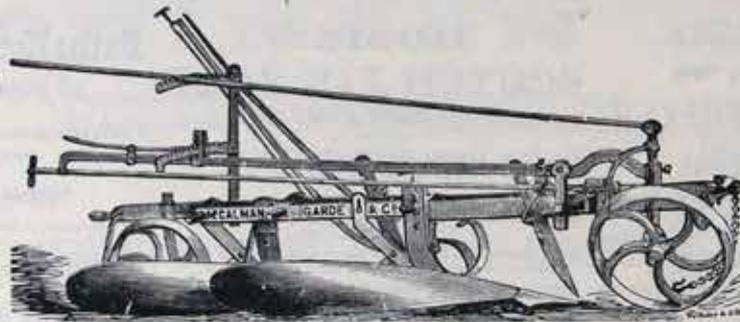
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LEVER WATCHES
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worthy timekeepers in the world.

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watches by the Australian public has been
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AWARD FOR HOROLOGY** at the Melbourne
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that his watches cannot be excelled. Seven Gold and other
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MANUFACTURER OF THE WELL-KNOWN

Williams' Rack & Pinion Wool Press

Rack and Gear Steel Press for the use of large stations,
Lever & Chain Press, with Folding Top Box, for the use of smaller stations
Lever and Chain Farmer's & Selector's Press. Price, £22 10s.

As the season for this latter kind is now approaching, those requiring them
should lose no time in sending their orders. Owing to the general satisfaction
given by those supplied for last season, orders are now freely coming in, and a
large demand is looked for. The following is a fair sample of a large number of
Testimonials to hand for those supplied last season:—

MR. PRICE WILLIAMS—

HALLSBROOK, JAN. 23RD, 1885.

Dear Sir,—I have much pleasure in informing you that the Farmer's Wool Press I
purchased from you last October, gave me every satisfaction. We turned out very compact
small bales, about 24 cwt., but could have them heavier if we wished with ease down. By
what the Wool Brokers tell me, they would clear themselves in two seasons to anyone having
twelve bales. Since done with the Wool, I have had it in constant use as a Cheese Press, and
Cheeses can be put in at once. It would make a good Press for Hay or Straw, and for Grapes
or Apples it is just the thing. I can highly recommend it as a most useful, substantial, and
cheap article.—Yours truly,
HUGH GORDON.

McDougall's Sheep Dip

USED THROUGHOUT THE WORLD.

McDOUGALL'S SHEEP DIP.

PERFECT SAFETY, NON-POISONOUS.

A Dip with 20 Years' Record and Second to None in the
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As certain as arsenic in its effects in exterminating all insects, and
without its danger. It is the only true specific for scab.
Finely stimulates the growth of Wool.

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PRICE, 5/6 PER GALLON, 5 GALLON DRUMS.

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VICTORIAN RIFLE CLUBS.

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 is the GOVERNMENT CONTRACTOR, and the Only Saddler
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 Saddle, Bridles, Leggings, and Wallets.
 Any of the above will be supplied in any quantities to Members
 of RIFLE CLUBS at the Contract Prices. Apply early.

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Manufacturers of every description of saddles and bridles; Gig,
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D. T. wishes to call particular attention to his Colonial-made
 Rough and Smooth Bullrocker, Hogskin, Bush and Town,
 Saddles, which for Shape, Price, and Quality, cannot be equalled.
 TRADE SUPPLIED.

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 FORWARDED on APPLICATION.

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They hold AUCTION SALES of WOOL twice each week
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CHAMPION RICHMOND JACK,
 THREE TIMES WINNER OF THE FIFTY-QUINOA GRAND CHALLENGE CUP,
CHAMPION DECKER.

This celebrated English winner, has sired more prize-takers,
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Satire (by Joker); **Sagacity** (by Spades); **Leaguer** (by
 Corinthian); **Daphne II.** (by Phundever); **Melbourne**
Hill and **same Sans Merc** (by the Belgavian); **Arius**
 (by Tackler.)

The above lot are from the very best strains, direct male
 lines, and only equalled, by about six kennels in England.

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MELBOURNE STEVEDORE (by Decker.)
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 1885 Prize Lists.

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SHELFORD RUBY (by Decker, ex Shelford Fury).
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The privilege of membership consists of
 power to vote at the Election of all Office-
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 Reading Room, Lectures; and, with two
 ladies, to the Society's Exhibitions and Grounds
 at all times.

A copy of this Journal, which is published
 monthly (on the Friday after the Council
 Meeting), is also forwarded to each member.

Members' Tickets may be obtained on
 application to the Secretary at the Office, or to
 Mr. JOHN HEDRICK, the Collector,
 Kirk's Bazaar, Melbourne.

THOMAS PATTERSON,

SECRETARY.

Melbourne, 2nd Feb., 1887.

THE NATIONAL

Agricultural Society of Victoria.

Shorthorn Derby Sweepstakes, 1889.
Hereford do do 1889.
Ayrshire do do 1889.
Jersey (late Alderney) do do 1889.

A Sweepstakes of £1 each (10s. at time of nomina-
 tion, and 10s. at date of general entry for Show), with
 £5 added in each case for Heifers calved between 1st
 July, 1886, and 1st July, 1887, to be divided and
 awarded as 1st, 2nd, and 3rd Prizes, for three-year
 olds, at the Society's Show, 1889.

Nomination of Calves of each breed respectively
 will be received on payment of a nomination fee of
 10s. each. Calves to be nominated within one month
 of date of birth. Nominators to fully describe the
 color of each calf entered, and to state the name of
 the sire, dam, and sire of dam, together with the
 date of calving. Entry forms on application.

THOMAS PATTERSON,

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 business. All met with wonder-
 ful success. Any one can do the work. Capital not
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 free. The employment is particularly adapted to the
 region in which this publication circulates. Boys and
 girls earn nearly as much as men. Full particulars
 and instructions mailed free. Now is the time—don't
 delay, but write to us at once. Address Stinson &
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Bulk Stocks of Grain held by Farmers can be sold by
 Auction or privately from samples sent by Post, avoiding
 storage charges.

References—Craig & Murray, 10 Queen St.

Notices.

All communications for the Editor to be
 addressed to the Society's Office, Kirk's Bazaar,
 Bourke Street West, Melbourne.

Business communications to the Publishers,
 Melbourne Place, off Russell Street, Melbourne.

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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
 requested to forward to the editor the dates on
 which their respective exhibitions will be held,
 also copies of their prize schedules as soon as
 they are published.

MARCH.

- 10, 11.—Beechworth.
- 11.—Grantville.
- 16.—Dunolly.
- 16.—Ararat.
- 17.—Bass.
- 18.—Bala Bulu.
- 23.—Daylesford.
- 24.—Victoria, at Heidelberg.
- 24, 25.—Warragul.
- 30.—South Gippsland, at Port Albert.

APRIL.

- 8.—Ballarat (grain).

MAY.

- 20 to 25.—Agricultural Society of N.S.W., at Sydney.

JULY.

- 21.—Deniliquin, N.S.W.

AUGUST.

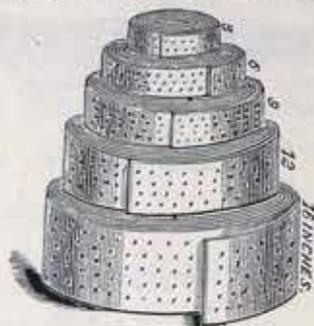
- 23, 24, 25, 26, 27.—National.

OCTOBER.

- 6.—Bacchus Marsh.



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WELL-STRETCHED
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Special Lists for BELTS for IRRIGATION PURPOSES.

A Large Stock of the "PREMIER" BELT LUBRICANT, and Well-Seasoned BELT LACES, kept in Stock.

TESTIMONIAL.—[copy.]

UNION FLOUR MILLS,
Brunswick-street, Fitzroy,
March 17th, 1886.

Messrs. Frank Vial & Co.,
Macauley Road, Hotham.

Gentlemen,—In reply to your enquiry respecting the (23") twenty-three inch double belt supplied by you to ourselves, we beg to state we have been working it for a period of seven months, and we find it to be all we could desire, as also is the other belting which we had from you.

We therefore feel great pleasure in recommending your belting to anyone requiring the same.

We are, Gentlemen, yours truly,
(Signed) W. S. KIMPTON & SONS.

Other Testimonials received too numerous to print, which with Price Lists, can be had on application.



REAPER & BINDERS

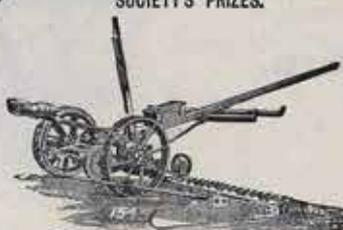
WON
EVERY FIELD TRIAL
IN VICTORIA
DURING SEASON
1885-1886,
IN WHICH
THEY HAVE
COMPETED.

HORNSBY

**MOWERS
AND
REAPERS.**

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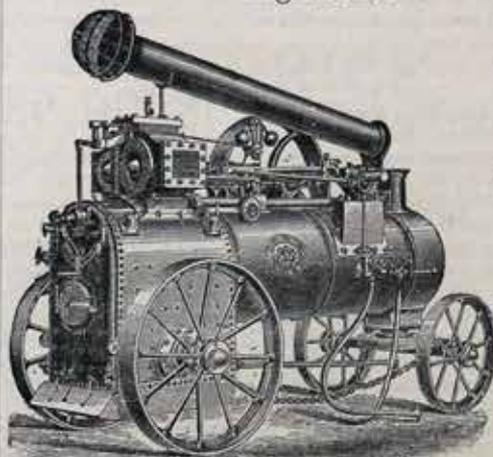
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AIRD & McCRAE, as Stock and Station Agents and Machinery Merchants, are prepared to supply Plant for Irrigation Works, and when necessary, obtain services of Eminent Engineers for the purpose of taking levels and advising generally.

Medical Journal June 15, 1883

Animal vaccination - Many letters have appeared in the public papers in connection with the process of vaccination with calf lymph as carried out by Mr. Graham Mitchell. We understand that the President of the Board of Health is requiring into the matter, and his report will doubtless lead to animal vaccination being more effectually ~~continued~~ ^{continued} among us.

Small pox in Australia

In 1872 considerable discussion occurred as to the relative merit of vaccination with calf lymph. ^{although the following} The Australian Medical Journal in a leading article (1872) expressed the following radicals of vaccination with calf lymph vaccine: -

As a matter of course ^{some} one or two of those ill informed persons who the less they know about a matter the more they have to say upon it, have availed themselves of the opportunity to thrust themselves into prominence by demanding that vaccine shall be obtained direct from the cow: and insisting that humanized lymph has no prophylactic efficacy. For such persons, pathological knowledge progresses in vain, but as Dr. Featon and other scientific investigators will be professed to these quidnuncs they may be left to the rising of their folly without any risk to the ^{un}Community, or any other notice from the scientific section of the profession than a contemptuous indifference."

This question excited a great deal of discussion and in 1881 a Select Committee of the Legislative Assembly was appointed. This committee reported that there was disagreement amongst the witnesses as to the danger of varu & varu vaccination and the Committee accordingly recommended that a Bill be brought in to amend the present Vaccination Act, in order to have depots established for supplying animal lymph from young heifers.

At some time prior to June 1883 there had been established a vaccine Depot at Royal Park for the production of calf vaccine. Dr. Le Fevre was in charge of this institution until 17th April after which date the preparation of vaccine lymph and the vaccination of children was carried on by Mr Graham Mitchell, a veterinary Surgeon. Australian Medical Journal 1883

'Thine own friend & thy father's
friend forsake not.' Proverbs 27-10

In September 1883 the Central Board
of Health assumed control of the Depot
and Dr. Dulbot was placed in charge
(Australian Medical Journal)

Mr. Graham Mitchell being retained
to carry on the actual vaccination
of the Calves. After Mr. Mitchell's
departure Mr. Rendall another veterinary
surgeon was ~~placed~~ in charge of the

vaccination of children
appointed, and Dr. Fletcher was
placed in charge of the vaccination
of children

(Depot) This depot has been the one permanent
depot for the preparation of vaccine
lymph in Australia, and it has
supplied the various States
with such vaccine lymph
as they require.

although it may be stated
that the Australian Medical Journal
in a leading article (1872) expressed
the following ridicule of vaccination
with calf lymph ~~as~~ ^{is} a matter
of course one or two of those ^{ill informed} ^{about the matter} ^{people} ^{who}
persons who the less they ^{know} ^{the more}
they have to say upon it

as may be inferred from
my reference to this notice ^{of his death} which was written
and published by me
at the time, and it is
which I ^{now} conclude

The Journal
OF THE
National Agricultural Society
OF VICTORIA.

MELBOURNE, MARCH 11th, 1887.

The Pursuit of Agriculture.

In an article in *The Sydney Mail*, which deals with the description of the Dookie Farm and Farm School, published in our last number, allusion is made to the necessity of establishing and fostering similar institutions in New South Wales, and opportunity is taken to suggest to the Agricultural Societies that they should lend their assistance in this direction. A wide subject is thus opened up which is of vast importance to the whole of the Australian Colonies. Not only should it be the object of the Governments—and the Agricultural Societies as well—to assist in providing facilities for the acquirement by the rising generation of a practical knowledge of agriculture, but the dignity, healthfulness, and independence of the pursuit should also be impressed on the young. The books used in our State schools could be made an excellent medium for conveying instruction of this kind if the reading matter they contain were such as it ought to be. Every effort should be made to educate colonial youths, so that they will incline to agricultural and pastoral pursuits instead of flocking to towns; for such a tendency cannot last long without bringing about disaster. The colonies may borrow money, and the people may flock together in towns, and live on borrowed capital and one another for a time, but without a substantial substratum of production from the soil, the whole fabric must soon topple over. In support of agricultural pursuits, an old writer says:—"Not to speak of the various delights, pleasures, and contents that these rusticities plentifully heap upon us, they supply us for our necessities and advantages; for, without this art, none in city or country could subsist. As the mother suckles the infant with her milk, so doth the earth, the mother of us all, universally feed and nourish us at an easy, liberal, and profitable rate, whereof we have daily experience that our industry, labour, and costs are returned upon us with a manifold increase and advantage, unless the celestial influences impede." As our success depends so much on the development of the productions of our soil, the contention that agriculture is a pursuit of such importance, and one we should by every possibility endeavour to induce the rising generation to adopt, will be readily acknowledged. The ancients considered the art of agriculture the most dignified of all pursuits

"Noah the just, meek Moses, Abraham,
(Who father of the Faithful Race became)—
Were shepherds all, or husbandmen at least,—
And in the fields they passed their days the best."

Socrates relates "how Cyrus, that most renowned King of Persia, a man of sublime wit, and most illustrious fame, when Lysander of Lacedemonia, a man endowed with excellent virtues, came and brought him presents: at a certain time, for their recrea-

tion, he conducted Lysander into his garden, on every side enclosed with a noble fence and cultivated with most curious art and singular industry. Then, Lysander (admiring the complete order of everything, and the height of the trees planted in such direct lines and every way lineal, the earth adorned with plants, the fairness of the fruits, the beauty and order of the pleasant and fragrant flowers) said that he did exceedingly admire, not so much at the study and diligence as the ingenuity of the workmen by whom the same was so artificially ordered and contrived. Then Cyrus, being well pleased with the praise and commendation of his workmanship, answered Lysander: All these things were performed by my own industry; these curious orders were by me delineated; these trees, plants, flowers, and all these things thou admirest at, were all planted and performed by my own hands. Then Lysander, beholding his purple habit, the excellency of his person, and his Persian ornaments, glittering with gold and precious stones, said: Oh, Cyrus! How deservedly may you, of all men, be esteemed happy, seeing so high an honour and fortune is conjoined and united with so excellent a spirit." Far be it from young Australians to belong to "the vainer and more pedant sort of persons, despising the worth or value of what they are ignorant of, who judge it below their honour or reputation to take any notice of so mean a profession, that esteem the country no more than a place for beasts, as cities for men." Rather may they be imbued with the excellent spirit of the illustrious Cyrus.

Judging at Shows.

The discussion at the National Society's annual meeting on Mr. L. L. Smith's motion—"That, in the opinion of this meeting, it is desirable that the single judging system be adopted by the Society," again opens up the question of judging at shows. The motion was lost by a large majority, so that, although the President stated that any conclusion arrived at by the general meeting would not be considered mandatory by the Council, the latter body will doubtless be influenced by it, and will still be inclined to adhere to the three judge system. It cannot be denied that there must be something wrong in the old system, or the desire for a change would not be so persistently expressed by those who are deeply interested in the matter. As we dealt exhaustively with the subject on which we are writing in a leading article in our October, 1885, number, there is, perhaps, no necessity for repetition here. One thing however is worthy of remark and that is, that on reading over the said article it is evident the literature of the subject has not advanced perceptibly since it was written. Perhaps it is unsafe to prophesy, but "coming events cast their shadows before." It is apparent to anyone thoroughly conversant with the history of the subject, who closely studies the debate on Mr. Smith's motion, as reported elsewhere, that the single judge system is gaining ground, slowly perhaps but surely, so that it is almost bound to be brought about. Men of the newer school like Mr. T. Learmonth and Mr.

Lynott unhesitatingly advocate it. And reading between the lines of the speeches of those who still adhere to the old system, it is evident that it is distrust of the new rather than love of the old which influences them in most cases; while Mr. Peppin, still clinging to his old love, yet goes so far as to say, "if you can find the one man, unimpeachable, then appoint him." The finding the one man seems to be, in the opinion of most people, the great difficulty; for, as Mr. Thomson said, "the community is small." But as we once before endeavoured to point out and explain, this difficulty is not likely to be so great as anticipated. In arriving at a decision on a matter of this kind, as Mr. Lynott forcibly put it, the matured experience of men in older countries should not be ignored. In England the tendency is decidedly in favour of single judging, while we notice in our exchanges to hand since the discussion, it has been recently adopted at Chicago in America. As the present judging system gives rise to so much dissatisfaction, we should really like to see the single system have, at any rate, a trial here. Notwithstanding what may be said regarding the difficulty of finding the one judge for any particular class, we think the fear is groundless; for we believe that as has been the case in the history of the world the occasion always finds the man.

The Council of the National Society.

Now that the election of the Council of the National Agricultural Society is over, it may be interesting to notice the change that has taken place in that body during the last few years. In 1881, when Mr. W. J. Lobb was President, he presented the Society with a framed group of cabinet photographs of the office-bearers for that year, which now forms a conspicuous and pleasing ornament to the Society's rooms. Of that group, five have died, and nineteen have resigned or withdrawn, so that of those thirty-four office-bearers, whose photos look down on the meetings, only ten now remain members of Council. This is a remarkable change in such a body of men in six years, and it is one which, perhaps, even those most intimately acquainted with the working of the Society scarcely realise. When made aware of it, anyone who talks about the necessity for new blood should surely be effectually silenced.

Breeders' Notes.

At the clearing sale of Mr. Robert McDougall's Ayrshires, by Messrs. King and Co., at Arundel, Keilor, on the 25th ult., good prices were realised. The highest price paid for a cow was 74 guineas for Little Grannie, by Buccleuch. Twenty-five cows and heifers averaged within a few shillings of £30. Six young bulls averaged 21 guineas. The highest priced animals went to Messrs. William Cumming and Son, of Mount Fyans, who are forming a herd of the choicest Ayrshires procurable.

Messrs. W. C. Yuille and Co. held their autumn sales of thoroughbred yearlings at Newmarket on the 25th ult. and 2nd inst. On the first day the highest priced animal was a colt by St. Albans—Royal Maid, from the St. Albans' stud, which brought 1325

guineas, the purchaser being the Hon. W. Pearson. On the second day there was a large number of yearlings offered, the highest priced one being a colt by Gang Forward—Josephine, from Sir Thomas Elder's Morphettville stud, S.A., which brought 1000 guineas. This colt when full grown should be able to pull a ton anywhere, as was said of the immortal Stockwell. Mr. Archie Yuille remarked that last year when selling yearlings from this stud, some one had said to him they did not want cart horses, but these very "cart horses" had since won everything before them on the racecourse. Some breeders' idea of a thoroughbred seems to be a narrow spindleshanked animal, "all legs and wings," but if they would produce animals more of the type of the 1000 guinea yearling, then would there be racehorses in the land. The yearlings from the Fulham Park stud, S.A., by the young sire, Richmond, who seems to impress his likeness on his progeny, made a very favourable impression on the public. The highest priced one (Richmond—Ruby) brought 500 guineas.

Messrs. Richard Gibson and Co (in conjunction with Messrs. Campbell, Pratt and Co.) held a sale of shorthorn bulls, from the well-known herd of Mr. J. Horwood, of Bridgewater-on-Loddon, at Kirk's Bazaar, on the 4th inst. These young bulls were in nice healthy condition, and from their breeding were fit—as Mr. Lynott said in his opening remarks—to go into any herd in the world. As has been the case at shorthorn sales lately, prices ruled low, the highest reached being 60 guineas for 14th Duke of Bridgewater, light roan, calved 18th September, 1885, sire Wild Eyes Duke, dam Geneva's Matilda 5th by 5th Duke of Underley, bought by Mr. Angus Robertson, of Yarrabee, New South Wales. It is quite within bounds to say that a few years ago young sires of the high breeding and excellent formation of these calves, would readily have brought five times the amount they realised at this sale.

Messrs. Powers, Rutherford and Co. held a clearing sale of Mr. Godfrey B. Mackinnon's Jersey cattle, at Hawthorn, on the 4th inst. The highest priced cow was Coma, red fawn, seven years old, bought by Mr. D. S. Wallace, of Queensland, for 58 guineas. The prices paid for the cows and heifers ranged from about 20 guineas to the amount above stated, the principal buyers being Mr. D. S. Wallace, Sir. W. J. Clarke, Sunbury, and the Hon. W. A. Long, New South Wales. Six young bulls sold at an average of 21 guineas.

Messrs. Campbell, Pratt and Co., with characteristic enterprise, have instituted a great combination sale of trotting and roadster stock, which they purpose to hold half-yearly. In the introductory remarks in the catalogue issued by the firm, they say—"The advantages derived from an exhibition of this kind not only benefit the large breeder of trotting stock, but also extend to those who produce two or three animals, who otherwise would not have an opportunity of showing them to the public. The want of first-class carriage and buggy horses is much felt in our city; and we hope our great combination sale will not only give the public a chance of possessing themselves of high-class animals, but will encourage breeders to renew their efforts in producing horses of a useful character." The first sale was held on the 4th inst., when 40 lots were catalogued, and when there was a large attendance of the public, good prices being realised.

On the day of the sale two Irish hunter stallions recently imported were on view at the City Bazaar. One is a powerful chestnut horse, with good outline and any amount of substance. He will no doubt find favour with

many breeders. The other is a dark, bright brown horse, with much more breeding than the other, well up in front, firmly put together, and a capital mover. He is undoubtedly a thoroughly good game horse, of a most desirable type.

Meetings.

The Annual General Meeting of the members of the National Agricultural Society of Victoria was held on Thursday, 17th February, 1887.

Present—Dr. Plummer (President), in the chair, with a large attendance of members.

The minutes of the previous Annual Meeting were read and confirmed.

ANNUAL REPORT.

Mr. J. Hurst moved that the Annual Report be taken as read and adopted; seconded by Mr. J. Blyth, and carried.

FINANCIAL STATEMENT.

The audited statement of receipts and expenditure for the past year was read, as well as the last clause of the report relating to finance.

Mr. D. R. McGregor moved the adoption of the statement; seconded by Mr. J. Garton, and carried.

MOTIONS.

In accordance with notice, Mr. D. R. McGregor moved "That the last clause of bye-law 24, viz.—"Such Committees to consist of not more than five members, two to form a quorum" be excised;" seconded by Mr. W. Thomson, and carried.

In accordance with notice, Mr. L. L. Smith moved—"That in the opinion of this meeting it is desirable that the single judging system be adopted by the Society." He said this was a subject which was of the utmost importance to the Institution. Under the present system of judging, many of the best stock we have were not exhibited. This applied particularly to thoroughbred horses. He was pleased to see that the press had taken notice of it, and had given prominence to his motion, showing that the importance of the subject was recognised. In racing, the system of having only one judge and one handicapper had been adopted; but with the farming class it was difficult to remove their old prejudice. He also thought that the Society should have all classes passed by a veterinary surgeon, as in England. In some yards there they had this done before the animals were judged, and in others, the animals selected for the prizes were sent afterwards for the approval of the veterinary surgeon. Under the present system of three or more judges there was no responsibility. The Society had been in the habit of choosing judges because they were breeders of the classes of stock they were asked to judge, but in his opinion this should not be done, as such men were prejudiced in favor of certain breeds of stock. We should have one judge alone for a class, who would be a responsible man; where there were three men there was no satisfaction.

Mr. T. Learmonth seconded the motion, as he thought the single judge system (which he was entirely in favor of) should get a fair trial for one year. Seven-

tenths of the judges now appointed would not act alone if they were responsible for their decisions.

Mr. Robert Simson thought Mr. Smith had brought forward an important subject, but he was altogether opposed to his motion. It was all very well to talk of single judging, but where was the one man to be found? If you get three men, and two of them agreed on a point, their opinion was better than that of one. It was very easy to take exception to the present system, but it was not so easy to find a better. After a long connection with the Society he could confidently assert that the Council had always used its best endeavors to get the very best judges.

Mr. W. Thomson rose to oppose the motion. He had a long experience of shows dating from the first held in Melbourne. He thought this community too small to bring the single judging system into operation. We wanted judges who were strangers, and we wanted three, less or more were a nuisance. If one dissented there should be a book in which he should record his dissent. If he were told who would be the single judge, he could tell who would not exhibit. In his opinion a Society might as well close the show-yard gates as have a single judge.

Mr. Robert Clarke was in favor of two judges; acting with an umpire to be called in in the case of disagreement.

Mr. C. Young said the chief objection to Mr. Smith's motion was that it would be unworkable, while the chief objection to the present system was that there was no responsibility. To obviate this, he would have each judge append his name to his judgment in books prepared for the purpose, so that they would have a greater sense of responsibility.

Mr. F. Peppin said it appeared that the advocates of the single judge system asserted that there was always one good judge appointed and two bad ones, and that the two overruled the one. He, however, thought it was quite possible to have three judges, and fix the responsibility on any one. Supposing one paid judge were appointed to go over the colony, he would necessarily give his decisions all in one line, which would keep exhibitors back. This was not so much the case when there were three judges. He believed the discussion of three men over their judgment was useful; although he was also prepared to say if they could find the one man—unimpeachable—then appoint him. As to men acting from motives, he took leave to doubt it. He had very frequently acted as a judge and had not seen it, so that it was an opinion from which he dissented.

Mr. Charles Lynott said he was entirely with Mr. Smith. He believed the three judging system was wrong—that as an educational means it was a failure. He thought one of the strongest points in favor of the single judging system was that it was gaining ground in England. The matured experience of men in the old country should not be ignored. He regretted that Mr. Robert McDougall—who was perhaps the best read man in Australia on subjects of this kind—was not present to address the meeting, as he knew he was in favor of single judging. In England not only was this system gaining ground, but Societies were putting all information

From E. M. Curr, Chief Inspector of Stock, in reply, stating he would have much pleasure in having the alleged cure for pleuro, which was to be carried out by a committee of experts appointed by the Council, watched by an officer of his department.

The letter was received, and Messrs. J. C. Cochrane and E. Peppin were added to the Committee.

The meeting then closed.

Correspondence.

The Breeding of Hack Horses.

To the Editor of the Journal of the National Agricultural Society of Victoria.

SIR—I read with very much surprise an article in your Journal on breeding the hack horse. The onslaught made by the writer on the American trotting horse, shows how grossly ignorant he is of the subject, and dictates to breeders how they should mate their animals. The writer would have you believe the experience, time and money of the American breeder, who has produced an animal which for beauty, docility, substance and speed, cannot be excelled in the world is thrown away, and remarks he never could see how a coffin-headed, donkey-eared, ewe-necked, slab-sided, ragged-hipped, coarse-tailed horse could improve anything. There are always a number of horses of moderate quality imported to the colony by speculators, but the best American horses of trotting blood do not answer the description above given. Take for instance "Sir Walter Scott," "Primero," "Contractor," "Vermont Jr.," these are standard bred American trotters. Did the writer ever see these horses? Where could you find a truer made horse than "Contractor," or a grander animal than "Primero."

How much your correspondent must know about breeding a hack, when he suggests doing so from a draught sire and a weedy mare. It is an understood rule in breeding, that weedy or faulty animals of any kind should never be bred from. I have always been of opinion that the Society was formed for the purpose of disseminating useful knowledge—why waste the pages of the Journal by inserting such trash? I with others have spent thousands of pounds in breeding from the American horse, and are we to be disheartened and our efforts ridiculed by a person who has the audacity to pen such twaddle?—Yours, &c.,

STRATFORD STRETTLE.

Veterinarian.

Veterinary Notes.

CATTLE DISORDERS.

Cattle fed on fibrous, woody grasses, especially when in seed, are liable to attacks of gastric irritation, complicated with symptoms of brain disorder. The attacks occur in animals grazed on pastures that have got strong and run to seed. The seizures come on suddenly; restlessness and scraping with the fore feet are usually the first evidences of anything amiss; occasionally there is dullness and drowsiness; presently the animals are convulsed, and throw themselves wildly about; their unwonted involuntary movements are obviously uncontrolled by will; they turn somersaults, and attempt to run up the wall of the house or yard in which they are confined. The eyes are bloodshot, and the membrana nictitans is drawn partially over them. In some cases there is violent straining; the bowels are constipated and torpid; the small quantities of urine voided are usually high colored and turbid. These symptoms are somewhat similar to the effects produced by feeding on the Darling pea, which causes horses and cattle to try and climb trees and perform other mad freaks, during which, some in their wild frenzy meet with fatal accidents. Curiously, however, the alarming symptoms are traceable to comparatively slight morbid *post mortem* appearances, the chief of which consist of conges-

tion, and a few inflammatory patches on the mucous lining of the fourth stomach. These cases which are so alarming, yet generally yield readily to treatment. A good dose of oil, followed at intervals of six or eight hours by a pound of treacle mixed with two or three ounces of Epsom salts, will generally be most beneficial, while some prescribe frequent doses of lime water and milk in order to relieve gastric irritation. The violent and frequent convulsions are usually quieted by bleeding from the jugular vein. Irritation of the urinary organs is relieved by encouraging the liberal drinking of linseed tea and other mucilaginous fluids with which extract of *bella donna* should be administered several times daily.

HORSE DISEASE.

A disease has broken out amongst horses in the north east of South Australia, which the Government Veterinarian pronounced to be malignant typhoid fever, highly contagious and destructive to human life through persons using water from places where diseased horses drink. It is said that the disease is caused by horses grazing on low marshy lands eating noxious weeds and drinking water from clay pans, also by the exhalations from decomposed animal and vegetable matter given off in marshes and swamps during evaporation. No expense is to be spared in eradicating the disease.

At Silverton a horse disease is prevalent, which the New South Wales Government Veterinarian says is a contagious fever apparently not epidemic. The railway contractors have about 150 horses, of which 100 have been attacked—40 up to the present fatally.

The Late Mr. H. M. Jenkins, F.G.S.

The old year ends gloomily—fears without and many a sorrow within. And the death of our dear friend and fellow-labourer, as hundreds in the agricultural world will call him, with the sense of grievous loss which has thus come upon us suddenly, has darkened many a Christmas holiday all over the country. So great a power disappearing from the agricultural world, just now especially, is a national misfortune. So energetic and resourceful, so prompt and capable, as he was, the great National Society which he served will—we say it without exaggeration—feel staggered by the blow.

Mr. Jenkins had been its secretary and editor for nearly twenty years. During that time English agriculture has known both prosperity and adversity. It has had many a fight with difficulty, and has met with both success and failure. It has made many a new departure, indulged in many hopes, and experienced many disappointments. It is not too much to say that Mr. Jenkins has generally led the way amidst it all, and has shared laboriously in every movement. And not only within his own office as secretary and editor to the Royal Agricultural Society of England, but outside his duties, under Royal Commission or other Institution, Farmers' Club, Society of Arts, South Kensington—whether in England, Scotland, Ireland—time, hands, pen, brains, all of them admirable, self-sacrificing, costly, have ungrudgingly, laboriously been lavished on the great interest to which his life has been devoted. Labours these, let it not be forgotten, more difficult for him than for any other man; for he was the victim of an almost constant asthmatic trouble which would have beaten any ordinary man, and must have sorely tried himself. And how heartily will not all his associates bear witness to the cordiality and warmth, and energy of his leadership. In original suggestion and direction, in taking the lion's share of any labour to himself, in the enlistment of fellow workers whom he made as enthusiastic as himself, in the inspiration of the whole army which he led:—all was his. How much of the heavy labour connected with the question of imported cattle disease fell to him, there are few who know, excepting those, as Mr. Jacob Wilson could tell us, who worked with him. And as he travelled to and fro in many a cattle ship, in order personally and practically to learn and realise the difficulties and inner life of this one subject—so of every other. He was always personally investigating, personally enquiring, personally in the field, among the foremost and in actual touch of the constant labourers in it. Early in his career in Hanover Square he had gone down to Aylshby along with a capital guide in Mr. H. H. Dixon, "The Druid," and there, with so good a practical farmer and cordial guide as he had in the late Mr. Torr, he got within the

inner circle of farm practice and of farm practitioners, whom he has held in hearty sympathy throughout his official life. His reports of farms and districts in his earlier years, when he was still acquiring by inspection and association the practical knowledge in which originally he was wanting; his accounts of foreign agriculture, also written on the spot; his leadership in the great subject of dairy husbandry; his readiness both to learn and teach; his sympathy with every hopeful scheme—the silo, the co-operative movement, small farming, the possibility of tobacco-growing:—All these found in him the hopeful, capable, resourceful man which his great office needed.

One of his latest labours, after a journey round all the spade-worked farms of the various country reformatories, was a report which gives the best available contribution to the recently prevalent feeling for small farms as a resource for the working man. His labours in connection with the improvement of the dairy will probably be considered one of the most efficient and successful of his efforts. Everyone knows how we have all been awakened of late years on this subject by his reports of foreign dairying—his criticisms of home dairying—his organisation of the labours of the English Agricultural Society in the showyards to this end. And here, too, outside of his strict professional duties, his efforts have been most successful. There is no better lecture on the dairy and other agricultural possibilities for the small farmer than one he gave a year or two ago in Dublin; and we know that he was planning yet another address, more exclusively on this subject, under the title of "The Dairyman's Daughter." Nor was he ever bound down by narrow estimates of his official duties and responsibilities. No one was ever freer than he to pour forth his soul on whatever there was in him for expression—whether in criticism or encouragement, in praise and satisfaction, or in disapproval and rebuke, whether in connection with his own Society, as we will call it, or with any other. We all remember the manly recklessness with which, in an address before the Farmers' Club, he referred to the palpable abuse to which the old prize system in the showyard is liable. "Throwing down money to be scrambled for," a phrase as good-humouredly taken as it was originally used, is not the utterance of a bureaucrat or pedant. No one less of either than he—and no one with more of that confident large-heartedness which disregards official limits in the fight in order to win position for his Ward—"his own Society" we have called it. His powers of organisation were extraordinary, but still more efficient were the warmth and energy and courage with which he carried all his fellow-workers with him.

The history of the Royal Agricultural Society is virtually made by its office bearers. What has been its history during Mr. Jenkins' connection with it? It is to-day the centre of agricultural energy and hopefulness and life in this country. It has doubled its membership of twenty years ago. It has been unsparring in expenditure, resourceful in difficulty, resolute in misfortune. The great successes of Mr. Jenkins' earliest years with it, as at Manchester in 1869, and subsequently at Birmingham and Liverpool and Bristol, did not spoil it, and Kilburn did not ruin it. When the cattle plague, the pleuro, and the foot-and-mouth disease were spoiling us, it took the lead in self-defence. Reckless of the conditions of its charter, we all know that it fought not only in the public press and in public meetings, but in the Home Office and in Parliament. And here, too, we recognise to a great extent the influence of its Secretary. Whenever, indeed, any hopeful agricultural scheme has been in the air it has been caught by a watchful editor, and trained and educated into shape. The silo, which is still in a somewhat doubtful stage, has unquestionably been made more hopeful by the patronage and guidance of the Society. The question of laying land to rest in grass, the question of small farms, of dairying, and of agricultural education have all been kept prominently before its members. And in all this Mr. Jenkins has been a clear-sighted powerful leader, as we have said.

The last-named subject—agricultural education—found in him the best historian, critic, stimulant, it has ever had, through his labours under the Royal Commission on Technical Education. The Blue-book on this subject, which appeared from his pen, written in the midst of his official duties, is a wonderful testimony to his energy and capability.

And how has his leadership throughout been so easily maintained? Questioned strongly at the outset as his appointment to the office was, no one doubted his capacity, efficiency, even supremacy, later on. He won success by his

regarding ownership and pedigree into the hands of the judges and also publishing the judges names beforehand. He was well aware that the Council took the greatest possible pains to appoint the very best judges; still the system was wrong. He thought that Mr. Smith was entitled to the thanks of the Society for having brought the matter forward.

After Mr. Smith had replied, his motion was put to the meeting, and was lost by a large majority.

LETTER OF THANKS.

In accordance with notice, Mr. Murray J. Jones moved "that the Secretary be instructed to write to the Royal Agricultural Society of England, expressing the thanks of the Society for the kindness and courtesy extended to members of the Society during their recent visit to England," seconded by Mr. C. Lynott, and carried.

ELECTION OF OFFICE-BEARERS.

At noon the President had appointed Mr. W. J. Lobb, his deputy, to act while the business of the meeting was transacted. When the business was concluded, the President relieved Mr. Lobb and conducted the election till 3 p.m., when the polling closed.

Mr. Charles Lynott and David Gibson were appointed scrutineers, and the result of the poll was found to be in favor of the following gentlemen (in the order named) whom the President declared duly elected, viz.:—James Garton, Francis Henty, David Mitchell, Walter J. Clark, James Buchanan, John Finlay, D. R. McGregor, James Hearn, Thomas Brunton, David Munro, T. Learmonth, William Glover, J. C. Cochrane, George Young, and Daniel White.

After the declaration of the poll, the President congratulated the members present on the great interest taken in the Society, and remarked that it was a most healthy sign to see the vacant seats on the Council so keenly contested.

Mr. D. R. McGregor moved a vote of thanks to Dr. Plummer for conducting the election; seconded by Mr. W. Rose, and carried.

The meeting then closed.

The ordinary monthly meeting of the Council of the National Agricultural Society of Victoria was held on the 8th March, 1887.

Present—Messrs. W. J. Lobb (in J. Finlay, F. Henty, S. G. Staughton, J. Hurst, W. Learmonth, George Young, James Hearn, C. Lynott, D. Mitchell, John Bond, W. Thomson, D. Munro, D. White, F. Peppin, J. Currie, T. Brunton, D. R. McGregor, J. Garton, J. C. Cochrane, T. Learmonth, Walter J. Clark, J. Bunce, the Hon. J. Buchanan, M.L.C., the Hon. C. Young, M.L.A., and Dr. Plummer.

The minutes of the previous meeting were read and confirmed.

The Secretary reported to the meeting the gentlemen who had been elected members of Council at the annual meeting.

ELECTION OF PRESIDENT.

Mr. Lobb moved that Dr. Plummer be re-elected President, seconded by Mr. W. Learmonth, supported by Mr. D. Mitchell, and carried unanimously.

Dr. Plummer then took the chair, and thanked the Council for the compliment

paid to him. With their unanimous support he had no doubt the business would be carried on successfully. The matter of the grant of the Show Ground was virtually settled, for Mr. Dow had given instructions that the clauses required by the Council should be embodied in the deed. He had also obtained a promise from the Minister that £500 would be again placed on the estimates for grand champion prizes of Australia.

ELECTION OF VICE-PRESIDENTS.

Messrs. Francis Henty, David Mitchell, and D. R. McGregor were re-elected Vice-presidents of the Society—each gentleman returning thanks for the honour conferred on him.

Mr. McGregor called the attention of the meeting to the retirement of Mr. Alexander Patterson from the Council. For a number of years Mr. Patterson had been one of the best supporters of the Society, and one of the most active members of Council. He (Mr. McGregor) moved that the regret of the Council be recorded at Mr. Patterson's feeling necessitated, through advanced years, to retire, and that a letter be written to him thanking him for all his past services to the Society.

Seconded by Mr. Lobb, and carried.

The President stated that at his retirement Mr. Patterson was the only member of the first Council of the Society who had been a member of Council continuously ever since the Society was instituted.

The following Committees were then appointed—

FINANCE—The President and Messrs. John Finlay, John Currie, D. R. McGregor and Thomas Brunton.

WORKS—The President and Messrs. David Munro, D. R. McGregor, John Bunce, T. Brunton, George Young and D. Mitchell.

SHOW—The President—*Horses*—Messrs. James Gibb, W. Thomson, James Hearn, T. Learmonth and James Garton. *Cattle*—Messrs. Robert Clark, C. Lynott, J. Hurst, F. Peppin, J. M. Peck, J. C. Cochrane and Hon. J. Buchanan. *Sheep, Swine and Produce*—Messrs. S. G. Staughton, W. J. Lobb, F. Peppin, J. C. Cochrane, J. Hurst and Robert Clark. *Poultry, Dogs, Buggies and Harness*—Messrs. W. J. Lobb, W. Learmonth, D. R. McGregor, W. Glover and John Bond. *Machinery and Implements*—Messrs. David Munro, Hon. C. Young, George Young, D. White, John Bunce, John Bond and W. Thomson.

PARADE—The President and Messrs. J. M. Peck, T. Learmonth, James Garton, James Hearn, C. Lynott, and J. Currie.

MAIN HALL.—The President and Messrs. David Mitchell, F. Peppin, S. G. Staughton, D. R. McGregor, T. Brunton, and John Blyth.

STUD BOOK.—The President and Messrs. James Gibb, John Hurst, W. Thomson, J. C. Cochrane, John Bond, and Walter J. Clark.

EDITING.—The President and Messrs. F. Peppin and D. Munro.

EXECUTIVE.—The President and Messrs. F. Peppin, D. R. McGregor, T. Brunton, John Currie, and John Blyth.

OFFICE FURNITURE.—The President and Messrs. J. M. Peck, John Currie, David Mitchell, and D. R. McGregor.

In connection with the appointment of the Main Hall Committee, Mr. Bunce strongly urged the Council to at once proceed to the erection of such a building.

FINANCE.

The Secretary submitted the state of accounts for the past month, and asked the Council to pass payments amounting to £56 11s. 6d.

Mr. Finlay moved the adoption of the report, including payments; seconded by Mr. Currie and carried.

MOTION.

Mr. Thomson moved the motion of which he had given notice, viz.: "That the following motion be rescinded—That in the opinion of the Society the federation scheme should be completed and worked on an independent basis."

The motion lapsed.

CORRESPONDENCE.

From John Blyth thanking the Council for having elected him a member of their body, and stating it would be his endeavour to faithfully carry out all the duties pertaining to the office to the best of his ability.

RECEIVED.

From W. T. Kendall, M.R.C.V.S., stating that, owing to the widespread prevalence of disease amongst stock, he thought it would be desirable to direct the attention of the Society to the matter. He would, if the Council thought fit, read a paper on the subject.

Mr. Peppin moved that the offer be accepted, and that the Secretary arrange a time for Mr. Kendall to read his paper; seconded by the Hon. J. Buchanan and carried.

From Warragul Agricultural Society asking the Council to nominate judges for nine classes at their show.

Mr. Staughton moved that the Secretary explain that, owing to the Warragul Show falling on the same day as the Heidelberg one—at which most of their number would be present—the Council, who would otherwise have selected judges from themselves, could not undertake the nomination. Seconded by Mr. Peppin and carried.

From Secretary for Agriculture, asking if, in the opinion of the Society, legislative action should be taken for the extermination of sparrows, and, if so, what provisions a law on the subject should contain.

Mr. Clark moved that the matter be postponed till next meeting. Seconded by the Hon. J. Buchanan, who remarked that much could be done by poisoning if it were carried out in accordance with the intelligence of the sparrow, as he had been successful in ridding his vineyard of the pest.

The motion was carried.

From the Farmers' Co-operative Business Association of Victoria (Limited), stating that, having gathered from the press that there was a proposal emanating from the Alexandra district to form a Farmers' Co-operative Company, they wished to state that such an institution was already in existence bearing the name above. Received.

From chairman Agricultural and Pastoral Committee, Adelaide Jubilee Exhibition, calling attention to the necessity for having the colony amply represented in her staples. Received.

"located" for years together in Bedale, and a score of similar incidents elsewhere. Whether this state of public feeling lasted very long, and what it succeeded, we do not know at present. But this much we do know—that before Bakewell's practice indicated (or before he himself caused) a change in the tide, the popular idea of how to improve was to cross.

It becomes a subject for the whole section of stockowners—to whom did the value of the practice of close-breeding first reveal itself? It is quite in conformity with all that we know that the important results to be won by this practice were first seen by the class of men who are held to be enthusiasts rather than by those who persist in believing their own appropriate designation is "practical men." In fact, the really practical man is the one who is not too solid to recognise the worth of the achievements of the enthusiasts, the original enthusiasts, the first enthusiasts, in England, to learn what could be done by in-and-in breeding seems to have been the Spittlefields weavers. In a curious little volume, dedicated to Mr. Ruskin, and written by the Rev. J. Lucas, entitled "The Pleasures of a Pigeon Fancier,"* we have what the writer (who is evidently a well-read, scholarly man, as well as a close observer of the smallest peculiarities of bird-life) considers to be "the pedigree of the Fancy." He asserts that the love of pigeons—if it did not originate in—certainly followed a study of the art of combining patterns and colours. Pigeon-keeping, he maintains, is the cultivation of living flowers; the superadding the charm of life and love to the blending of exquisite hues and the arrangement of lines of grace. His teaching goes to show that with the flight of the Huguenots from the massacre of St. Bartholomew, in 1572, there came to London not only the knowledge of the beauty of pigeons but the best specimens of the bird then existent. Those who wove in looms of France had borrowed, from the makers of Persian carpets and Oriental silks, a sense of the beauty of colours revealed in plumage; and the pigeon (as possessing the greatest variety of hues, outlines, and patterns of adjusted colours) became the companion of artist-weavers all the world over, and were cultivated by them, not only as companions, but as models. With the weavers fancy pigeons came to England; and with them, too, came the knowledge how to fix any type, and to develop any desired pattern and tint. The first English writer on pigeons (says Mr. Lucas, p. 79), was Francis Willoughby (1676), and John Moore followed with his *Columbarium* in 1735. In 1765, an anonymous author dealt "lengthily and lovingly" in a treatise on the Almond Tumbler. In 1802, one Mr. Windus, a London solicitor (Hear it, oh, ye modern dwellers in Lincoln's Inn Fields) issued what Mr. Lucas calls "his celebrated treatise" on the same bird; and, so the series of writers on pigeons has continued to this present day.

There can be no mistake that throughout all these years the pigeon-fanciers (or shall we call them art-students, who sought new combinations of colours by pigeon breeding?) systematically pursued in-and-in breeding. Every cattle breeder has read how Comet 155, "the thousand guinea bull" of fifty years' astonishment was bred. "Comet, by Favourite 252, out of Young Phoenix, who was by Favourite 252, out of old Phoenix (who was the dam of Favourite 252)". Compare with this the following narrative of Mr. Burchatt's method of producing red bald-head pigeons:—

Mr. Burchatt had bred his birds in-and-in for many years, and succeeded in producing a strain almost perfect as far as colour and markings were concerned. But his birds failed in carriage, eye, and head, till he introduced into his loft a magic drop of Almond blood. The bird selected for the experimental cross was a red agate hen, excellent in head and carriage, and of Chapman's strain. This hen Mr. Burchatt matched to one of his best red bald-head cocks; and the bird selected from this union, was a hen of grand Tumbler properties, entirely red in feather, except two or three white flights in one wing. This hen was paired with her father; and, from the progeny of this pair, a red hen, fine in head and carriage, was selected to continue the experiment, the selected one having five white flight-feathers in each wing, and a sprinkling of white feathers on the top of the head. This red-and-white hen was again matched back to her father, and from the happy union sprang a very pure family of bald heads, &c., &c.

There are a number of similar stories about pigeon-breeders, all of which, no doubt, serve the writer's purpose to illustrate "the pleasures

of a pigeon fancier." We do not care to follow with any of these. Those persons who are in sympathy with Mr. Lucas will, no doubt, get and read his book with avidity. His book is quite one of the best of its class. Its class is that of Mr. Reynold Hole's "Book on Roses," i. e., works of bright, well-read enthusiasts adoring the narrative of their special hobby with the results of years of reading. But, without being further in sympathy with Mr. Lucas than in holding, with him, that a man who has a harmless hobby is a healthier and happier man than is he who has none, we may challenge general attention, from the readers of the *LIVE STOCK JOURNAL*, to the facts that this book seems to establish. It was the so-called fanciers—i. e., men who bred living pets out of the pleasure they found in the pursuit—who made known in England those principles of stock-breeding, which when carried out among our herds and flocks, have given them a value which all the world is now ready to recognise. Mr. Burchatt's narrative of how he got his baldheads seems especially interesting—when cattle-breeders are only now emancipating themselves from the necessity of telling frightful "tarradiddles" to avoid admitting the natural explanation of the occurrence among Polled cattle of frequent scurs and white markings; among Shorthorns of those black tips to the horns and hair six inches long in winter; or among Herefords of strawberry or even white specimens; and, among Devon and Sussex herds, of those very wide, reachy horns. "Gentlemen," let us say to one and all of them, "don't be so positive about the absolute and entire 'purity' of your favourites, backward through the ages to the days of Noah's Ark." The "magic drop of almond blood"—which poor Mr. Burchatt so honestly admitted—has had its prototype, within a century, in the method pursued by those who established every breed of horse and cattle, sheep and swine, in Great Britain.—*Live Stock Journal*.

American Forests.

[At the present time when attention is being called to the wasteful destruction of our forests, and to the influence such destruction is likely to have on our agricultural and pastoral prospects, this article should be of special interest.—*Editor*.]

Of a desolation which is recorded far back of the days of Roman or even of Grecian glory, we read that "a man was famous according as he had lifted up axes upon the thick trees." In the days when American forests were considered practically limitless, our fathers were far too famous for lifting up axes upon the thick trees, and the resultant destruction is now upon us, like the Philistines upon Samson. This destruction comes upon us in many forms, most of which are, in fact, rapidly and terribly cumulative. Here is a beautiful stream of water, for example, which was a great element of wealth to the region through which it flowed. It might not only have continued to be so, but to have gained in usefulness instead of either being dead or surely and swiftly passing away. The numberless little hollows on the hills where the springs which grow into rivulets to feed it, have been stripped of the moisture economising verdure with which the Creator clothed them, and so the springs are dry, and the hills no longer murmur their once glad songs of labour as they hasten down the valleys to turn the mill-wheels of mechanical industry. In this one matter of destruction of hydraulic power with which we have already been smitten, hundreds of millions of dollars of annual damage has been, and is, the actual result. That this drying up the streams is attributable not only chiefly to deforesting, but almost solely to it, common sense—which is, in fact, the very essence of fact and philosophy—must make plain to every candid mind. Rain feeds the springs. To feed them economically, it should be gentle and frequent, not violent and at long intervals. Intelligent forest engineering would require that such portions of hills be clothed with a mantle of green trees, as by its cooling influence it would more frequently so contract the aerial sponge as to give us showers at short intervals. This is the case in forest clothed, beautiful Britain. The reverse is true in tree-stripped Spain, whose people have become as proverbial for their hatred of trees, as their country has for sterility of soil and sleeping streams. There, and on eastward all through the Orient, a relentlessly brilliant sky and an appealing absence of verdure will teach one as nothing else can how beautiful are clouds that weep, and, in its proper time how delicious a drizzling rainy

day. There deforested Eastern lands are so famous for seasons of blinding storms, and valleys torn by terrible torrents, as they are for the reverse. They will soon find their counter part in all these characteristics in America, unless we rouse ourselves with a will to understand and master these evils. Forests promote streams available for our precious manufacturing interests, also, by furnishing vast and almost innumerable beds of fallen leaves and of moss, which act on the earth like a huge overlying sponge, to check the sudden rush of rainfall into the valleys and down into the streams. Very rapidly in recent years are mournful instances multiplying, in which these manufacturing streams are transformed by freshets from spirits of blessing—to give homes and food and clothing to thousands who live in hamlets, by turning the machinery which helps them by their labour to help themselves—to demons of destruction. Forests also promote such steadiness of flow of the streams as to make them sources of national wealth in giving employment to skilled labour, by preventing the rapid evaporation of moisture. Probably more than half the water that falls on a deforested region in a dry season, is whisked off by evaporation just at the time when it is most needed to strengthen the depleted mill-streams. The steam-engine, to be of any practical use as a motive power, must have its action controlled by the conservative influence of the balance-wheel; otherwise its wheels would whirl at one time with a fury which would result only in destruction, and then they would move too slowly to be of service. Thus the forest by increasing the frequency of gentle rains, and so decreasing the volume and the length of intervals between showers, also by regulating their too sudden plunge into the streams, is the great regulator provided by nature for their control in the service of man. All over the manufacturing portions of our country we may find instances where large amounts of capital have been invested to develop and make available our once magnificent and almost numberless hydraulic powers. Trusting to what seemed a certainty of employment for themselves and their families, thousands of skilled labourers have in many cases confidently made their homes at a point where the stream seemed abundantly powerful and permanent. Then, as the summers came and went, the river seemed to sicken and grow more and more feeble, till there would be a week or two each year in which the spindles and the looms would be silent. As time went on, these periods of idleness have lengthened into months, in which the labour struggle for bread and clothing, for means to pay for the humble little home, or debts incurred in sickness, was compelled to be suspended. The cause of all this was the sources of the river's life had been destroyed or injured by the ignorance, cupidity, or recklessness of men who "lifted up axes on the thick trees" far up the mountains, where the mill-streams had their birth.

Some question whether the cutting away of the forest guardian of the springs produces these results. Our country, and especially its literature in this department, is so young that we cannot give many cases in point to prove that dead or dying streams can be wakened into new life by reforesting the hill sides. Abundance of such instances are recorded, however, in the sylvicultural literature of continental Europe—cases where both sides of the problem are repeatedly and regularly demonstrated three or four times in a country. Such, for example, as that given by Hummel, where, by the forest regulations at Heilbronn, the forests are cut every twenty years, and the springs as regularly dwindle or die as the periodical cuttings proceed, and bubble up with their former life after the stripping is completed and the wood-growth re-asserts itself. Another case among similar ones is specified, where the most famous spring in the commune of Soubrey has twice been destroyed and twice reproduced, by precisely these causes, in ninety years. We prove the correctness of the upward addition of a column of figures by adding it down. We can, if we will only open our eyes in a spirit of genuine willingness to see the truth, quite as certainly see that the forest, not by increasing, perhaps, but by regulating the rainfall, secures both its even and its permanent flow.

The same lines of argument that apply to the question of the almost incalculably valuable hydraulic powers of America supply with quite equal cogency to the subject of inland navigation. Probably next to the question of production is that of transportation, involved in navigation, in the immensity of its proportions. The importance of this branch of our subject can very easily be seen to be vast both to producer and consumer; more, if possible, to the latter than to the former.

(To be continued.)

* "THE PLEASURES OF A PIGEON FANCIER," By the Rev. J. Lucas, Sampson Low and Co., 188, Flett Street, London, 1886.

genial hearty way with everyone, by his capacity for work, by his insatiable lust of finishing everything he took in hand; every letter answered, every day's work cleared before the night. Serving on a jury at South Kensington in 1884, he arrived one day late from Barnes, and found that he had been appointed reporter in his absence. His most energetic and quite unanswerable protest was of no avail. Overwhelmed as he pleaded by other work, this new task nevertheless was done before night, and the report was brought next day. And so in every other thing; no one sharper than he in detecting difficulty—no one more resolute in conquering it. No one more capable in organising effort to that or any other end. We suppose that with Mr. Jacob Wilson—with whom we mourn as bitterly as we know he does, the loss of his great friend—with Mr. Jacob Wilson he shares the credit of the extraordinary success of the immense annual performances of the National Society in its showyard, when the efforts of many months culminate in a week's display—in itself the greatest possible proof of administrative power.

Hearty, genial, bright, and merry with his friends—full of information on all the subjects within his own professional field and in many others—capable in any company, whether English, French, or German—encouraging, inspiring, with plenty of the word of command, and any amount of sympathy for those whom he directed—himself always setting the example of hard work—courteous and friendly even with his opponents, as the present writer can declare, for he opposed the original appointment all he knew. No one knows better than he what a loss we have all sustained. No one is more ready than he, among those who knew him best, to mingle his tears with theirs over his untimely grave. Mrs. Jenkins and his family may be assured that they have with them the heartfelt sympathy of the whole English agricultural world.

The funeral took place at the picturesque old village church of East Barnet on Thursday afternoon. The coffin was covered with wreaths, among them one from H.R.H. the Prince of Wales, bearing as its legend the word "Equality," in reference to the great leveller Death; another from Lord Egerton of Tatton, the president of the Society; another from the staff of the Society at Hanover Square. Telegrams had been received from Colonel Kingscote, Mr. Charles Randall, Mr. M. Reynard, from Germany, Mr. H. J. Hine, and others who were unable to be present. Mr. W. Wells, a past-president of the Society, Mr. Jacob Wilson, Mr. Walter Gilbey, and Mr. Chandos-Pole-Gell who had come from Derbyshire to do honour to his friend, represented the Council of the Society.—*The Agricultural Journal*.

The Dairy.

Novelties for the Dairy.

(By PROFESSOR SHELDON.)

AFTER all it is more than questionable whether progress in the management of dairies has kept pace with the invention of new, and the perfecting of old dairy equipments. In any case, it is true that the mere possession of the newest and best appliances will not ensure the production of fine cheese or butter. The art of dairying is not one which can be made mechanical, like that of the weaving of silk or cotton. The equipment of the dairy, or factory, or creamery, may be perfect in all its details, as well as in its general arrangement, but this is in itself no guarantee of the production of first, or even second-rate dairy goods. It may even be said of some instances that this very equipment is, if not a cause, still an explanation of failure in the dairy; inasmuch as it has led some superficial persons to become careless of first principles, and to depend on machinery to do that which can only be accomplished by the exercise of care, skill, method, and intelligence. And I have known instances where fine cheese and butter had been regularly produced by the aid of the rudest and most primitive of dairy paraphernalia. I have known cases, too, in which a dairy has gone wrong when new and improved appliances have been put into it.

All this, however, is attributable not to appliances, but to persons. It may be confidently said, in fact, that the possession of new inventions, and of improvements on old ones, is in itself, or ought to be, essentially a means to an

end, and that end a good one. New appliances in the dairy do not in any sense interfere with the perennial and constant need which exists and always will exist for unceasing care and watchfulness. What they really do is to diminish toil and to make dairy management a pleasanter task. All else depends entirely, so far as the dairy itself is concerned, on the persons in whose hands the appliances are placed. You may, in fact, put bread into people's mouths, but you cannot eat it for them. And so it is that people who have the management of dairies have need to exercise their wits just the same with new appliances as with old ones, though they may not need to use their hands as much.

In our day, and quite recently, an extraordinary reform, and even revolution, has been effected in all matters relating to dairy equipments. Old models have been remodelled, and entirely new inventions, some of them of a remarkable and almost startling character, have been produced; and the cry may well be, "still they come." One of the most interesting and most wonderful inventions of the age is the cream separator, even the initial idea of which is barely ten years old. Already this admirable machine has been developed into various forms and manifestations. There are several distinct machines of this order, each of them differing fundamentally in construction from all the others, yet all of them working from the same initial idea. These machines are being modified and adapted in one way or another to suit the requirements of those who wish to employ them. The Laval machine, in particular, is being made available to the requirements of any kind of a dairy to which it would be an acquisition at all, and we already have it for steam power, without an engine, and for hand power where no steam is available.

The Dairy Supply Company are much to be commended on having introduced the Laval turbine separator and the Laval hand-power separator. The former of these is, practically, separator and engine combined, a supply of steam to the base of the machine being all that is necessary to do the work, so that people who have steam boilers and no engine may operate the machine with perfect success. It seems probable, indeed, that this form of separator may become preferable in almost all cases to one which needs an engine and a belt to drive it. The hand-power machine is capable of separating, with one-man power, as much as thirty-five gallons of milk per hour, the cost of the machine being only £24; and there is a smaller machine of the same make, suitable to be operated by a strong active woman, if need be, which separates twenty-five gallons per hour, and costs £19. Here we have a long felt want supplied, viz. that of manual separators, suitable for either large or small dairies, which have no steam or water power. These adaptations of the Laval Separator follow each other so quickly, that we may well pause to enquire when the limits of adaptability of this machine will have been reached.

The firm named introduced some little time ago a centrifugal butter-maker called "The Delaitense," which, acting on the principle of the cream separator, drives butter-milk and water out of freshly-churned butter, without in the least injuring the grain or texture or granulation of the butter. In this way the grain of the butter is preserved, and the keeping properties left intact. After passing through this machine, or rather into it, and out again—for it does not go through it—all the pressing the butter requires is that which is necessary to consolidate it into a compact mass. Assuming that perfectly fresh butter is wanted, or that the butter has been brined sufficiently in the churn, while in a granular condition, the Delaitense obviates all "working," so-called, of the butter, with the view of getting out the moisture, and all it wants is pressing into a firm mass, in order to exclude the air. This novelty is also a hand-power machine in its smaller sizes, costing £12, and will probably find its way into the hands of many dairymaids who wish to make butter which is simply and undeniably perfection. I am able personally to bear testimony to the merits of this machine, inasmuch as it does its work thoroughly, and is easily within the power of one man, or even of an active woman.

Milk-testing machines have been longed for ever since the Food Adulteration Act was passed, since the milk trade assumed such enormous dimensions, and since cheese factories were established. Close on ten years ago I saw at the International Dairy Show in Hamburg a small mechanical arrangement by which a wheel was driven round at a very high rate of speed. To the spokes of this wheel glass bottles containing milk were attached, and the

revolutions of the wheel caused the watery or heavy portion of the milk to fly to the outer circumference, leaving the cream collected at that end of the bottles which was nearest the axis of the wheel. This implement, indeed, contained a demonstration of the initial idea of the cream separators, which are now so commonly used in large establishments where cream is wanted and butter is made.

The simple idea embodied in the Hamburg machine, has been, I am glad to see, made handy and practical in Messrs. Freeth and Pocock's centrifugal milk tester. This instrument, which is worked by hand power, is simple and reliable, and in a minute or two will accurately demonstrate the percentage of cream which milk contains. Four samples can be tested at one time, and a machine of this description ought to be of great value in establishments which receive milk from many dairies. It will be useful in cheese factories to detect possible, and to test suspected, cases of adulteration or of skimming.—*Live Stock Journal*.

Guenon's Escutcheon Theory.

The milk mirror or escutcheon, which was discovered in its relation or supposed relation to the milk yield, by Guenon, a Frenchman, is formed by the hair above the udder, extending upwards between the thighs, growing in an opposite direction from that of the other parts of the body. We take this description from a well-known writer, because words cannot be employed that will convey a more definite idea of the milk mirror. Well-formed mirrors, ordinarily beginning before the four teats in the middle and ascending to the vulva or even higher—the hair growing upward—are evidences, according to the Guenon theory, and the cow possessing the mirror has arteries that are large and fully developed to supply the milk glands. The well-developed mirror, therefore, is supposed to indicate largeness of the arteries which supply the milk glands with blood. In the bull the escutcheon is shorter and narrower, because the arteries which correspond to the lacteal arteries in the cow are not so large. According to this theory there should be just as much care in selecting a bull with a good milk mirror as in selecting a cow. When speaking upon the subject we always remind the reader that an animal which is really not a milker may have a well-developed escutcheon. But that does not impair any value that the theory may possess. It is often the case that a cow that belongs to a milking family has had her milking qualities subordinated to beef production. But such a cow has within her good milking qualities, and by a proper course of breeding they may be developed to the highest standard of offspring. We have never subjected the theory to any practical test, but from all the evidence that has been presented to us we have reached the conclusion that there is really something in it.

Before all Herd Books.

No tendency is more marked in all established institutions than is a settled dislike of enthusiasm. We cannot borrow an illustration from Law, Physics, or Divinity, for fear of roughly tearing away the cicatrix from some as yet unhealed wound. But the "above all, let us have no zeal" (from the address of the Great Napoleon, when he had attained to absolute power), may serve as a case in point. Still, it is a fact that, without the power of creating enthusiasm, every established institution would quickly perish from a kind of moral dry rot. Enthusiasm means a capacity for growth; and that which ceases to grow is in preparation for a more or less rapid decay. It is true that what is alive may soon be "kicking," but, embarrassing as unseasonable "kicking" may be, it is certainly more hopeful than is that cold, clammy condition of things which we describe as death.

It is believed that what is called "pure" breeding in Great Britain is little, if at all, more than an hundred years old. Whatever has come down to us, from earlier times before Bakewell, tells of a very general desire to improve the live stock of every part of the country; but it also tells that the method of doing this was to introduce some alien blood, the more remote and strange to the local flocks, herds, and studs the better. We have authenticated information of Holderness cattle sent into Aberdeenshire, of a bull from Yorkshire taken into the breeding districts of the Wye, of a Devon or Sussex bull

RESTORATION OF FERTILITY.—In an article in the *Country Gentleman*, by Sir J. B. Lawes, under this heading, the world-renowned scientific farmer has some very interesting facts about the amount of nitrogen and carbon in the soil. He said: As there can be little doubt that the organic substances which we find in our soils had their origin in the atmosphere, we have only to leave the impoverished soil alone a sufficient number of years in order to enable the natural vegetation to restore the lost organic matter; and, looking to the vast period of time during which vegetation of some sort must have existed on the earth, there does not appear to me to be any difficulty in accounting for the large stores of carbon and nitrogen which we find in our soils and sub-soils.

A new method of washing butter has been patented in Germany. As soon as gathered in the churn in particles of about one-tenth of an inch in size, it is transferred to a centrifugal machine, whose drum is pierced with holes and lined with a linen sack, that is finally taken out with the butter. As soon as the machine is set in rapid motion the buttermilk begins to escape, and a spray of water thrown into the churn washes out all foreign matters adhering to the butter. This wash is kept until all this comes away clean, and the revolution is then continued till the last drop of water is removed, as cloths are dried in centrifugal wringers. The butter is then taken out, moulded, and packed. It is claimed that the product thus so quickly freed from all impurities without any working or kneading has a finer flavour, aroma, and grain, and far better keeping qualities, than when prepared for market in the ordinary way.

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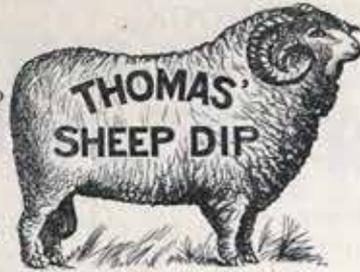
Hold Sales every Wednesday and Friday of

Dairy Produce, Poultry,

Carcase Pork, &c.

Account Sales rendered within Four Days from
Date of Sale.

A
Perfect
SHEEP DIP
Destroys
all
Parasites,
Ticks, Lice,
or Scab.



The
CHEAPEST,
Most
RELIABLE,
and
Most
LASTING

The Wool consigned to Messrs. Helmuth, Schwartz & Co., London, by the Pastoral Society of New Zealand, was reported upon as "of Free, Staple and Sound, of Good Lustre and Soft Feel, and with little or no smell."

Messrs. Miles & Co., of Christchurch, report of last season's clips that those who had been previously dipped with

THOMAS' SPECIFIC

Realised fully One Penny per lb. extra, and some as much as 3d. per lb. extra, clearly due to the use of this Specific.

Flockowners! Consider what this means in your Account Sales.

24 Prize Medals and Certificates.

NON-POISONOUS IN USE.

JEYES' SHEEP DIP

FOR

Dipping Sheep and Lambs. Cures Mange, Scab, and Kills Lice, Ticks, Warble Fly, &c. Heals Wounds. Prevents Fly. Cures Worms in the Throat in Lambs. Cures Foot and Mouth Disease. Cures Foot Rot. Improves the Wool.

Jeyes' Perfect Purifier,

BEST AND CHEAPEST DISINFECTANT.

For Washing Horses—Kills Insects, Cleanses the Skin and Improves the Coat. For Broken Knees, Quitter, Grease, Cracked Heels, &c. For Shoulder Galls. Heals Wounds. Kills Vermin in Dogs, Fowls, &c. Cures Mange. Kills Lice, Purifies Kennels, Stables, Poultry Houses, &c.

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Sanitary Engineers,

50 BOURKE ST. WEST.

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Australian Carriage Factory,

MANUFACTURER OF

DEXTER AND OTHER BUGGIES
OF LATEST STYLES.

☛ All Materials of Best American Quality. ☛

Workmanship Guaranteed.

REPAIRS PROMPTLY EXECUTED.

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Princes Bridge, Sandridge Rd.

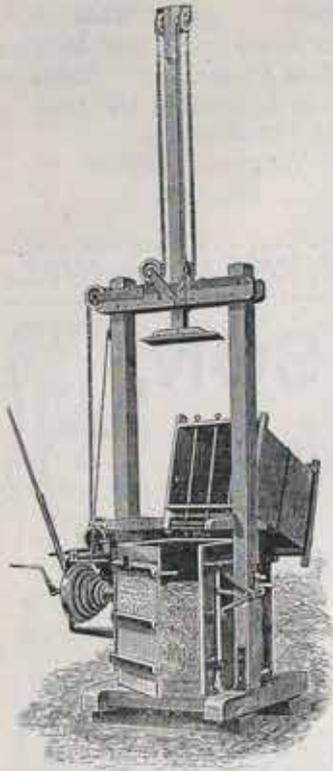
SOUTH MELBOURNE.

D. FERRIER'S PATENT LEVER WOOL-PRESS

First Order of Merit awarded this Press at the Melbourne International Exhibition, 1880.

HUMBLE & NICHOLSON

Makers, Geelong.



The usual screw is dispensed with, and the pressure brought to bear by means of a strong rope or chain, working in sheave pulleys overhead, attached to a Ram, and winding on a fusee, which is made in the shape of a suddenly tapered screw.

The rope works on the large part of the Fusee, when the pressure is light, and passes down to the taper end as the pressure increases, being worked by a lever fixed on the centre spindle.

The top Box is hinged to side Brackets, and turns down to the floor, which greatly facilitates the putting in of the wool, and renders any second floor unnecessary, and when filled is easily placed back in position.

When the bale is pressed and the sides sewn, the Ram is lifted by a small rope from the Fusee, turned by a handle.

It will be understood how very much quicker the power is brought into application by this means than by the ordinary screw press, and double the work is got through by the same number of men.

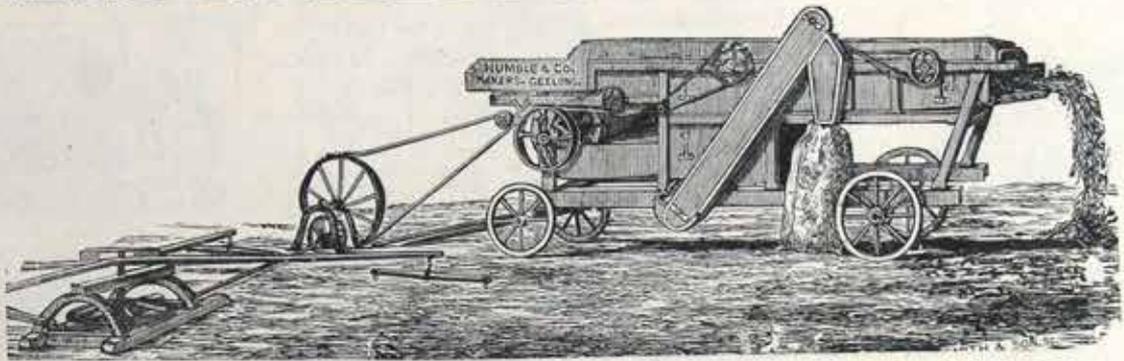
Special attention is directed to the fastening of the Packs before the Wool is put in, which is done in an exceedingly quick and simple manner: four pieces of wood are fitted into the recesses of doors, which hold the Pack securely in position and to the side catches for fastening the doors, which are held in position by a vertical bar, and relieves them simultaneously.

The side door is also held in its place by a catch, which at any time can be relieved instantly, the door falling back and allowing the bale to be removed.

At the Melbourne Exhibition competition this Press turned out 3 Bales of Scoured Wool in 28½ minutes, being considerably less than any other Press, although one had the advantage of being driven by steam.

HUMBLE & NICHOLSON, ENGINEERS.

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FOUR-HORSE POWER THRESHING MACHINES.—These Machines are found to be very convenient to farmers who wish to thrash their own grain; or in some cases where three or four neighbours combine. They will thrash from three to four hundred bushels per day with horse power; or if worked with steam power, about six hundred bushels daily.

We have been making these Machines for the last seventeen years, and have been awarded a large number of prizes at the different Shows, including the National Show at Melbourne and other places. The above is strongly made with Wrought Iron Drum, Steel Spindle; all bearings of the best material, no time or expense being spared to turn them out in a substantial manner.

HUMBLE & NICHOLSON,

VULCAN FOUNDRY, GEELONG.

Manufacturers of TAYLOR'S PATENT REFRIGERATORS
And Cold Dry-Air Apparatus,

ALSO

TAYLOR'S RABBIT EXTERMINATORS,

The most effective when used with the chemical dust, which is supplied by Vulcan Foundry.

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SEEDSMAN AND PLANT MERCHANT,
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COMMISSION GENTS, &c.,
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Chaff, Hay, Butter, and
General Produce Merchants,
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WHITE & ALLAMBY
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Single and Double, Carriage, Brougham, Gig, and Buggy, in ALL of which none but the best English and American Leather is used in making up.
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YARRA BANK ROAD SOUTH,
(Below Langland's Foundry.)

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Nurserymen & Seedsmen,
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All Vegetable and Agricultural Seeds tested to see they grow.

Lists of Seeds or Plants Free on Application.

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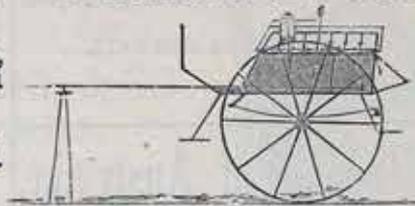
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STEAM CARRIAGE WORKS,
244 AND 245 SWANSTON STREET,
And 6, 8, 10, 12, 15, 17, 19 & 21 STEWART STREET, MELBOURNE.

Awarded GOLD MEDAL for Special Merit at London Exhibition of 1873, and TWO GOLD MEDALS for best Carriages at Melbourne Shows of 1883 and 1884, and THIRTY-TWO MEDALS (1st Prizes), at Exhibitions and Shows of 1872, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, and 85. Also, THREE FIRST AWARDS OF MERIT (1st Prizes), at International Exhibition of 1880.

NOTICE.—Referring to above, D. WHITE desires to inform his numerous Customers and the Public generally that he has secured and completed EXTENSIVE ADDITIONS TO HIS COACH FACTORY, and with the increased accommodation and Steam Plant, and the Largest Stock of Seasoned Timber in Melbourne, is now prepared to meet the increasing demand for his well-known Carriages and Vehicles. The new premises are in Stewart Street, immediately opposite the present Factory. Patentee of the Improved Carriage and Buggy Hood Apparatus, for raising or lowering the Hood from the inside. Every description of Vehicle built from the best imported Materials and Well-seasoned Timber.

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Ladies' Pony Phaetons,
Victoria Phaetons, and
every description
English Design Carriage our Speciality.



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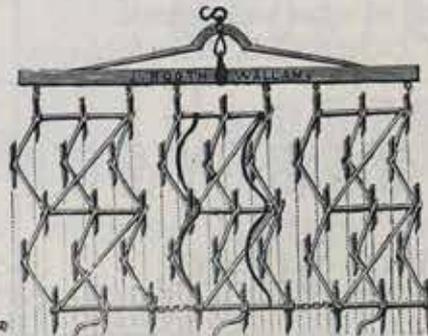
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STEVENSON & ELLIOT,
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H.R.H. the DUKE OF EDINBURGH, K.C.B., and
Carriage Builders
To His Excellency the Governor Sir HENRY LOCH, K.C.B., and all the late Governors for the past 25 years.
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A variety of Second-hand Vehicles kept in stock.
Heraldry executed in correct style.
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5 SILVER MEDALS.

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Harrow Maker,
RAILWAY STATION WALLAN.

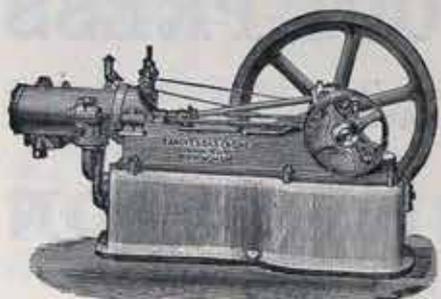
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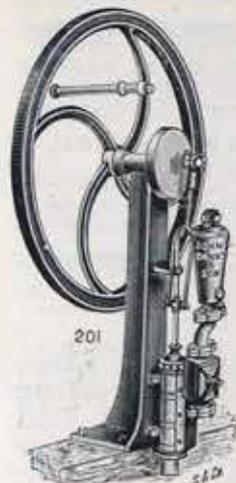
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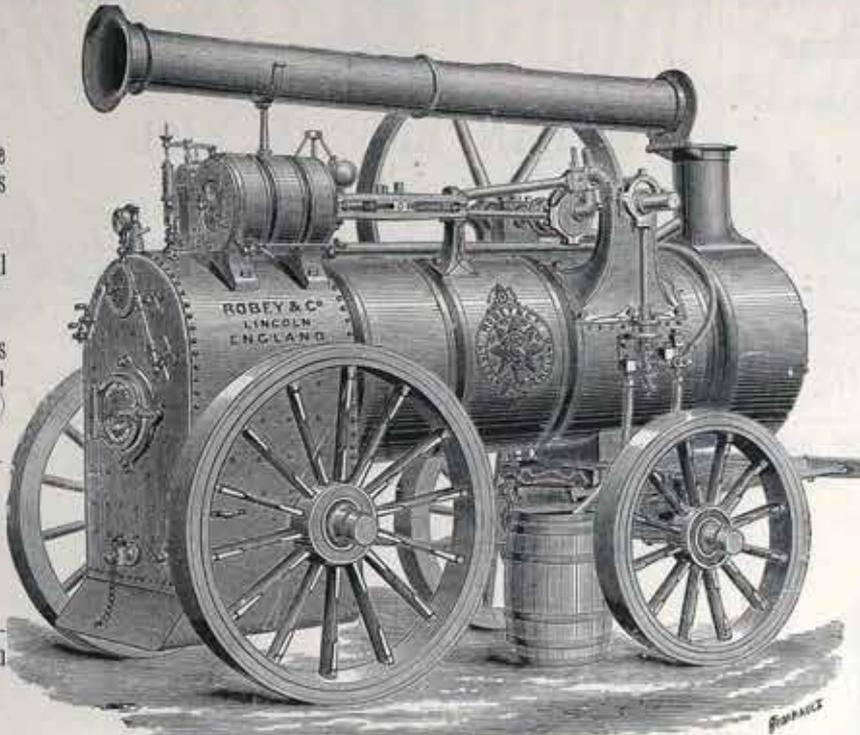
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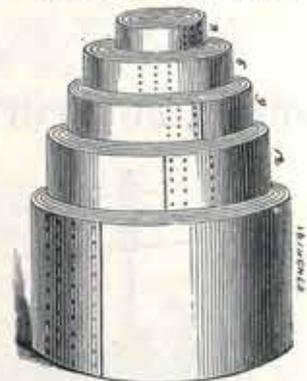
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VICTORIA

Vol II.—No. 21. [Repl. as a Newspaper.]

MELBOURNE, APRIL 22ND, 1887.

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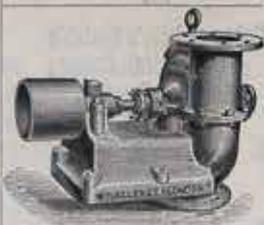


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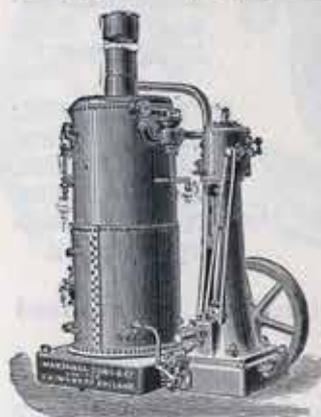
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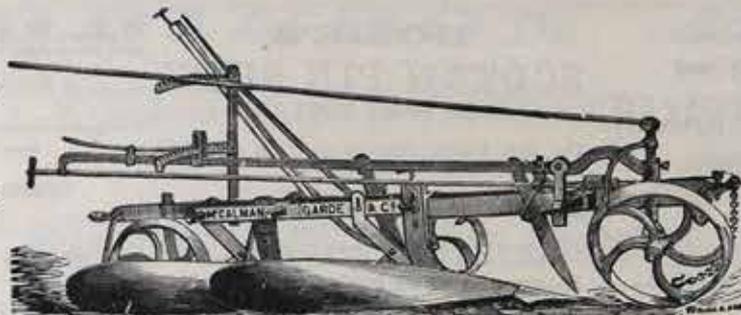
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GAUNTS ENGLISH LEVER WATCHES still hold their ground against all competitors as the most durable and trustworthy timekeepers in the world. The favorable opinion formed of Gaunt's watches by the Australian public has been endorsed by the jurors of the several Exhibitions in which he has competed, and his last crowning success, the obtaining HIGHEST AWARD FOR HOROLOGY at the Melbourne International Exhibition, should convince the most dubious that his watches cannot be excelled. Seven Gold and other Medals. Price from £5 6s. to £10 10s. Get the opinion of any of your friends who has one of my watches.
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ROBERTSON & MOFFAT,

LARGEST

Furnishing Warehouse

IN AUSTRALIA.

Furniture Showrooms—

16, 18, 20, 22, 24, 26, 28, 30, 32 POST OFFICE PLACE,

USED THROUGHOUT THE WORLD.

McDOUGALL'S SHEEP DIP.

PERFECT SAFETY, NON-POISONOUS.

Dip with 20 Years' Record and Second to None in the Market.

As certain as arsenic in its effects in exterminating all in-scots, and without its danger. It is the only true specific for scab. Finely stimulates the growth of Wool.

Trial Once Made, Always Used.

PRICE, 5/6 PER GALLON, 5 GALLON DRUMS.

Direct gents—

GOW BROTHERS,

8 MARKET BUILDINGS,

WILLIAM STREET.

PRICE WILLIAMS,

FRANKLIN STREET, WEST MELBOURNE,

MANUFACTURER OF THE WELL-KNOWN

Williams' Rack & Pinion Wool Press

Rack and Gear Steel Press for the use of large stations. Lever & Chain Press, with Folding Top Box, for the use of smaller stations. Lever and Chain Farmer's & Selector's Press. Price, £22 10s.

As the season for this latter kind is now approaching, those requiring them should lose no time in sending their orders. Owing to the general satisfaction given by those supplied for last season, orders are now freely coming in, and a large demand is looked for. The following is a fair sample of a large number of Testimonials to hand for those supplied last season:—

MR. PRICE WILLIAMS—

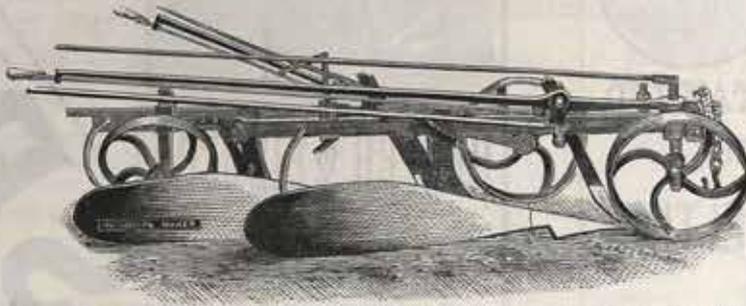
BALLYMORAN, JAN. 23RD, 1886.
Dear Sir.—I have much pleasure in informing you that the Farmer's Wool Press I purchased from you last October, gave me every satisfaction. We turned out very compact small bales, about 34 cwt., but could have them heavier if we wished with once down. By what the Wool Brokers tell me, they would clear themselves in two seasons to anyone having twelve bales. Since done with the Wool, I have had it in constant use as a Cheese Press, and I reckon it worth half its cost for that. We have weights on the levers. Any number of Cheeses can be put in at once. It would make a good Press for Hay or Straw, and for Grapes or Apples it is just the thing. I can highly recommend it as a most useful, substantial, and cheap article.—Yours truly,
HUGH GORDON.

McDougall's Sheep Dip

McDougall's Sheep Dip

JOSEPH NICHOLSON & CO., AGRICULTURAL MACHINE MANUFACTURERS.

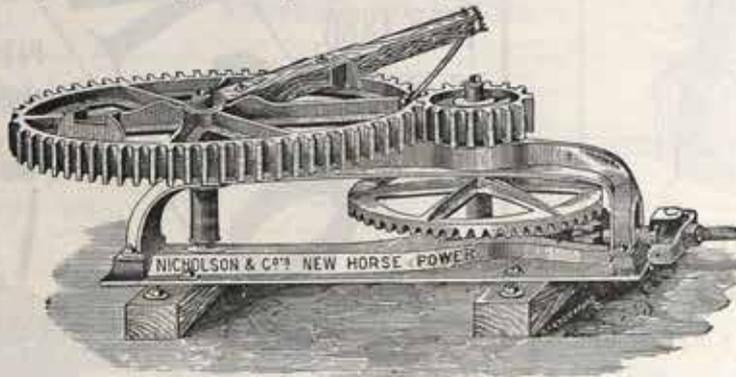
Winners
of the Champion
Prize of One Hundred
Guineas in the Inter-
colonial Match held
at the Werribee.
July, 1882.



Prices—
Doubles, £21.
Trebles, £28 & £29.

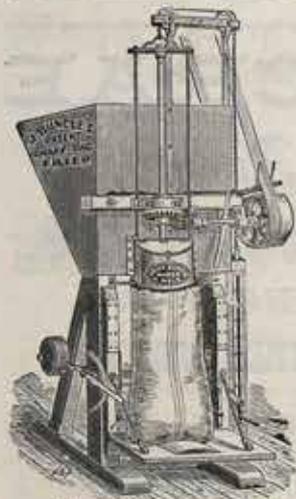
J.N. and Co.'s DOUBLE and TREBLE FURROW PLOUGHS are constructed of the best materials, and every care is taken to combine lightness with strength. The sizes of the furrows can be easily adjusted to any required width or depth. The implements are of great durability, and the draught is as light as that of any Double or Treble Ploughs manufactured.

Price, including two
Poles,
£18.



Price, including two
Poles,
£18.

This most useful Machine is made entirely of Iron, simple in construction, very strong, and easily managed. It is also fitted with a spring clutch, which prevents the poles from striking the horses' legs when the Machine is stopped. The pole or poles (as it can be used either as a Single or Double Horse-power) are fixed in such a manner that the pull is direct; the strain thus being reduced to a minimum, the speed is sufficient without the expense of an intermediate motion.



BUNCLE'S Patent Chaff Bag Filler.

or without Baggers. A few attempts have been made by some to supply such a want, but probably not having a theoretical as well as a practical knowledge of machines, have not been able to reduce the complicated movements in their machines, and which are perfectly unnecessary—as witness the Unique Simplicity and correctness in design, and the admirable working of **BUNCLE'S PATENT BAG FILLER** compared with the few others tried at work.

For the information and convenience of customers, a machine is kept constantly set up ready to show at work in **BUNCLE'S PARKSIDE IRONWORKS**, and many customers have witnessed **80 to 90 lbs.** of Chaff put in a bag in 15 seconds!!! which, after making allowances for time removing the full bag and replacing an empty one, would easily on an average keep **Four** of **Buncle's No. 1 Chaffcutters**—well, if there is any doubt, say **Three** Machines clear of all the Chaff they cut (medium length.) Of course the Machines are arranged to put in as light weight as you like, or you can fill up and burst all your Bags—to pieces. As a trade requirement (in addition to filling bags) the necessity for a **Mixing Machine** is a long felt want, the laborious and unsatisfactory way at present adopted cannot much longer be endured, and there is no necessity for it!! as J. Buncle can arrange to "Blend" the worst and the best samples "To a Hair" at the least possible expense with the best results.

The season is now coming on when all those who intend having the latest improved Machines should forward their orders as early as possible, to prevent disappointment in the day of their need.

J. Buncle's Machines have, as usual, been awarded **First Prize** at all the leading shows wherever he exhibited last year (1885), and the many improvements introduced and constantly copied by other makers, is the best proof of the value of the continued consideration in all that affects the profits and welfare of his customers.

Chaffcutters with 14-in. wide mouthpieces and Newest Designs, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

Sirs and Gentlemen, yours respectfully,

Parkside Iron Works, North Melbourne.

Catalogues Post Free on Application.

JOHN BUNCLE.

VICTORIAN RIFLE CLUBS.

Members are informed that
W. H. HUNTER
 SADDLER,
 15 POST OFFICE PLACE & 11 BOURKE ST. WEST,
 is the GOVERNMENT CONTRACTOR, and the Only Saddler
 Appointed for supplying the Regulation Riding
 Saddle, Bridles, Leggings, and Wallets.
 Any of the above will be supplied in any quantities to Members
 of RIFLE CLUBS at the Contract Prices. Apply early.

DANIEL TOPP,

Late J. J. Walker, Wholesale & Retail

SADDLE AND HARNESS MANUFACTURER,
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Manufacturer of every description of Saddles and Bridles; Gig,
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 Scotch Tandem, Leader and Outrigger Harness.

D. T. wishes to call particular attention to his Colonial made
 Rough and Smooth, Bullockhide, Hogskin, Bush and Town,
 Saddles, which for Shape, Price, and Quality, cannot be equalled.

TRADE SUPPLIED.

WM. ADAMSON,

Seed Merchant,

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SAMPLES AND PRICES.

Grasses—Lucerne, White Clover, Red Clover,
 Mangolds, &c.

FORWARDED on APPLICATION.

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WHEELWRIGHTS,

AND GENERAL BLACKSMITHS,

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(In which are amalgamated the Australasian Agency and
 Banking Corporation Limited and R. Goldsbrough & Co.)

WOOLBROKERS.

Capital, £3,000,000.

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MAKE LIBERAL CASH ADVANCES on the existing CLIP
 of WOOL and on STATION SECURITIES.

They hold AUCTION SALES of WOOL twice each week
 during the season, and at frequent intervals during the
 winter months.

AUCTION SALES of TALLOW, HIDES, SHEEPSKINS,
 &c., are held three days each week throughout the year.

AUCTION SALES of WHEAT, OATS and FLOUR are held
 each Wednesday during the grain season.

Three Months' Free Storage allowed on Grain.

Liberal Advances made at bank rates on receipt of produce
 into warehouse.

Full rates of interest allowed on fixed deposits, current
 accounts, and financial business of all kinds conducted.

Branch in Sydney: No. 93 Pitt-street.

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BOURKE & WILLIAM STREETS, MELBOURNE.

Shamrock Hotel,

NUMURKAH.

W. G. SMITH, Proprietor.

FIRST-CLASS ACCOMMODATION.

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 GOOD STABLING.

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 Near Spring Street,
MELBOURNE.

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 HIGH-CLASS FOX TERRIERS.**

The English Prize-winners, imported to strengthen my
 collection, are not equalled by all the kennels in Australia.

CHAMPION RICHMOND JACK.
 THREE TIMES WINNER OF THE FIFTY-QUINNA GRAND CHALLENGE CUP.

CHAMPION DECKER.
 This celebrated English winner, has sired more prize-takers,
 than any fox terrier in the colony. Vide Nat. Ag. Soc. and Vic.
 P. and Dog Society's Prize Lists—1883, 1884, 1885.

**Sattire (by Joker); Magnolia (by Spades); Leaguer (by
 Corinthian); Daphne II. (by Plunderer); Melbourne
 Bill and Game Sans Merit (by the Belgravian); Arius
 (by Tackler.)**

The above lot are from the very best strains, direct male
 lines, and only equalled, by about six kennels in England.

THE COLONIAL-BRED STOCK ARE CHIEFLY FROM THE ABOVE.

MELBOURNE STEVEDORE (by Decker).
 A WINNER EVERY TIME EXHIBITED, PROVING HIMSELF THE BEST
 COLONIAL-BRED DOG IN THE COLONY. Vide 1884,
 1885 Prize Lists.

**MELBOURNE JOKER (by Leaguer, ex Wilfrida,
 (imp.), by Rouspe, by Brockenhurst Rally, ex Satire.**

MELBOURNE RAGE (Brother to Melbourne Joker).
 Winner of three Prizes, Exhibition Building, 1885.

MELBOURNE NELL (by Diamond Jack, ex Alice.)

SHELFORD RUBY (by Decker, ex Shelford Fury).
 Guaranteed Pedigrees with young stock. Photos, 13d. stamps.
 ADDRESS—9 DARLING STREET, SOUTH YARRA.

THE NATIONAL

Agricultural Society of Victoria.

Member's Subscription - £1 per annum.
 Life Member's Do. - £8.
 Governor's Do. - £3 per annum.
 Life Governor's Do. - £24.

The privilege of membership consists of
 power to vote at the Election of all Office-
 bearers, of free admission to the Library,
 Reading Room, Lectures; and, with two
 ladies, to the Society's Exhibitions and Grounds
 at all times.

A copy of this Journal, which is published
 monthly (on the Friday after the Council
 Meeting), is also forwarded to each member.

Members' Tickets may be obtained on
 application to the Secretary at the Office, or to
 Mr. JOHN HEDRICK, the Collector.
 Kirk's Bazaar, Melbourne.

THOMAS PATTERSON,

SECRETARY.

Melbourne, 2nd Feb., 1887.

THE NATIONAL

Agricultural Society of Victoria.

Shorthorn Derby Sweepstakes, 1889.
 Hereford do do 1889.
 Ayrshire do do 1889.
 Jersey (late Alderney) do do 1889.

A Sweepstakes of £1 each (10s. at time of nomination,
 and 10s. at date of general entry for Show), with
 £5 added in each case for Heifers calved between 1st
 July, 1886, and 1st July, 1887, to be divided and
 awarded as 1st, 2nd, and 3rd Prizes, for three-year
 olds, at the Society's Show, 1889.

Nomination of Calves of each breed respectively
 will be received on payment of a nomination fee of
 10s. each. Calves to be nominated within one month
 of date of birth. Nominators to fully describe the
 color of each calf entered, and to state the name of
 the sire, dam, and sire of dam, together with the
 date of calving. Entry forms on application.

THOMAS PATTERSON,

Kirk's Bazaar, Melbourne. SECRETARY.

ROSS & WESTERN

IMPORTERS OF

Builders', Cabinetmakers' & General Ironmongery

LAMPS, LAMPWARE, & GASFITTINGS.

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MELBOURNE.

A large assortment of Carriage and Buggy Lamps
 always on hand.

per day to be made by persons
 of either sex, in their own
 localities, at work for use. New
 business. All met with wonder-
 ful success. Any one can do the work. Capital not
 required. We will start you. Outfit worth £1 mailed
 free. The employment is particularly adapted to the
 region in which this publication circulates. Boys and
 girls earn nearly as much as men. Full particulars
 and instructions mailed free. Now is the time—don't
 delay, but write to us at once. Address Stinson &
 Co., Portland, Maine, United States.

TRIUMPH OATS.

100 Bags of Triumph Oats for sale at

Australian Mortgage & Agency Co.'s Warehouse,

COLLINS STREET WEST.

Notices.

All communications for the Editor to be
 addressed to the Society's Office, Kirk's Bazaar,
 Bourke Street West, Melbourne.

Business communications to the Publishers,
 Melbourne Place, off Russell Street, Melbourne.

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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
 requested to forward to the editor the dates on
 which their respective exhibitions will be held,
 also copies of their prize schedules as soon as
 they are published.

MAY.

20 to 25.—Agricultural Society of N.S.W., at
 Sydney.

JULY.

21.—Deniliquin, N.S.W.

AUGUST.

2, 3.—Corowa, N.S.W.

23, 24, 25, 26, 27.—National.

SEPTEMBER.

7, 8.—Wimmera, at Stawell.
 8, 9.—Ovens and Murray, at Wangaratta.
 14.—Wycheproof.
 14, 15.—Donald.
 22, 23.—Echuca.
 28.—Numurkah.

OCTOBER.

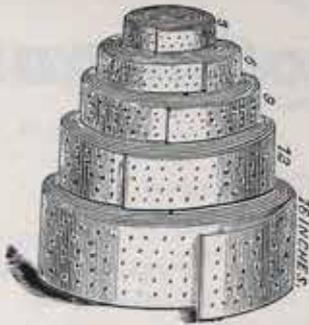
4, 5.—Rochester.
 5.—Euroa.
 6.—Bacchus Marsh.
 6.—Cashel.
 6.—Tungamah.
 12, 13.—Bendigo, at Sandhurst.
 13.—Murchison.
 16.—Nagambie.
 19, 20.—Tatura.
 26, 27.—Shepparton.

NOVEMBER.

10.—Heathcote.
 16, 17.—Kyneton.
 24.—Ballarat.



DOUBLE OAK-TANNED
WELL-STRETCHED
MACHINE BELTING.



FRANK VIAL,

"UNIVERSAL"

LEATHER BELT FACTORY,

MACAULAY ROAD,

HOTHAM,

And at 59 MAIR STREET, BALLARAT.

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On the Most Approved

CONTINENTAL AND AMERICAN PRINCIPLES.

The "UNIVERSAL" BELTS are acknowledged by all who have used them to be the Best in the Market.

Special Lists for BELTS for IRRIGATION PURPOSES.

A Large Stock of the "PREMIER" BELT LUBRICANT, and Well-Seasoned BELT LACES, kept in Stock.

TESTIMONIAL.—[copy.]

UNION FLOUR MILLS,
Brunswick-street, Fitzroy,
March 17th, 1886.

Messrs. Frank Vial & Co.,
Macauley Road, Hotham.

Gentlemen,—In reply to your enquiry respecting the (23") twenty-three inch double belt supplied by you to ourselves, we beg to state we have been working it for a period of seven months, and we find it to be all we could desire, as also is the other belting which we had from you.

We therefore feel great pleasure in recommending your belting to anyone requiring the same.

We are, Gentlemen, yours truly,
(Signed) W. S. KIMPTON & SONS.

Other Testimonials received too numerous to print, which with Price Lists, can be had on application.



REAPER & BINDERS

WON

EVERY FIELD TRIAL

IN VICTORIA

DURING SEASON

1885-1886,

IN WHICH
THEY HAVE
COMPETED.



HORNSBY

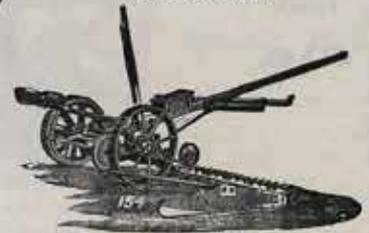
MOWERS

AND

REAPERS.

PARAGON, CHALLENGE
DIAMOND, ENCLOSED GEAR

WINNERS OF THE ROYAL AGRICULTURAL
SOCIETY'S PRIZES.



I. G. FOSTER, SOLE AGENT FOR VICTORIA,
& A'BECKET STREET, MELBOURNE.

AIRD & McCRAE

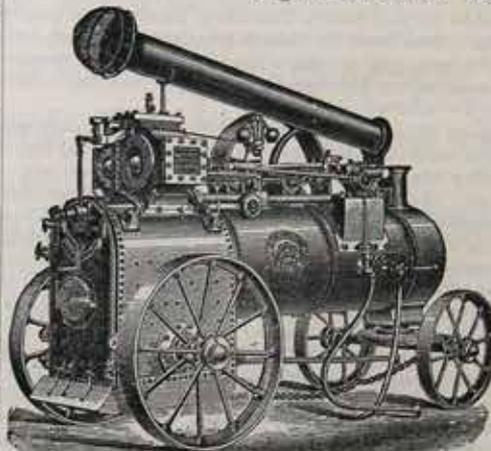
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MACHINERY MERCHANTS,

ROBB'S BUILDINGS,

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Agricultural Engineers.



Compound Engines

Portable Engines

Semi-Portable or Fixed Engines

From 20 to 100 I.H.P.

Threshing Machines

Saw Benches

Pumps

Seed Drills, &c.

Messrs. GARRETT & SONS' ENGINES afford marvellous economy of fuel and water, and enormous power in proportion to their dimensions, and are strongly recommended in preference to the ordinary Double Cylinder.

AIRD & McCRAE, as Stock and Station Agents and Machinery Merchants, are prepared to supply Plant for Irrigation Works, and when necessary, obtain services of Eminent Engineers for the purpose of taking levels and advising generally.

really want is facts, which can only be gathered from men of practical experience. The idea we have been working on all along is expressed by the *Planter and Farmer*, as follows:—"Nothing, if not educational, should be the motto of the journalist. The journal should be educational, and the educators (in the plural) varied in their attainments. The variety there is in minds to mould and fashion calls for as great variety in those who manipulate the plastic material. Truth is one, unified and harmonious, of necessity so in its very nature; but there are niches and crannies in its domain where only minds of certain calibre can reach. Do our readers catch our drift? We mean that were our capabilities very much greater than they are, and had we all knowledge within our reach, we could not individually present it so acceptably to some as can others. Many men of many minds need many teachers of as many kinds. The pupil teachers can do better within certain limits than the head master; simply because such live, move and have their being practically within the sphere their charges fill. Pupil teachers may help themselves most while they are working to benefit others. Now do you catch our drift? We want pupil teachers. Our editorial 'we' represents the head master who fills the presidential chair to keep order and see that good work is done by each while reserving to himself the responsibility of speaking, and uttering no uncertain sound when occasion arises for him to speak. Believing in variety, we therefore believe in good extract matter. If we wielded ever so prolific a pen, and were enriched with ever so deep and satisfactory an experience, there are pens besides ours, brains besides ours, rich experiences besides ours as worthy of use; and, therefore, while we refuse to allow our little light to be extinguished by other men's bushel, we have no thought of acting the part of extinguishers to others. Some complain of a journal (we are not speaking personally) because it has not sufficient 'original' matter; others there are who find fault because the editorial 'we' floods all else. The real question at issue, after all, is whether can the 'we' or the rest advance the cause of education most? All sorts of means on all sorts of subjects by all sorts and conditions of men strikes us in the most efficient way of embracing the wide-reaching difficulty. Yes, we incline to the thought that even in allowing utterance to a crude and false notion, in the reception it is likely to meet with, greater good may sometimes be effected eventually than had the plain truth been at first set forth. An error is almost sure so to attract attention as to arouse thought and beget opposition. Controversy thus provoked creates a lively interest. Men then begin to watch and look around them carefully for facts that do not do so habitually, and a much more healthful state of being is at last engendered as a consequence of the warfare that has raged."

A New Steam-Ploughing Plant.

Last month Messrs. T. Robinson & Co., of Elizabeth-street North, gave a public trial of a steam-ploughing plant at Essendon. The plant consists of an eight-horse power traction engine by Marshall & Sons, which draws two ordinary three-furrow ploughs, running parallel, one about six feet behind the other. The engine was so thoroughly under control that it could be as readily turned at the ends of the furrows as a pair of horses. The soil operated on was a light sandy loam, in which the plant made excellent work. A number of practical men who were on the ground expressed themselves highly pleased with the results of the trial. It was suggested that if the ploughs were arranged to work together with a joint in the centre, probably an eight-furrow plough (two four-furrows

jointed) could be drawn as readily as the six were. The success of this application of the idea of steam power travelling with the ploughs over the land in the process of cultivation, will doubtless lead to further development and improvement in details whereby plants suitable to different classes of soil will be turned out to the great advantage of the agriculturist.

New Combined Harvester.

The following is a description of Richard's new combined harvester, of which a successful trial was given last month. The machine is roughly made, being in fact an old stripper fitted up with the various adaptations by the inventor himself, and the additions can be fixed to old or new strippers. In the comb various improvements on the old style are shown. The fingers are attached by bolts and nuts instead of rivets, so that in case of accident any finger can be repaired at home, while by removing alternate fingers and replacing others a different sized comb can be readily obtained. The face of the comb is straight, in order to adapt itself to a patent adjustable crop roller, which is attached to the drum in front of the comb, and effectually prevents the knot of the straw from getting in the comb; by this improvement a much closer comb can be used. From the main threshing drum to the Adelaide peg drum, a shoot is provided, which, carrying forward the grain, causes it to be threshed a second time. The draught from the drums escapes through the wire cloth covers, and the grain and chaff are led on to the riddles. The fan is placed under the main drum, and the blast is led through a flexible tube, which automatically directs it in the required direction. This is one of the main features of the machine. The riddles are partly composed of wire and partly perforated, the main blast comes up through the wire and prevents any foreign substances choking the riddles, and also provides a light blast which prevents any grain (wild oats or otherwise) being blown over. The riddle box is kept level by an ingenious, yet simple attachment of cranks and connecting rods to the platform of the machine, which appears to answer the purpose admirably; and it is claimed that the riddles never vary in level. A board working automatically with the riddles, is fixed at the end and conveys stray grains into the heading shoot, preventing them falling into the chaff. Provision is made for the seconds to pass into another receptacle, which in turn empties itself into a bag at the off side of the machine. The clean grain is sent into a well, from whence it is led into an elevator conveying it into an iron box on the near side of the machine, which is capable of holding three bags of wheat. The box is provided with a slide door for emptying the grain. The bag to be filled is suspended from a lever fixed on a movable hand truck. The lever shakes down the grain, and when hooked in position suspends the bag, which can then be wheeled to one side. The chaff box, composed of iron, extends across the back of the machine, and also serves the purpose of keeping the tail wind from the riddles. The box when full is readily emptied in heaps or rows as desired, by a lever under the control of the driver, which opens an aperture at the bottom of the box. The machine needs no attention from the driver beyond that of an ordinary stripper, and requires oiling only once a day. During the three hours trial the paddock was visited by a large number of farmers, who, fully recognising the disadvantageous conditions, expressed their satisfaction at the result. The inventor is so confident of the success of the harvester that he has decided to dispose of his farm at Katamatite, and devote his whole energies to the manufacture of the machines. He has arranged to start business at once at Shepparton, in conjunction with Mr. J. Furphy.

The West Bourke Show.

The fourteenth annual exhibition of the West Bourke Agricultural Society, was held last month at Lancelfield Junction, under very favourable circumstances. The Show itself was a really good one, although the exhibits in several classes were not quite so numerous as on some previous occasions. The draught stallions and colts were a very creditable lot, and the mares and fillies were also good. Thoroughbred stock were not numerously represented, except in the class for mares. There was a good turn out of hunters, hacks, and trotting horses. The competition in shorthorns was limited, but the exhibits made up in quality what they lacked in number. One of the most interesting exhibits was a group of five Hereford cows, which won the prize for the best group of five cows 4-year old or over, which, in the opinion of the judges had attained the highest merit of perfection of their breed, valuation not being considered. Herefords always look well when grouped, they are so uniform in colour. This is well seen in the Melbourne cattle yards, where no cattle look so well when penned off as pure Herefords. There was a fine, though not extensive show of Ayrshire and Jersey cattle, and some very good dairy cows. Sheep were not numerous but there were some good exhibits. Not many swine were penned, but there were some grand representatives of the Berkshire breed, which is popular in the district. There was a fair show of poultry and dogs. Some very good oats and potatoes were shown in the farm produce section, while in the dairy produce there were some attractive exhibits of bacon, hams, and fresh butter. A large quantity of ladies' fancy work was shown in the shed adjoining the produce. There was a fair turn out in implements, and some good exhibits in buggies. His Excellency the Governor visited the Show, being driven to the grounds from the station in Sir William Clarke, the president's, four-in-hand drag. There was an excellent attendance of people who had a pleasant time, as the management were most fortunate in their selection of a day for their Show.

The Heidelberg Show.

The exhibition of the Victoria Agricultural Society—the oldest in the colony, was held last month at Heidelberg. In this country where everything is said to be "so beastly new, don't yer know," it is quite interesting to find something claiming age. It must also be satisfactory to those connected with the institution to feel that theirs is the pioneer one in a country where so many similar ones have been established, and where their establishment and subsequent operations have been such potent factors in forwarding the best interests of the colony. The Show which was up to the average in most classes, was a great success in point of attendance. The draught horses were not so numerous as on some previous occasions, but some fine animals were shown. Thoroughbreds were a very good class, which is not often the case in Victoria, where owners of this description of stock do not usually exhibit extensively. In Sydney it is different—the best thoroughbreds in the land are sent to the Shows. Hackneys, hunters, and ladies hunters were good classes, the jumping of the latter causing great excitement. Some very superior shorthorns were shown. Jerseys and Ayrshires were as usual well represented, but the sheep and swine classes were not very well filled. The produce department, including grain, roots, fruits, &c., made a very interesting display. There were a few exhibits of agricultural implements and machinery, and a very good collection of drays and buggies, as well as a number of miscellaneous exhibits.

The Journal
OF THE
National Agricultural Society
OF VICTORIA.

MELBOURNE, APRIL 22nd, 1887.

The Selection of Seed.

CARE is necessary in the selection of seed. It is necessary with regard to its quality and condition, it is no less necessary with regard to its being clean. As is the case with our domestic animals, which are bred up and improved from stock inferior to themselves, so with our cereals and seeds generally, their present excellence is the result of judicious crossing and selection. Perhaps, within the historic era, many of our grains have remained practically the same, but much improvement has been brought about nevertheless, so that the principle applies. Having been so bred up, they will assuredly degenerate unless great care is taken to keep them up to the proper standard. This is no new idea. Virgil says:—

"I saw seed pick'd and cul'd with tedious pain,
And yet degenerate, unless yearly we
The largest choose; each thing by destiny
So hastens to grow worse."

It has been truly said that men cannot gather figs of thorns, or grapes of thistles. It is just as true that neither can men expect the best results from the produce of the soil unless judicious care is exercised in the choice of that which is put into it. It may be contended that much also depends on the treatment of the soil and the preparation of a seed bed, which doubtless is the case, but that is a question for separate consideration. Without mentioning specific cases, it is well-known that our best articles of agricultural produce are the result of crossing and careful selection of seed; the best only of each successive resulting crop being selected until an improved type is thoroughly established. The limit is not yet reached. Hence our agriculturists should not only have the general bulk of their produce of the highest excellence, but should also endeavour to improve on that already possessed. Quality as well as quantity should be their aim. Quality first, quantity afterwards. Superior produce not only brings a better price, but is also most readily disposed of. The profits are greater. But, in addition to the matter of paying better, which is of course the main point, there must be some satisfaction even to the most prosaic practical farmer in producing a first-class article. To stimulate them to do this latter is the object of all agricultural exhibitions. But exhibitions have a practical *raison d'être* beyond the mere offering of prize-money, or they would soon collapse. This they are not doing, but on the contrary, in every country their success is increasing. The superior produce commands a ready sale. The prize money and the paying price go together, so that no effort should be spared in the endeavour to produce a superior article which cannot possibly be done without care in the selection of seed. This may be considered iteration, but there is much reason

for it, as will further be shown in considering the second part of the subject, viz., the necessity for clean seed. Our leading grain merchants and seedsmen say that it is almost impossible to procure clean samples of grain or seed of any kind, which directly shows the carelessness of the bulk of the farming community in a matter effecting not only themselves but others. If one travels in any direction from Melbourne into the farming districts, there can be seen on every side fields ruined with wretched weeds, land dirty almost beyond hope of reclamation. How was this brought about? Simply by the want of care in the selection of seed with which the land was cropped. Weeds not indigenous to the district, nor even to the country, have been introduced by sowing dirty seed; weeds which, in many cases, are not only injurious in the cultivated areas, but which spread to such an extent as to be almost ruinous to the pastures. It is a penny-wise and pound-foolish policy to purchase inferior and dirty seed, simply because it is cheap; it is for reasons already given almost criminal to sow it. As a matter of prudence, policy, and profit, care is necessary in the selection of seed.

The Japan Clover
(*LESPEDEZA STRICTA*, H.A.).

DR. SCHOMBURGK, Director of the Botanical Gardens in Adelaide, has forwarded to the National Society for distribution a small quantity of the seed of the Japan Clover and of Tefl. The following is the Doctor's description of the plants:—

In my last year's report I mentioned a valuable fodder plant, "the Japanese Clover," which had been introduced into California, and which has attracted a good deal of attention of late years as a most valuable fodder plant.

My attention was directed to this plant by a Californian agricultural paper, called the *Rural Californian*, which gives a glowing account of this useful plant. The extract runs as follows:—"The Japan perennial clover (*Lespedeza stricta*) is now covering thousands of acres, where in 1866 it only covered ten feet square. It grows in the plains and at a latitude of 4000 feet, and stands well through the midsummer droughts, flowering and blooming until the frost comes, and living after most herbage is dead. It grows in every kind of soil, rich or poor, clay or sandy, dry or wet, and is deep-rooted, and improving the soil. It never runs out, and can be fed off without injury. It is wonderfully fattening, and contains—

"Nitrogen matter...	16.60
Fat	1.10
Ash	5.92
Lime	0.99
Magnesia	0.56
Potash	0.88
Soda	0.51
Phosphoric Acid	0.39
Sulphuric Acid	0.20"

The *American Farmers' Manual*, lately published, says, regarding the Japan Clover: "Of late years it has attracted more and more attention; cattle eat it readily, and sheep greedily."

On reading this glowing account, I immediately took steps to procure seed of this

valuable plant, which after much trouble I succeeded in doing; and the last mail brought me a quantity, which, after testing, I found that the seed germinated freely.

What a boon for the colony it would be if this plant could be acclimatised in South Australia, of which I do not doubt, as the Californian climate is somewhat similar to ours.

Part of the seed I now distribute amongst the squatters and farmers for trial. The seed should be sown, say at the commencement of August, on a well-prepared spot, so that a good crop of seed may be gathered for extended sowing next year. I may mention again that the plant spreads without cultivation.

At the same time I enclose a little seed of the Tefl (*Eragrostis abyssinica*), which I received from the Royal Botanic Garden, Kew, for distribution.

The Tefl is an Abyssinian cereal of economical value. The grain produces a flour called Tefl, it is very white, and the bread made therefrom is of excellent quality. An analysis has been made by Professor Church, London, who notes that the grain contains 8.2 per cent. of albuminoides (flesh-forming food), and 68.1 per cent. of starch, or force-producing food.

The Abyssinians, indeed, grow plenty of wheat, and some of it of an excellent quality. They likewise make as fine a wheat bread as any in the world, but the wheat bread is chiefly confined to people of rank.

I do not believe that Tefl flour would be used in South Australia, but the grass may turn out to be an excellent hay. The plant is only an annual. By all means the grass should be tried. The seed has also been tested, and is germinating freely. The seed should be sown in June.

R. SCHOMBURGK, Director,
Botanic Garden, April 1st, 1887.

The Journal.

(From the National Agricultural Society's Annual Report.)

"INCIDENTAL allusion has already been made to the Society's Journal, which has been conducted so far successfully, while the interest in it has been well maintained. It is to be regretted, however, that members of the Society do not avail themselves more freely of its columns for the discussion of subjects of practical interest. To a certain extent they have done so, but it is worthy of note that in some of the valuable papers—particularly American ones—received in exchange for the Journal, the great bulk of the matter is made up of letters from correspondents, resulting in the accumulation of a mass of practical information. Many of the articles appearing in the Journal have been purposely written with the object of eliciting criticism resulting in correspondence, in which regard they have not been unsuccessful; but it is hoped that members of the Society will in the future be less backward than they have been in using its columns as a means of giving publicity to their ideas on all matters relating to agricultural and pastoral pursuits."

We sincerely trust that members will so use the columns of this Journal. Science is only facts accumulated and digested. In this comparatively new country, where not only so much has to be learned but where also so much has to be unlearned, what we

That animals apparently recover, both with certain methods of treatment, and also without medication of any kind, cannot be denied. But it should be remembered that once the lung, or a portion of the lung becomes disorganised from pleuro pneumonia, that diseased lung is never, under any circumstances, renewed, but become encysted, and may, under the least exciting cause, let loose the germs of the disease to become disseminated broadcast.

TUBERCULOSIS IN CATTLE.

This disease is one that is much more difficult to deal with than pleuro, inasmuch as it is not only contagious, but is also capable of hereditary transmission, and not being easily distinguished from the latter by ordinary observers, may exist for some time in a herd before it is suspected.

Tuberculosis is most prevalent amongst pedigree herds and dairy cattle, and the reluctance many owners of pedigree animals have in destroying aged cows or bulls, to which exceptional value is attached on account of their breeding, is a fruitful source of the disease. Stud bulls from such herds become distributed all over the country, and the disease is thus spread from one herd to another. Tuberculosis does not always show itself in the early life of the animal, consequently, those who are in the habit of selling their cattle when young, may have the hereditary taint in their herds for years without knowing it. Occasionally an animal may remain unthrifty for a long time, and finally die from the disease without the nature of the disease being suspected.

Tuberculosis exists in many of our dairy herds, and I have seen cases of it in almost every part of the country I have visited, and am convinced that it is spreading, and will continue to spread if steps are not taken to prevent it. The disease has been so fully dealt with in the report of the tuberculosis board, that it is quite unnecessary for me to go more fully into the matter here, and whenever the time comes for the recommendations of the Board to be acted upon, some good will no doubt be done. The prevention of tuberculosis rests more with the breeders than anyone else, and to them we must look for a sounder race of stock, which can only be produced by getting rid of all tainted animals and procuring good sound ones to breed from.

ANTHRAX.

The next disease which claims our attention is anthrax. It has been my duty to investigate two serious outbreaks of this disease amongst cattle—one at the You Yangs, and another quite recently in the Portland district. Although anthrax usually occurs as an enzootic and dies out again in a few months, it causes a very serious mortality amongst sheep and cattle, and has the undesirable habit of returning periodically. The increasing prevalence of this disease is due in a great measure to the altered conditions under which animals are reared and fed. Through the grazing areas becoming more and more restricted, the animals are brought into closer contact with each other, and there is a greater degree of overstocking and more interference with the natural selection of food and water. Every year anthrax keeps making its appearance in districts where it was previously unknown, and, unfortunately, where it becomes established, future outbreaks may be reckoned upon with tolerable certainty.

Time will not permit me in a short paper like this, to enter into the scientific aspects of the disease, but I will here point out the absurdity of stockowners relying entirely upon Government to investigate the nature and causes of any disease which suddenly makes its appearance in a district.

While waiting for Government to take action, the disease may rage unabated for weeks or even months before anything is done, and stockowners will find that by trying to save their own pockets they generally turn out the greatest losers. Perhaps I cannot illustrate my meaning better than by relating what occurred in regard to the two outbreaks of disease just referred to. A disease has been prevailing in the neighbourhood of the You Yangs for years. The Stock Department is requested to have the matter enquired into. An Inspector is sent, and furnishes a report, stating that the disease is caused by the animals eating the drosera or sundew. This is not considered satisfactory, and a veterinary surgeon is sent to the district. In due course his report is sent in. The following year the disease is more prevalent and fatal than ever, and another veterinary surgeon, after the usual official routine has been got through, is despatched to try and clear the matter up, and finally sends in his report with certain recommendations as to the means to be adopted in order to prevent the disease, as well as treat those affected. I am informed that at the present time the disease is almost, if not quite

as prevalent as ever, and that the stockowners are very dissatisfied yet, and cannot see the good of the voluminous reports that are sent in to the Stock Department. The fact is, gentlemen, that not one of the recommendations, whether they are right or wrong, has been tried, and these poor helpless creatures are waiting for the Government to purify their water holes, to supply them with healthy cattle, and to go down to drench their sick animals for them.

The recent outbreak of disease in the Portland district turned out to be only an aggravation of what has been going on every year for the last dozen years, and in order to have the matter enquired into at Government expense, sixty stockowners attached their signatures to a petition to the Minister for that purpose.

If instead of doing this, when the matter became so serious as to require some concerted action on their part, these sixty stockowners had each subscribed a small sum towards paying for a thorough scientific investigation, and had each given their best assistance, the labours of the veterinary surgeon would have been better appreciated, and his instructions would have been more likely to have been carried out to the satisfaction of all parties.

This, however, never seems to have been thought of; and I will here throw out the hint that if the numerous agricultural societies throughout this country were to provide means for the scientific investigation of these scourges, and encourage the settlement of well-trained veterinary surgeons in their respective districts, they would be doing what would be of more benefit to the country than anything they have yet attempted.

OPHTHALMIA.

This is a disease about which I can say very little from actual observation, although I have seen hundreds of animals affected. I have never met with any written description of the disease as it occurs in this country; and as a metropolitan practitioner does not have the opportunities of watching a disease like this through its various stages, one has to depend a great deal upon the testimony of lay observers who, I am sorry to say, very frequently mix up a great deal of fiction with very few facts.

Although ophthalmia is rarely fatal in its immediate effects, it is a source of great loss and inconvenience to breeders and graziers. Many animals whilst affected become totally blind, and consequently are liable to get into situations from which they are unable to extricate themselves, and, unless immediate aid is at hand, death from injury or starvation may be the result.

Dairy cows lose their milk, and other kinds of cattle, as well as sheep, lose the season if badly affected.

So far as I am able to judge the disease appears to have a miasmatic origin, and when established may be communicated by contagion. Like anthrax it appears to confine itself to localities, but the number of these, as well as the number of outbreaks, is decidedly on the increase.

I can say nothing positive about the duration or the various terminations of the disease, and consider that a careful enquiry into the various conditions under which it arises and spreads is needed.

ACTINOMYKOSIS.

I saw this disease many years ago in England, but was not aware at that time of its contagious nature. Quite recently it has been discovered to be communicable not only from one animal to another, but also from animals to man by contagion. It used to be recognised under the name of Osteo Sarcoma, and in this country is called cancer, or big jaw.

I have recently seen several cases of this disease in cattle. It is characterised by a peculiar fungoid growth which attacks the gums, tongue, and most frequently the jaw, and sometimes extends to the lungs and grows upon the tissues wherever it is planted. On examining these growths with the naked eye, you can see granular masses of white or sulphur colour, which can be easily scraped off with a knife.

When examined with the microscope you can see that the granules radiate from a centre. Sometimes these granulations contain calcareous deposits, which rattle when touched with the knife. The larger masses of granules consist of a number of smaller ones aggregated together. The disease is only known to attack herbivore and omnivore.

Animals affected with this disease should be at once destroyed and the carcasses burned.

THE DISEASE ERGONKOUSLY CALLED 'STRINGHALT.'

This disease is one which is becoming extremely prevalent in many parts of the country, and causes very serious losses to horse owners. From reports which have come to hand it has

appeared in several districts this season where it was previously unknown, and on the whole is more prevalent than it was ever known to be.

Although the disease has been in existence in this country for twenty years, no satisfactory explanation of its character and cause or causes has been given. This may be thought to be a reflection on the skill of Colonial veterinary surgeons, but when it is remembered that the regular practitioner has no opportunity of examining into all the conditions and circumstances under which a disease like this is likely to originate, this apparent want of scientific penetration may to a great extent be accounted for.

Last year I spent three days in Gippsland in making inquiries into this mysterious disease, and must confess that had I even found facts as easy to collect as opinions, it could scarcely have been expected that I would in that short time clear up a pathological mystery of twenty years standing. In addition to this, although I saw dozens of horses affected with the disease, there was not one that had not been so for a couple of months at least, so that whatever the cause or causes might have been, they had for the time ceased to operate. How then were they to be discovered? In order to get some insight into the nature of the disease from its pathological anatomy, I requested some of the horse owners to allow me to kill a horse for *post mortem* examination. This, however, they declined to do unless the Government would pay compensation, and as I had no authority to incur any expense in this direction, I returned without having made any such examination, but with a mass of evidence collected from various sources that would be better calculated to upset a dozen theories than to lay the foundation for anything like a feasible one.

A disease like this, which presents itself under such a variety of circumstances and surroundings, cannot be fully explained by a casual observation or two. Until a reliable history of each outbreak, with all the conditions as to food, water, climate, &c., have been collected, and every particle of evidence has been compared and contrasted, there is little hope of arriving at a correct solution of the difficulty.

Experiments should be tried on healthy horses in order to see if the disease can be artificially produced, and on diseased animals for the purpose of discovering a remedy.

EPIZOOTIC CELLULITIS.

About three years ago this disease made its appearance in the Kyneton district, and caused a rather heavy mortality amongst horses, and spread a good deal, owing to mares and entire being moved about during the stud season. So far as I am aware, this was the first outbreak of the disease in this country, but since then it has become quite common, though usually of a much milder form. I could, I think, give some information as to how the disease was introduced in this country, but would be scarcely justified in doing so here.

It will be sufficient for the purpose of this paper to state that the disease may now be considered to be thoroughly established in Victoria, that it is contagious, and often fatal, when the outbreak is of a virulent form, and that I have had a number of cases under treatment, both in the country and in Melbourne.

From the description of the symptoms, &c., of the disease which has been causing such mortality at Silvertown, I conclude that it is nothing more or less than epizootic cellulitis.

EPIZOOTIC PLEURISY, OR PLEURO PNEUMONIA IN HORSES.

This disease is often very prevalent during the winter months, and also occurs at other seasons of the year, causing a somewhat heavy annual mortality. So insidious is the disease in its attack that a horse which is only supposed to have been ill for a few hours is often found, on examination, to have the cavity of his chest nearly half full of serous fluid. Another remarkable thing about the disease is that horses affected with it will often eat till within a few hours of death, and show scarcely any outward signs of being affected with such a serious complaint. If the many cases of horses suddenly dropping dead, when at work, or under other circumstances, without any apparent cause, were enquired into, it would be found, in not a few instances, to have been the effect of this disease.

The Melbourne Tramway and Omnibus Coy. have been heavy losers from epizootic pleurisy, the death rate, on some occasions, having reached as many as seven or eight horses per week.

ASTHMATIC INFLUENZA.

I have attached the distinctive term, "Asthmatic," to this particular form of influenza because, so far as I am aware, it has never been previously described. I have only seen one

Meetings.

THE ordinary monthly meeting of the Council of the National Agricultural Society of Victoria was held on Tuesday, April 19, 1887.

Present—W. J. Lobb, Esq. (in the chair), Messrs. D. Munro, W. Thomson, C. Lynott, W. Learmonth, W. Glover, George Young, Robert Clarke, S. G. Staughton, J. Hurst, James Garton, T. Learmonth, D. White, Walter J. Clarke, James Hearn, F. Peppin, J. Finlay, the hon. C. Young, M.L.A., and Dr. Plummer (president), and the hon. James Buchanan, M.L.C., who came in near the close of the meeting.

The minutes of the previous ordinary and special meetings were read and confirmed.

The Finance Committee's report, submitting the monthly statement of accounts and recommending payments amounting to £177 12s. 6d., was read.

Mr. Currie moved that the report be adopted, seconded by Mr. W. Learmonth and carried.

POSTPONED BUSINESS.

The letter from the Department of Agriculture, asking to be informed if, in the opinion of the Society, legislative action should be taken for the extermination of sparrows; and, if so, what provisions a law on the subject should contain; which had been postponed from the last meeting, was then considered.

Mr. Thomson moved that it is desirable that legislative action should be taken for the extermination of sparrows. He thought that no one could question the injury farmers sustained through these birds, which he regarded as unmitigated pests.

Mr. Currie seconded the resolution. He grew fruit trees but the sparrows got almost all the fruit. Unless united action were taken for their destruction no good would be effected, as he had been killing them for 10 years, but could not get rid of them.

Mr. Peppin supported the motion, and stated that the rapid increase in the number of sparrows might have been prevented if proper united action had been taken. He believed that the way to reduce their numbers was by poisoning, which should be done at a uniform time when great destruction could be brought about.

Mr. Hearn thought that some native birds were even more injurious to fruit-growers than sparrows, while it was a question if these latter did not do more good than harm by destroying insects. Some years ago when he tried poisoning he had no difficulty in killing sparrows, but he had also caused a terrible mortality amongst the cats of the neighbourhood through the medium of the poisoned birds.

The motion was carried.

Mr. Thomson moved that an answer be sent in accordance with the previous motion, and that a committee, consisting of the President, Messrs. W. J. Lobb, J. Currie, J. Bond, F. Peppin and the mover, be appointed to draw up provisions for a law on the subject. Seconded by Mr. W. Learmonth, and carried.

CORRESPONDENCE.

From James Gibb, resigning his seat on the Stud Book Committee, as the severe accident he had met with prevented him from attending meetings.

Mr. Thomson moved that the resignation be accepted, with regret. Seconded by Mr. Currie and carried.

Mr. W. Learmonth was appointed in the room of Mr. Gibb.

From A. A. M'Millan, Secretary North Gippsland Agricultural Society, inviting co-operation in taking steps to bring into general use two bushel bags in the transit of wheat instead of the four bushel bags now in use.

Mr. Currie moved that the letter be received, and the Society informed that the Council had already dealt with the matter. Seconded by Mr. W. Learmonth, and carried.

COLLECTING COMMITTEE.

Mr. Thomson moved that the whole Council be appointed a Collecting Committee to solicit donations for prizes at the show, and that the President and Secretary fix up the sections of the Committee. Seconded by Mr. Garton, and carried.

NOTICES OF MOTION.

Mr. Peppin—"That it is desirable to reconsider the duration of the next show, and the arrangements made for the time of the auction sales."

Mr. Lynott—"That it is advisable that the Society take in hand the compilation of a cattle, sheep, pig, and dog stud book."

Mr. Robert Clarke—"That two judges and a referee be appointed in each class at the next show to be held in August."

THE COUNCIL.

Mr. Peppin moved that it is desirable at next meeting that the Council be filled up to its full strength, viz., 34. Seconded by Mr. Lynott, and carried.

Mr. Garton brought under the notice of the meeting some excellent advertising sheets from America, which was much approved by the Council.

MR. KENDALL'S PAPER.

Mr. Kendall then read his paper on "Prevailing Diseases in Stock," which is published in full elsewhere.

The paper was attentively listened to, and very well received.

At its conclusion, Mr. Thomson moved that a cordial vote of thanks be passed to Mr. Kendall for his very able paper. If more of a similar character were brought forward, it would be creditable to the Society and advantageous to the colony. Seconded by Mr. George Young, and carried unanimously.

The meeting then closed.

The best farmers sheep is the one that will give him most for his money. We believe that he will find that plenty of meat and a large quantity of medium price wool will be more profitable to him than a small carcase and a little wool of exceeding fineness and a high value, even though the price for the total quantity of wool in each case should be equal. The very fine bred sheep are tender, and require careful management; the coarser sheep are hardier, and their meat is worth twice or three times as much, because so much heavier. A man does not hesitate to sell a common large-framed sheep, but is tempted to keep a fine-bred animal beyond the time that it is profitable. The first cross between a good Merino ram and a Leicester ewe would perhaps give the farmer the breed that he wants; but he must not breed again from the crossbred animals. The fault of crossbred sheep is their fancy for breaking through enclosures. Close, strong fences must be maintained for them.—*Planter and Farmer.*

Prevailing Diseases in Stock.

Paper read by Mr. W. T. Kendall, M.R.C.V.S., before the Council of the National Agricultural Society of Victoria, April 19th, 1887.

Mr. President and Gentlemen,—

The duty has devolved upon me on various occasions to investigate diseases prevailing amongst live stock in different parts of the country, both on behalf of Government and private individuals. During the visits which these enquiries have entailed, I have been struck with the number and variety of these maladies, and the serious losses which stock-owners suffer therefrom, and the conviction has forced itself upon me that I should be neglecting a very important duty were I not to bring prominently before the stock-owning community the necessity of some steps being taken to arrest the spread of these unwelcome visitors.

In order to do this, it appeared to me that I could not do better than bring the matter before your society, especially as one of the objects of its formation was to enquire into the nature and causes of animal diseases.

I propose to glance briefly at a few of the most important of these diseases, with the view of showing the necessity of immediately dealing with them in a systematic and determined way.

The most common disease the stockowner has to deal with is

PLEURO PNEUMONIA.

This disease is so well known that I need not give any detailed description here. The question of its prevention by means of inoculation is one which is receiving great attention at the present time, both in Europe and America. In the latter country, so much are they against this practice that they are actually trying to obtain legislation to prevent people from adopting it. It is asserted by one of the leading veterinarians that inoculation has proved a failure in all countries, and that cattle that have been inoculated, although previously healthy, are capable of transmitting the disease to other animals.

In the face of these circumstances, I have no hesitation in saying that I am a firm believer in its efficacy. During the last four or five years I have inoculated a number of herds in which the disease had broken out, and in every instance pleuro has been effectually stamped out of the herd. Whenever inoculation has failed to check the disease, the failure has, in my opinion, been due to the use of bad virus, or the operation has not been properly performed. To this Society's Veterinary Surgeon, Mr. Graham Mitchell, F.R.C.V.S., we are indebted for having been the first to carry inoculation to a successful issue, and it is but common justice to state that this important service has been acknowledged in every recent work on the subject, both in England and on the Continent.

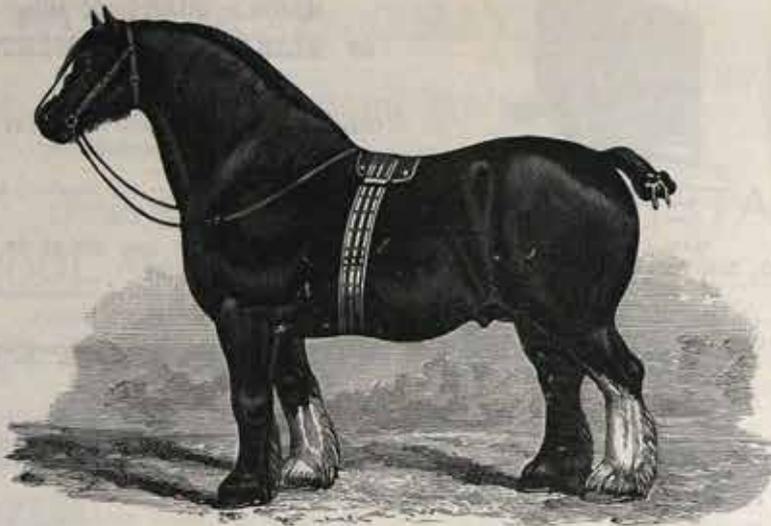
If every herd in which the disease breaks out were to be properly inoculated, I believe that in two or three years the disease might be stamped out.

The greatest drawback to the operation, that I am aware of, is the danger of communicating other diseases by the use of virus tainted with them.

This is by no means an imaginary danger. About eighteen months ago I was called upon to inoculate a herd in which the disease had broken out, and, being told that I would have no difficulty in selecting an animal from which to obtain virus, I did not take any with me.

Having picked out a bullock which appeared to be far enough advanced with the disease, I had him shot, and opened the chest for the purpose of getting the virus, but found, in addition to having pleuro pneumonia, the beast had old-standing tuberculosis, the margin of the lungs and costal pleura being covered with tuberculous nodules. Had the virus been taken from this, which probably would have been the case with anyone not knowing the characteristic lesions in the two diseases, the result would have been to spread tuberculosis through the herd.

I believe that permission has been granted to this Society by the Stock Department to conduct some experiments in the curative treatment of pleuro pneumonia. As a veterinary surgeon, who has had a long experience in dealing with this disease, I enter my strongest protest against any such course of action. If there is one thing proved in regard to pleuro pneumonia, it is the fact that any beast which has once had the disease is never afterwards safe from communicating it at any future time to other cattle.



PRINCE OF ALBYN.

The above illustration very faithfully represents the recently imported Clydesdale stallion Prince of Albyn, one of the grandest draught horses ever brought to Australia. Prince of Albyn is a black colt rising four years old, by the celebrated Prince of Wales (673)—the greatest horse in Scotland. His dam is Jewel, one of Mr. Laurence Drew's prize mares. Prince of Albyn won the Glasgow premium as a three-year old, beating 112 of the best colts in Scotland. He was also first at several other shows. Prince of Albyn was purchased from Mr. Peter Crawford, of Barnfoot, Strathblane, by Mr. H. Rae, by whom he was lately imported to Victoria.

American Forests.

[At the present time when attention is being called to the wasteful destruction of our forests, and to the influence such destruction is likely to have on our agricultural and pastoral prospects, this article should be of special interest.—*Editor.*]

(CONCLUDED.)

The battle of life for the producer, surrounded with plenty to eat, and needing less expensive raiment, as a rule, than the consumer, and having little or no house-rent to pay, is necessarily and naturally a less intense and anxious one. Now, when we remember that by rules in common use among engineers it is demonstrated that 8lbs. of traction are required to move a ton by rail, and that less than one-fourth of that amount of traction is necessary to move a ton afloat in still water, we have the factors which enable us to know that, let freight be rolled as cheaply as honest administration of the railway interests shall make possible, it can be still more cheaply floated on waterways. If we visit some of the American streams, which undoubtedly truthful and accurate records show to have been used extensively for purposes of transportation, we shall find some of them so feeble that no miracle would be needed to cross them dry-shod. They may be passed over by stepping on the tops of stones as they naturally lie there in the beds of these now feeble watercourses. These streams only need to be restored to their old strength, and improved by a system of interlocking canals similar to the system long in use in England, to enable us to float the great bulk of the freight we have, or ever shall have, to move, except in the ice-bound season in the North.

By her combination of streams and canals England has inland water-lines well-nigh equal in length to her railway lines. We have in the United States over 70,000 miles of railway. When our railway lines are as complete in proportion to our territorial limits as are those of England, we shall have about 60,000. Many—probably most—of the streams by which Britain secures her grand system of inland navigation are so small that in our experience we would hardly think them worth trying thus to utilise. Many of them are spoken of as "brooks" in the pre-railway Parliamentary Acts which gave the rights to companies to improve and use them. One of these combined canal and river courses takes freight at the south-west of England from tide-water at the Severn, up beautiful and historic little Avon, which leaves at Bath, in Somersetshire, by canal across Wiltshire, and on down the Thames to London,

and to the sea again in the south-east. So minute and comprehensive is this system that it is said no point can be found in all the south of England, which is fifteen miles from some such line of transportation. When we make our creeks and small rivers thus available, as we surely shall, it will be necessary to improve many of them by the application of the "slack-water" arrangement, and this in turn will add to the number of the distribution of water-powers just where they will be most essentially available for the purpose of our manufacturing interests. These streams, so improved, and used in conjunction with such rivers as our magnificent Hudson those of the South and the West, will constitute a system which will be just cause for honest pride. There will, of course, be many places where locking up and down the streams and over summit levels will be necessary. And mountain ranges may be crossed by section canal-boats, as they now are, and for more than a century have been, in Pennsylvania and New Jersey. By means of these boats, mounted on cars and rolled over by rail, the highest ranges can be surmounted successfully and economically. This age of steam and of almost inspired ingenuity enables us to add the wings of speed also. Already it has been proved that double the rapidity of canal navigation which was possible for freight-boats three years ago is quite practicable now. All this will, no doubt, be improved upon so that in a very few years the difference between the speed attained by steam canal-boats and that of the average railway freight-train will be very materially reduced. The miserable economy which prevents the improvements of our larger rivers will be replaced by a broader and more intelligent one, and the demand for increase of the number and the speed and splendour of their floating palaces will result in the production and use of many more. The first step in the march to realise all this, however, is the adoption and practice of forest economies which will restore our stream courses. *Nothing else will or can restore them.*

Territory required for agriculture does not need to be sacrificed for culture of trees for the benefit of navigation or of hydraulic power. On the contrary, the identical conditions of rain and dew fall most favourable to both; the latter are just the ones most needed by our vast grain, fruit, and stock-growing interest. These last are suffering from meteorological irregularities quite as much as, and—if possible—even more than the others. All these great interests are, in the economy of nature, most intimately and intricately interlaced and interdependent. Seasons seldom pass in which a majority of those engaged in agricultural pursuits would not have from one-fourth to three-fourths added to the results of their labour by a more equal distribution of the rainfall. Long heavy rains in the spring-time retard the operations of

sowing and planting, and often not only retard the germination of seeds, but actually cause them to rot in the ground. Then, after the work of putting in the seed is done over again, the earth becomes "as iron beneath, and the sky as brass above, through the long continued absence of rain, till the poor struggling plant life can return but little if any more at harvest time than the original stock put in in the spring. Agriculture is the means God has seen fit to take by which to answer the prayer of his thousand million children: "Give us this day, our daily bread." It is the great overshadowing interest, in the prosecution of which "nine-tenths of the fixed capital of all civilised nations" is estimated to be embarked. Nothing else is so vital to it as the supply of moisture in proper quantities and at proper times. Right here is the very point at which the greatest advances in the higher grades of scientific agriculture are possible. An acre properly watered can be made to yield as much as seven, or even more, which are not so treated. This has been demonstrated in garden farming, which has the full advantages of complete supply and appliances for first class irrigation. The cultivation not only of fruits and flowers, but grains and vegetables, can and has thus been made to give results in proportion to expenditures which are almost amazing. Here, too, is one of the most beautiful examples of the mutual relations and dependence of interests upon each other. Where the supply of water is abundant for artificial channels of navigation, the same arrangement answers the purposes both of waterways to transport the products of the soil from the producers to the consumers to the best possible advantage, and of irrigation by means of which the maximum of yield from the soil can be attained. It furnishes also the motive power to enable the artisan to produce the results of his skill, and to return them over the same channels to the cultivators of the soil.

In the ordinary process of agriculture, however, irrespective of the elaborately perfected conditions as above supposed, are numberless examples in the common experience of many a farmer in almost any town in every country and State where a good shower of rain at a critical point of time of growth or of maturing of some one of his crops was literally worth hundreds of dollars to him. In proportion as we understand and apply the only known regulator of this vital element of vegetable life, shall we be insured against damages incident to a climate which becomes more and more erratic in proportion as we unwisely manage our precious woodland interests. Wise management of this interest will not only conserve our prosperity in the great departments of our national wealth considered above, but it will give us more and better timber for fuel and for use in the mechanic arts, more and better timber for the common usages of land and of naval architecture, for the rich and elegant usages of the interiors of the homes of the people, the temples of religion and art, and the halls of fashion and refinement. More beautiful and more precious and expensive woods for rich carvings and the most brilliant veneers grow in our own forests than any which are imported to us from far off islands and distant continents. The burls of the birch and the walnut, and select sections of the curly ash, the wild cherry, and the bird's eye maple from American forests, bring prices at home as well as abroad which would amaze the uninitiated. Single trees of such wood have been cut in "slashings," and burned up in the log-heaps to get them out of the way of the pioneer which would now bring enough, in addition to the cost of transportation, cutting into veneers, and commissions for selling, to buy the same sterile farm on which it grew, and on which the owner has a struggle to keep himself and family from starving.

When our forests are as economically administered as are most of those of Europe, few trees will be cut except such and for such usages as have been recommended by a scientific forest superintendent. It might cost a country a few thousand dollars a year to employ such a superintendent with the necessary assistants; but when our eyes are open, we shall see that to fail to employ them is nothing more or less than the most wicked wastefulness.—From *The Planter and Farmer*.

To Destroy Weeds in Walks.—It is stated that a strong solution of "blue vitriol dissolved in boiling water, and used hot, will destroy weeds on walks, and this solution will retain its virtue for many years.

outbreak of the disease amongst horses, and that occurred at the time that the so-called bog fever was so prevalent amongst human beings. Both heavy and light horses were attacked by the disease. A horse that had been doing his work perfectly well one day would be found standing next morning with his nose poked out and nostrils dilated, and as badly broken-winded as a horse could be, the inspiration being quick with the characteristic long, double expiration.

In addition to these symptoms, there was usually more or less swelling of the glands of the throat, and, in some cases, spasms of the glottis, the disease being invariably accompanied by indigestion, flatulence and constipation. The mucus membranes were usually tinged with yellow, and the feces light coloured, showing the liver to be implicated. In the early stages, there was a considerable amount of fever, indicated by a quick pulse and an increase in the internal temperature which, in some cases, reached as high as 106 degrees. There were no fatal cases to my knowledge, and the animals regained perfect health in from nine to fourteen days. The disease did not appear to be contagious, for out of between forty and fifty cases which came under my notice, there was only one instance in which two horses became affected in the same stable.

I could mention several other forms of disease of which we hear a good deal, but know very little about, but think I have already said enough to convince anyone that the subject is one which needs serious attention. I am no advocate for creating false alarms, and have only spoken of what I have seen and know to exist, and shall leave you to deal with the matter as you think fit.

So long as we are blessed with a paternal Government that will make our roads and build our bridges, and even give a bonus to the inventor of the best pea thresher, and stock-owners can amass fortunes in spite of the losses sustained through the diseases of stock, there is little hope of anything practical being done, but, in the meantime, animal diseases will continue to increase in number and in the frequency of their visits, and a legacy will be left for the rising generation that will take the State, the Stockowners, and the Veterinary Profession, all their time to cope with.

Gentlemen, before concluding, I would say that if I have expressed my convictions rather strongly, it is because the importance of the subject demands it, and I could not have done it justly in milder terms. If it is thought I have some ulterior motive, such as an appointment, for instance, my answer is that I have been seven years in the colony, and have never yet applied for one, or personally solicited patronage, and so far as the interests of the profession, to which I am proud to belong, are concerned, I can only say that they will be best served by leaving things as they are. A gentleman whose evidence was considered to have some weight, when under examination before the Tuberculosis Board, volunteered the statement that the "scare," as he termed it, had been got up by veterinary surgeons to make employment for themselves. I can assure that gentleman that there is but little need for veterinary surgeons to seek employment, and in a few more years, if the present apathy of stockowners continues, there will be still less.

Origin of the Clydesdale Horse, and Draught Horse Breeding in England, Scotland, & Australia.

In submitting the following, the object is to supply information that may be useful and interesting to the public and horse breeders in general. The aim has been for many years to improve the draught horse both at home and in the colonies, not only by the infusion of fresh blood necessary to maintain their size and strength, so liable to deterioration, but by the careful selection of breeding stock possessing in a marked degree the qualities calculated to improve the breed known as the Clydesdale.

The origin of the Clydesdale breed has been traced to an admixture of Flemish and Scotch blood, and at first it occupied a limited area of Lanarkshire. The late Mr. Lawrence Drew, of Merryton, did not put

implicit credence in the story of six Flemish stallions being imported by a Duke of Hamilton. He states that James, the sixth Duke of Hamilton, who succeeded to the title in 1742 and died in 1758, imported into Scotland a dark brown Flemish stallion for the use of his tenantry, with the view of improving their breed of farm horses. The horse was named "Clyde," and the breed originally and for long, was known from him as the "Clyde" breed, the term "Clydesdale" being an invention of comparatively recent times, and never adopted by the old farmers. It is evident that the Clydesdale were made up of a mixture of Flemish, English, and Scotch blood, and it is reasonable to conclude that the reputation of not a few of the noted horses both at home and in Australia was, and is derived mainly from a fortunate combination of these strains.

It is well-known that the dam of the celebrated Prince of Wales (Drew's) was an English mare. The dam of Lord Lyon was English. "Darnley" had English blood in him; also a great number of the best horses imported to Australia have English blood in them, such as "Prince of Altyre," "Admiral," "Prince Hillearn" imported by Mr. John McCulloch this year, and "Prince of Albyn" imported by Mr. Hugh Rae this year. The latter is considered by eminent horse judges to be the best horse ever imported to Australia. He won the Glasgow Premium of £100 last year, beating no fewer than 112 stallions in one class. He is said to be the *beau ideal* of a Clydesdale. His dam is an English mare, his sire the renowned "Prince of Wales" (Drew's), "Cock-o-the-Walk" imported by Mr. John McCulloch, winner at the West Bourke Show this year, "Big Gun," "Gentleman," and "Roderick Dhu," winner of the Glasgow Stallion Show in 1879, afterwards imported to Australia. I can name fifteen stallions that won the Glasgow Premium of £100 which are the offspring of a cross between the English shire mare and the Clydesdale horse. I may also mention that the Highland and Agricultural Society of Scotland has got a painting of a pure bred English mare exhibited at the rooms of the Society in Edinburgh as the model of a Clydesdale. This mare is the famous "Netty," purchased in Lincolnshire by the late Lawrence Drew of Merryton. Her sire is "Lincolnshire Lad." She was afterwards sold at Mr. Drew's annual sale for 760 guineas. She won the Highland and Agricultural Society prize in the draught mare class at Edinburgh in 1877. The purity of an animal is proved by the transmission of its distinctive characteristics to its progeny, and any accidental departure from the original wild type may be taken advantage of and rendered permanent by careful cultivation.

The amalgamation of selected Scotch and English breeds of draught horses, so closely allied, cannot correctly be called "crossing,"—a term implying the union of different species, or of dissimilar varieties—for these have many points of resemblance arising from their similar origin; while defects in either breed may be modified, or got rid of, by judicious mating. Thus the early Lanarkshire breeders devoted their attention chiefly to the securing of good feet and pasterns so essential to activity and durability; while the English breeders attached more importance to weight and symmetry of body, and in many of our noted modern horses, we find both points brought out by the skilful union of the two breeds referred to. I do not consider it necessary to trace lines of descent so far back as is generally done, for I have more confidence in breeding from animals good themselves, and whose ancestors I have seen and know to be really good, than with a pedigree, however long, of which I have no personal knowledge.

W. ALLAN,

Hotham Veterinary Establishment,
Chetwynd Street.

April 18th, 1887.

Best Way of Curing Bacon.

A correspondent of the *Agricultural Gazette* gives the following directions in order to have the "best bacon":—

"Assuming that the pig has been properly fed, for you cannot have the best bacon from a garbage-fed beast, we will take as an example a ten-score pounds pig—that is, weighing 200 lb.—and then the quantities can be regulated according to weight. Sprinkle a covering of salt over each piece, and lay them in a tub, where they will remain for twenty-four hours. Take out, and pour away the brine that has been made. Next powder about half a pound of saltpetre, and rub this thinly over the pieces, giving an extra dose of all pieces that show blood, around bones, and draw out any blood veins, if any be left in, and giving an extra dose of the saltpetre at the openings. Then rub in about one pound of brown sugar, and follow with a moderate dose of salt. Lay the pieces into the tub, and sprinkle a little salt over each. Take them out every alternate day, and give them a rub over with the brine that will be found at the bottom of the tub, and in putting them back reverse the positions of the pieces, so as to bring each to the bottom in turn, one time with sward down, the next with the sward up. The fitches should remain in the tub a week, the shoulders a fortnight, and the hams three weeks. I am writing of a 200 lb. pig, and larger or smaller ones must be regulated accordingly. When finally taken out, wash the bacon with an almost dry cloth dipped in tepid water, wipe dry, sprinkle a little oatmeal over it, and hang up to the kitchen ceiling to dry. Where there are openings in the shoulders and hams, at the shank, &c., dust a little pepper, and if a dark room is available when dry, hang them there; and no further precaution is needed, for flies will not enter a dark room. If, however, the bacon is cured in winter, or about the new year, it becomes sufficiently dry to be safe from the attack of flies in the spring. The above directions may seem to involve some trouble; in reality, they mean an hour each alternate day of curing, and the work is well repaid. The veriest tyro need not fear making good bacon if he will carry out the above.

Under the usual system of curing on slabs, the brine all runs away, and fresh salt and saltpetre is added, until it is not fit for consumption.

Land, the value of which depends entirely upon the stability of existing institutions, is always depressed when there is wild talk affecting those institutions.

The following is a bit of sentiment not often found in the columns of an agricultural journal, but it has a world of truth in it. The *Massachusetts Ploughman* gives it thus:—"The farmer who gives the most thought and care to his home naturally clothes it with the most affection. Thus does work breed an increasing fondness for the object worked for. There is no sort of danger that farmers will exhaust themselves as practical men by an excess of emotion; on the other hand, the danger is rather that all work will tend to kill out what should be fostered by constant tenderness. Earth has no paradise left but home. The more thought one devotes to that, whether it be humble or palatial, the greater the sum of his happiness. The standing wonder is that farmers do not see and improve their natural advantages, as men who retire into the country with ample fortunes to enjoy are more apt to do. All that heaven has to give is theirs,—air, sunlight, water, grass, trees, sky and the company of birds and animals. What a prize would not these be esteemed in the thick of a large and noisy city. The contented farmer is the one who makes his home the permanent centre of the earth for himself, by adorning and rendering it attractive. It is easier to create such a deep and lasting attachment than it is to heap up riches. Life is rather for living than for a perpetual getting. The country home is the ideal home in our civilization." We recommend this to every farmer for his scrap book.—*Planter and Farmer.*

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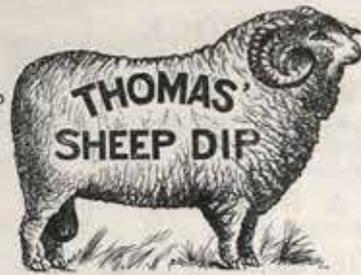
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including nearly £600 in Sterling Money.

TESTIMONIAL.

"I have very much pleasure in sending you a testimonial of my high appreciation of Thomas' Sheep Dipping Specific, with which you have supplied me. I have found it to answer well. The complete failure of an English Poisonous Dip to kill the Ticks, induced me to try the above, I am glad to state, with the greatest success. The eradication of the Ticks and Ova was so complete that on several occasions I have challenged inspection of my Stud Sheep and General Flock to find a living Tick amongst them. As for the condition of the Wool, and the health of the Sheep—the fact of my taking so many First Prizes at each of the Agricultural Shows, viz., Melbourne, Ballarat, Echuca, Sandhurst, Rochester, Kyneton, and several other Shows—sufficiently testifies, and my Sheep were entirely free of Ticks at Shearing. I have now much pleasure in giving in writing my opinion of your Specific, which I never hesitate to express publicly whenever the subject of Dip is referred to. Scale Park, Clunes, Victoria, Jan. 29, 1887. (Signed) LENARD R. CARTER."

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Dipping Sheep and Lambs. Cures Mange, Scab, and Kills Lice, Ticks, Warble Fly, &c. Heals Wounds. Prevents Fly. Cures Worms in the Throat in Lambs. Cures Foot and Mouth Disease. Cures Foot Rot. Improves the Wool.

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SOUTH MELBOURNE.

The Bee's Sting.—From lengthened observations, Mr. W. F. Clarke, a Canadian, has come to the conclusion that the most important function of the bee's sting is not stinging, but its use by that wonderful creature as a tool. Mr. Clarke says he is convinced that the most important office of the bee's sting is that which is performed in doing the artistic cell work, capping the comb, and infusing the formic acid by means of which, honey receives its keeping qualities. The sting is really a skilfully contrived little trowel, with which the bee finishes off and caps the cells when they are filled brimful of honey. This explains why honey extracted before it is capped over does not keep well. The formic acid has not been injected into it. This is done in the very act of putting the last touches on the cell work. As the little pliant trowel is worked to and fro with such dexterity, the darts, of which there are two, pierce the plastic cell surface, and leave in the nectar beneath its tiny drops of the fluid which makes it keep well. This is the "art preservative" of honey. Herein, we see, says Mr. Clarke, that the sting and the poison bag, with which so many of us would like to dispense, are essential to the storage of the luscious product, and that without them the beautiful comb honey of commerce would be a thing unknown. This is certainly a most wonderful provision of Nature.

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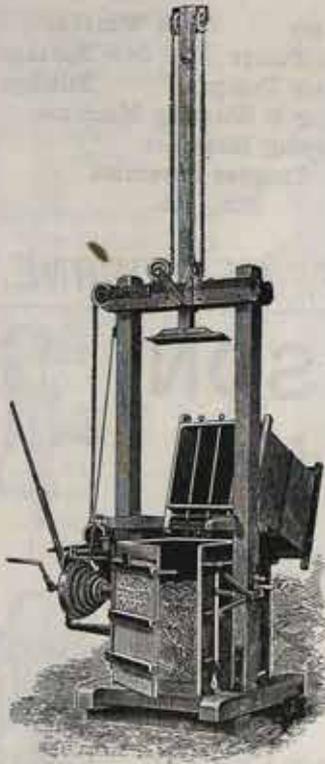
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D. FERRIER'S PATENT LEVER WOOL-PRESS

First Order of Merit awarded this Press at the Melbourne International Exhibition, 1880.

HUMBLE & NICHOLSON

Makers, Geelong.



The usual screw is dispensed with, and the pressure brought to bear by means of a strong rope or chain, working in sheave pulleys overhead, attached to a Ram, and winding on a fusee, which is made in the shape of a suddenly tapered screw.

The rope works on the large part of the Fusee, when the pressure is light, and passes down to the taper end as the pressure increases, being worked by a lever fixed on the centre spindle.

The top Box is hinged to side Brackets, and turns down to the floor, which greatly facilitates the putting in of the wool, and renders any second floor unnecessary, and when filled is easily placed back in position.

When the bale is pressed and the sides sewn, the Ram is lifted by a small rope from the Fusee, turned by a handle.

It will be understood how very much quicker the power is brought into application by this means than by the ordinary screw press, and double the work is got through by the same number of men.

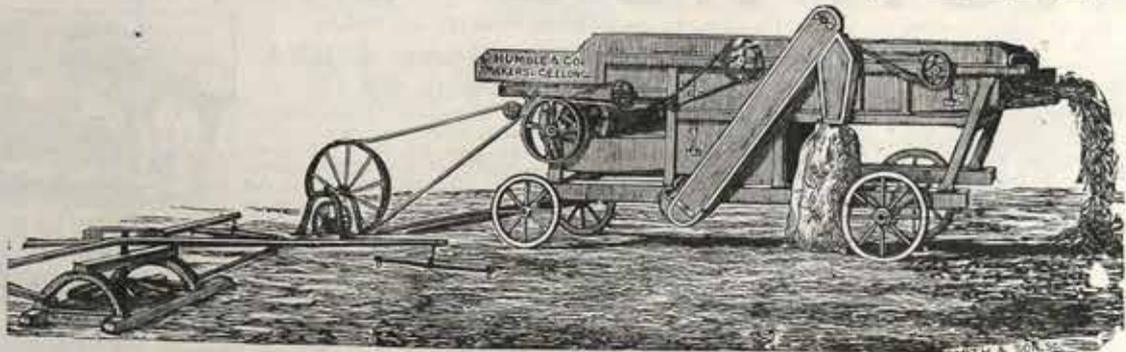
Special attention is directed to the fastening of the Packs before the Wool is put in, which is done in an exceedingly quick and simple manner: four pieces of wood are fitted into the recesses of doors, which hold the Pack securely in position and to the side catches for fastening the doors, which are held in position by a vertical bar, and relieves them simultaneously.

The side door is also held in its place by a catch, which at any time can be relieved instantly, the door falling back and allowing the bale to be removed.

At the Melbourne Exhibition competition this Press turned out 3 Bales of Scoured Wool in 28½ minutes, being considerably less than any other Press, although one had the advantage of being driven by steam.

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FOUR-HORSE POWER THRESHING MACHINES.—These Machines are found to be very convenient to farmers who wish to thresh their own grain; or in some cases where three or four neighbours combine. They will thresh from three to four hundred bushels per day with horse power; or if worked with steam power, about six hundred bushels daily.

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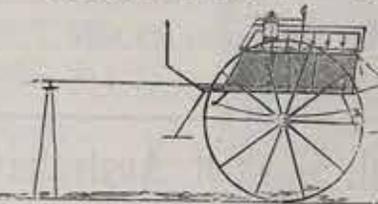
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MEDALS (1st Prizes), at Exhibitions and Shows of 1872, 73, 74, 75, 76, 77,
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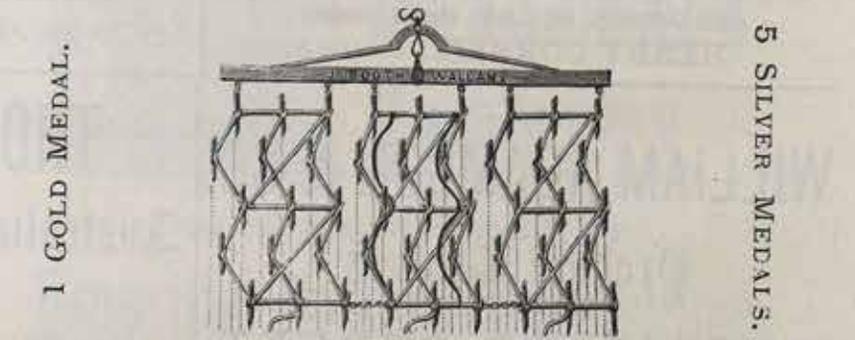
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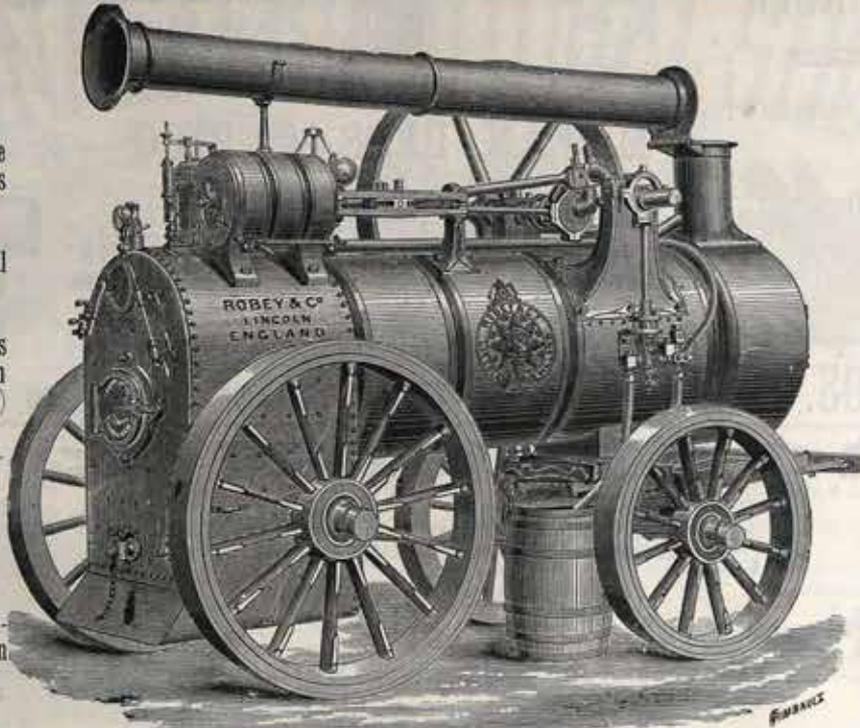
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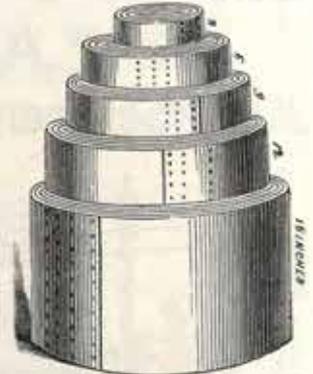
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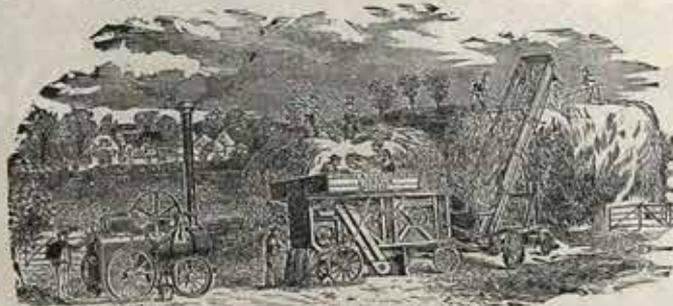
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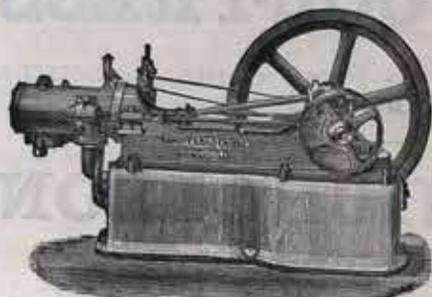
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VICTORIA

Vol II.—No. 22. [Read as a Newspaper.]

MELBOURNE, MAY 13TH, 1887.

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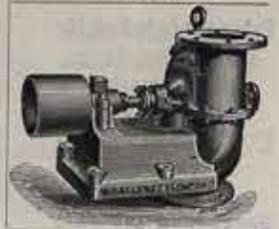


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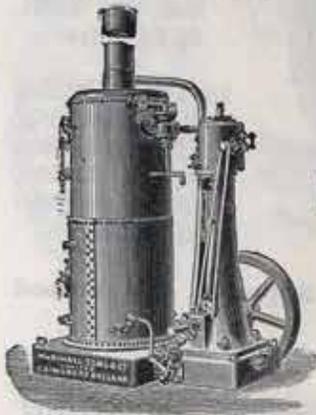
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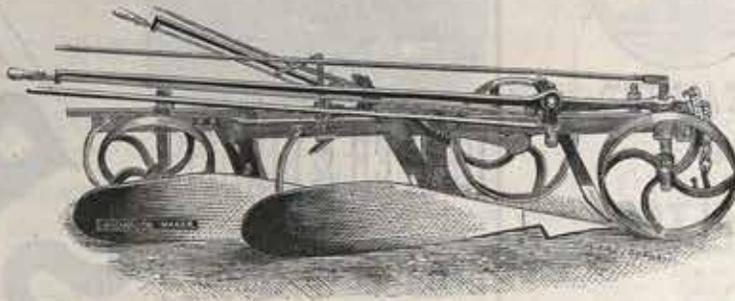
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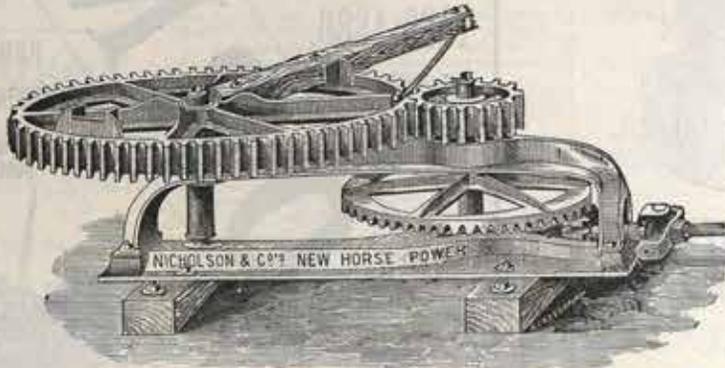
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Trebles, £28 & £29.

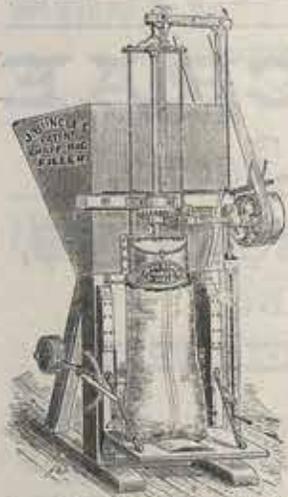
J.N. and Co.'s DOUBLE and TREBLE FURROW PLOUGHS are constructed of the best materials, and every care is taken to combine lightness with strength. The sizes of the furrows can be easily adjusted to any required width or depth. The implements are of great durability, and the draught is as light as that of any Double or Treble Ploughs manufactured.

Price, including two
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This most useful Machine is made entirely of Iron, simple in construction, very strong, and easily managed. It is also fitted with a spring clutch, which prevents the poles from striking the horses' legs when the Machine is stopped. The pole or poles (as it can be used either as a Single or Double Horse-power) are fixed in such a manner that the pull is direct; the strain thus being reduced to a minimum, the speed is sufficient without the expense of an intermediate motion.



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For the information and convenience of customers, a machine is kept constantly set up ready to show at work in **BUNCLE'S PARKSIDE IRONWORKS**, and many customers have witnessed 80 to 90 lbs. of Chaff put in a bag in 15 seconds!!! which, after making allowances for time removing the full bag and replacing an empty one, would easily on an average keep **Four of Buncle's No. 1 Chaffcutters**—well, if there is any doubt, say Three Machines clear of all the Chaff they cut (medium length.) Of course the Machines are arranged to put in as light weight as you like, or you can fill up and burst all your Bags—to pieces. As a trade requirement (in addition to filling bags) the necessity for a **Mixing Machine** is a long felt want, the laborious and unsatisfactory way at present adopted cannot much longer be endured, and there is no necessity for it!! as J. Buncle can arrange to "Blend" the worst and the best samples "To a Hair" at the least possible expense with the best results.

The season is now coming on when all those who intend having the latest improved Machines should forward their orders as early as possible, to prevent disappointment in the day of their need.

J. Buncle's Machines have, as usual, been awarded First Prize at all the leading shows wherever he exhibited last year (1885), and the many improvements introduced and constantly copied by other makers, is the best proof of the value of the continued consideration in all that affects the profits and welfare of his customers.

Chaffcutters with 14-in. wide mouthpieces and Newest Designs, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

Sirs and Gentlemen, yours respectfully,

JOHN BUNCLE.

Parkside Iron Works, North Melbourne.

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Single, Double, and Treble Ploughs.

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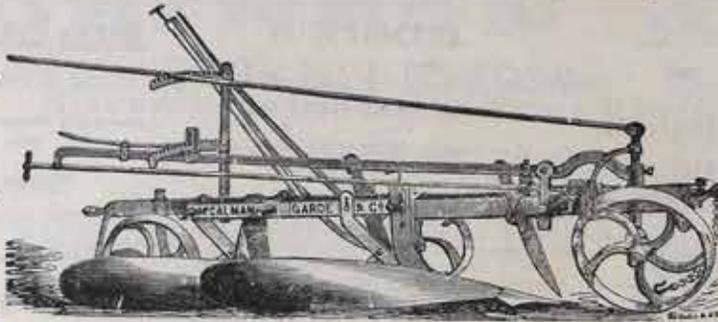
Horse Hoes,

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For dam sinking.

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Special Ploughs

Made to any design.

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LEVER WATCHES
still hold their ground
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THOMAS PATTERSON,

SECRETARY.

Melbourne, 2nd Feb., 1887.

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- Hereford do do 1899.
- Ayrshire do do 1899.
- Jersey (late Alderney) do do 1899.

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Business communications to the Publishers,
 Melbourne Place, off Russell Street, Melbourne.

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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
 requested to forward to the editor the dates on
 which their respective exhibitions will be held,
 also copies of their prize schedules as soon as
 they are published.

MAY.

20 to 25.—Agricultural Society of N.S.W., at
 Sydney.

JULY.

21.—Deniliquin, N.S.W.

AUGUST.

- 2, 3.—Corowa, N.S.W.
- 16, 17, 18, 19.—National, Brisbane.
- 23, 24, 25, 26, 27.—National, Melbourne.

SEPTEMBER.

- 1, 2.—Ballarat (Sheep).
- 7, 8.—Wimmera, at Stawell.
- 8, 9.—Ovens and Murray, at Wangaratta.
- 14.—Wycheproof.
- 14, 15.—Donald.
- 14, 15.—Albury, N.S.W.
- 22, 23.—Echuca.
- 28.—Numurkah.
- 29, 30.—Horsham and Wimmera (National).

OCTOBER.

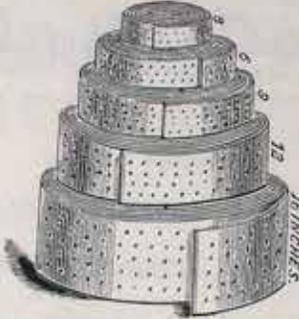
- 4, 5.—Rochester.
- 5.—Euroa.
- 6.—Bacchus Marsh.
- 6.—Cashel.
- 6.—Tungamah.
- 12, 13.—Bendigo, at Sandhurst.
- 12, 13.—Warrnambool.
- 13.—Murchison.
- 16.—Nagambie.
- 19, 20.—Tatura.
- 20.—Sale.
- 26, 27.—Shepparton.

NOVEMBER.

- 10.—Heathcote.
- 16, 17.—Kyneton.
- 24.—Ballarat.



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(Signed) W. S. KIMPTON & SONS.

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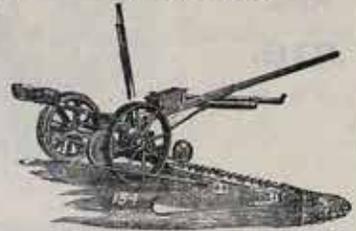


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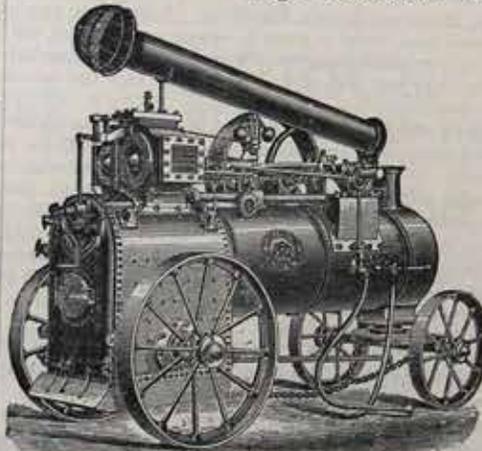
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The Journal
OF THE
National Agricultural Society
OF VICTORIA.

MELBOURNE, MAY 13th, 1887.

Pleuro-Pneumonia in Cattle.

This disease, which is still rife in England and on the Continent, has lately been very prevalent throughout Australia, more particularly in Victoria. It seems strange that this should be so when inoculation has been proved beyond a doubt to be a certain preventive, for it would naturally be supposed that, such being the case, the practice of inoculation would be universally adopted, to the complete stamping out of the disease. Inoculating, however, is not believed in by every one, for the simple reason that in many cases it has not only failed to stop the disease in a herd, but has itself been fatal to the animals operated on. And here we may say at once that the success of inoculation as a preventive of pleuro-pneumonia depends entirely on the use of proper lymph—that is lymph taken from the lungs at the right stage. Want of knowledge on this point is the sole cause of failure. If the disease is not sufficiently advanced in the animal from which the lymph is taken, the latter will be too weak to have the desired effect. If, on the other hand, the disease is too far advanced, the lymph will be too strong and will cause the tails of the inoculated animals to rot off, or if still further advanced it will kill them outright. Many years ago, when inoculation was first tried, we saw a lot of valuable working bullocks operated on. The lymph used was altogether too strong—"not the right stuff," as a stockrider who afterwards became an expert in pleuro used to say in speaking of it—the result being that the mortality was greater than if the disease had run through the lot. As this happened shortly after the introduction of pleuro into Australia, and when inoculation was on its trial, it set a great many stockowners in the part of the colony where it occurred against the practice. An expert, however, has no difficulty in selecting lymph at the right stage, although sometimes he may have to kill more than one animal before he obtains it. In choosing a beast to slaughter for lymph, one should be selected which has the disease in the early stage—before it is very far advanced. Then lymph may be obtained from the lungs which is of a pale sherry or amber colour, this being the stage at which it should be taken. Inoculation with such lymph is a certain preventive of pleuro, proved over and over again by men who have stopped the disease in herds which, before inoculation, were dying wholesale. Some even go so far as to claim that inoculation is not only a preventive, but is also a cure for the disease in its early stage. However this may be, it is unquestionable that many animals which were undoubtedly infected have recovered after inoculation without ever showing any severe symptoms. Although we would not advocate compulsory inoculation throughout the whole of the

cattle of the colonies, still, wherever the disease breaks out the herd should be at once inoculated. This would certainly be to the interest of the individual owner as well as to that of the whole community. Opinions differ with regard to the infectious or contagious nature of pleuro-pneumonia, but we notice that those who question its infectious nature always take very good care that no animal suffering from the disease is admitted to their herds—if they are aware of it. There is also a difference of opinion between professional men—veterinary surgeons—and practical men—stockowners—as to whether an animal that has had pleuro and has recovered is likely afterwards to be a source of infection to others. The leading veterinary surgeons (who speak theoretically) maintain that it is, while the practical men argue that it is not. During an experience extending over a number of years we have never seen an animal which has recovered from the disease which has afterwards communicated it to others. Sometimes an animal which is apparently recovering, and is almost well, will have a relapse, during which it is, of course, a source of infection; but after the disease has run its course—whatever may be the theory of the professional men with regard to matter becoming encysted in the lungs and retaining its vitality—in actual experience there is no danger of infection from a recovered beast. In proof of this we remember a milking cow which had a terrible attack of the disease, lasting about two months, during a fortnight of which she neither ate nor drank—her recovery being looked on as almost a miracle—which afterwards bred calves and ran for years amongst all kinds of cattle, yet never infected a single beast. Only quite recently we were reminded by the man who broke them in of several Queensland bullocks which were bought as stores, which had the disease and recovered, and which were afterwards worked for years, and were then sold in Melbourne fat, without ever having infected others. Also we have again and again turned bullocks, which had been isolated while they had the disease, back into the herd after they had recovered, when they have run with others till fat, sometimes being kept over for a second year and mixed with fresh mobs, without ever once having known them to be a source of infection to others. Surely the "noes" have it, as Mr. Speaker would say. As we see no reason why pleuro-pneumonia should be like the poor—always with us—or like tuberculosis, which our Chief Inspector of Stock said in his evidence before the Tuberculosis Board would never be eradicated from our herds till the end of the world, we hope that in course of time a better appreciation of the efficacy of inoculation may lead to the stamping out of the disease.

The Clydesdale.

The history of the Clydesdale horse proper dates back only to the beginning of the last century, but to get at the origin of the breed we must go as far back as the year 1066, when what is known in British history as the Norman Conquest took place, and in which William, Duke of Normandy invaded England, accompanied by the Earl of

Flanders and a strong force, mounted on the very finest chargers in the world. These were Flemish horses, said to be descended from a combination of the strong black horse of Flanders, the Arabian bay, and the original Asiatic white horse, and they subsequently became so popular in Great Britain that a century afterwards King John imported 100 of them into England for the purpose of improving the draught horses of that country. These Flemish stallions are described as follows:—Color black, with white markings on face and feet, and frequently with all his legs white up to the knees and hocks. He was tall, rangy, muscular, well developed at the vital points, and stood on broad, flat, cordy limbs, which were strongly jointed both above and below, and the backs of which were fringed from the fetlock to the upper end of the cannon bone with long hair. The dominance of the black stock in him gave a short neck and a rather clumsy head, but he possessed enough of the blood of the bay to give him the long sloping shoulders, the long arms and thighs, the oblique pasterns, and the splendid style and action for which as a war horse he was distinguished. The abundance of lime in the soil of Flanders contributed liberally to the growth of his osseous framework, and in size and quality of bone he never was, and probably never will be, excelled.

Early in the fourteenth century another large importation of these Flemish horses into Britain was made by King Edward II., and in the year 1352 King Edward III. granted to William, Earl of Douglas, a free passport to allow his taking ten of these 'large horses' from Scotland into his English possessions, the strong probability being that these horses were also of Flemish stock. These stallions were crossed on the native Scotch mares of about 1,300 pounds weight.

To come now to a much later date it is reported that the Duke of Hamilton brought over from Flanders into the Clydesdale district six black stallions for the purpose of improving the Scotch breed of horses about the middle of the seventeenth century, but at all events it is certain that a Scotch farmer, named John Patterson, of Locklyoch, in the upper ward of Lanarkshire and the valley of the River Clyde, brought from England into his own district a black Flemish stallion for the use of himself and his neighbours, and from that horse is descended in a straight line the well-known Lampits mare, dam of the noted 'Glaner,' alias Thompson's Black Horse, which was foaled about the year 1810. From this time downward a correct record has been kept of nearly all the colts bred in that country till the present day, this being rendered less difficult on account of the comparatively limited area over which the breeding of Clydesdales was carried on during the first half of the present century. The Clydesdale horse is therefore in all likelihood descended from, first of all, the black horse of Flanders, from which he inherits his great strength, size, and quality of bone; from the white horse he retains the markings on face and legs, while from the Arabian bay he partakes in a large degree the color, endurance, and hardihood so characteristic of the breed. There has undoubtedly been a vast improvement effected during the last half century in the breeding

of Clydesdales, and while the original stock contained the elements of what was really good and substantial, the climate, soil, and pasture of Scotland, and especially of the Clyde Valley, were specially favorable to the development of bone, muscle, and general strength and hardiness; but probably the most powerful agencies of improvement are to be found in the careful and judicious selection of the best and most suitable stallions and mares, the result of intelligent ideas on the science of breeding; also the castration of nearly all inferior or unworthy colts, and the friendly rivalry engendered and promoted by competition for premiums at local or provincial shows or fairs throughout Scotland. The Highland and Agricultural Society, which was organized in 1784 for the purpose of improving the condition of the Highlands of Scotland, has been of incalculable benefit in awakening the people to the necessity of improving their stock, and their annual exhibitions are held in rotation at all the principal towns, with liberal premiums offered for competition in all the various classes.

The modern Clydesdale may be described as a horse of from 16 to 16½ hands high, weighing at maturity in fair flesh from 1,700 lbs. to 1,900 lbs., although some weigh 2,000 lbs. and over. The prevailing colors are bays and browns with white markings, these being the most popular shades, but there are quite a few blacks and also an occasional grey. Chestnuts are rarely met with unless when crossed with English Shire blood. The Clyde horse has a fair-sized head with considerable width between the eyes, which are large and prominent, expressive of vigor and mildness of temper; profile, straight; ears, moderately long and active; under jaws cleanly cut; neck of good length, and well arched on to the shoulders, which are deep, powerful, and tolerably sloping. His chest is broad and full, denoting a good constitution; his back is short, firm, and pretty straight; body round and ribs well sprung, with short couplings; lengthy quarters; arms and thighs powerful, and well muscled; hocks, broad and clean; cannon bone flat, strong, and cordy, with nice fringe of long hair from knees and hocks to fetlocks; pasterns, sloping and elastic; feet, good size, strong, and tough, with heels square and prominent; large knees and joints; general appearance noble, symmetrical, and majestic. The popularity of the Clydesdale is due in a great measure to action and general disposition. In trotting the action is level and straight, knees and hocks well bent and reaching forward with much life and elasticity, getting well over the ground. In walking his superiority over other breeds is quite apparent, as the stride is long and swinging, and the whole gait expressive of activity and power. This enables him to get over long distances pretty quickly with very heavy loads. Indeed, the strength and willingness of these horses is very apparent to anyone who has seen them moving rapidly along the crowded streets of Glasgow, and noted the fact that two-horse carts or waggons are quite unknown in Scotland. While full of spirit and vigour, the temperament of Clydesdales is, as a rule, mild and docile, easily broken to work, and very pleasant to handle. The manner in which Clydesdale

horses set themselves to pull heavy loads is noteworthy. He plants his hind feet far forward under his body, his fore feet deliberately thrown straight forward with toes firmly clutching the ground, his head on a line with his body, but not too high, then by a slow, steady pull, gaining a strong leverage from the natural bend in his hind legs, and bringing into play all the weight and strength he possesses, he moves off with his load of four or five tons quite cheerfully. Some horses might make a sudden dash with such a load only to recoil backward, but the deliberate Clydesdale, with shoulders and pasterns tolerably sloping, goes forward, onward, and if need be upward, without any trouble or hesitation. Not the least important characteristic of the Clydesdale horse is that peculiar, impressive faculty which he invariably shows when crossed with native or grade mares, the produce in almost every case being a strong, useful animal, with marked resemblance to the sire.

The Clydesdale work horse, as used in Scotland, shows, perhaps, a measure of greater intelligence than any other animal. In the cart he is guided entirely by word of command, while in the plough he shows a degree of sagacity and intelligence that is positively surprising.

Anyone who has witnessed a Scotch ploughing match cannot fail to have noticed the careful 'measured step and slow' which these horses take as their masters hold the plough-handles (or 'stilts,' as they are called) like grim death, trusting to the horses' steady, constant, mechanical motion to help them in securing the much-coveted prize. It is on such an occasion that the Clydesdale horse is seen to the greatest advantage, when fifty or sixty teams, decked with ribbons and with their highly-polished harness glancing in the bright sunlight, assemble on the lea, and each man and horse seems to feel responsible for the satisfactory accomplishment of the day's work. The sight to a stranger is most imposing, and once seen not easily forgotten.

Notes.

Baron Von Mueller has favored us with a letter in which he states that the botanic name of the Japan clover, which we mentioned in our last issue had been received by the National Society, was incorrectly given by Dr. Schomburgk. It should be *Lespedeza striata*—not *stricta*. No *Lespedeza* is called *stricta*. The name arose with the traveller Thunberg, who discovered the plant in Japan, and described it as *Hedysarum Striatum* in 1784. Sir William Hooker and Dr. Walker Arnott transferred the plant in 1841 to the genus *lespedeza*, of which we have also one species in Victoria. Baron Von Mueller informs us that there is a note on this Japanese valuable pasture herb in his volume on select plants for industrial culture and naturalization. The Baron adds that the plant has become naturalized in the Southern States of America, where it is regarded as a valuable acquisition to the pastoral vegetation. There were so many applicants for the clover that the Society could not possibly supply them all.

A great deal of correspondence has been going on lately in the English Agricultural papers on the subject of England's horse

supply, particularly in relation to horses suitable for army purposes. *Agriculture* says that European Russia is credited with 11,500,000 horses, Germany, 4,000,000; France, 3,000,000; and Austria-Hungary, 3,500,000; while Great Britain cannot muster many over 2,000,000. The country is eminently adapted for horse breeding, and none contains a better breed—or the nucleus of a better breed. Lately, however, the best horses have been drained out of it by the foreigners, while not a few have come to Australia. In view of the early possibility of war, the steady drain on the horse supply has occupied the attention of the Legislature, who see the necessity for retaining the best animals and producing a superior class of horses. Lord Ribblesdale has promised to bring forward a 'detailed and constructive' scheme of legislation on the subject.

Mr. Harbison, of Phillip Island, has given us an interesting account of his mode of dealing with sparrows, which, in view of the present action in relation to the pest, is worthy of note. Mr. Harbison, who had thousands of the birds on his place, procured a couple of shallow boxes in which galvanised iron had been packed, and set them on legs a considerable height from the ground to keep them out of the way of the poultry. They were set near a hedge where sparrows did much congregate, in a position viewable from a window in the house. In these boxes Mr. Harbison placed a quantity of sound corn. From a window he watched results. The first sparrow alighted cautiously on the box, took a peck, made a chirp, and retreated. Shortly afterwards, however, he returned with one or two others, who also tried the grain, and finding it good partook of it, then flew away, but only to return with many others. This went on for a few days, Mr. Harbison continuing to supply good grain till at last at feeding time the boxes were a living mass of sparrows. Then he procured some phosphorised grain, and put it in the boxes. The sparrows, accustomed to being fed on good grain, innocently ate the poisoned wheat greedily. The fatality was enormous, the destruction was complete. Every sparrow on the place succumbed. Nor were any seen for a considerable time afterwards. But other people on the island had not carried out the experiment, so that in course of time the place was again stocked. Mr. Harbison's individual success, however, goes to prove that if a general system of poisoning, as suggested by Mr. Peppin at the April meeting of the Council of the National Society, were carried out, very much would be done towards ridding the colony of a destructive pest.

The Council of the National Society is busy preparing the prize list for the show to be held at the end of August next. The prizes will be very similar to those of last year with the exception that several new features will be introduced. The prizes for grain have been improved, good second and third ones in addition to the grand champion having been introduced. Should any member of the Society be desirous of offering a special prize or prizes, particulars should be at once forwarded to the Secretary. If completed in time, the list will be issued as a supplement to the June number of this journal, as it was last year.

Lime is a purifier and should be used often as a wash for coops, perches, and nest boxes of poultry. Sprinkle the place most frequent by them with air-slacked lime.

A thermomic plant is the newest sensation. It changes color as it grows hotter, until at a certain temperature it gets very dark. On being allowed to cool it returns to its original light hue.

If poultry would believe how succulent and valuable potatoes, cabbage, turnips and carrots are when cooked and mixed with meal and fed while warm to the fowls, they would make ample provision for them in winter.

The Veterinarian.

Veterinary Notes.

WORK.—An animal at work presents many associated phenomena, of which we will mention acceleration of the pulse and respiration, excitement, increase of perspiration and of fecal discharge, and increase of metabolism and body temperature. There is evidence to show that, if some of these be aroused, there is a tendency for others or all to be aroused. If the temperature of an animal be artificially raised, the pulse and the respirations are accelerated, and the cutaneous glands are more active. The converse is the case if the temperature be reduced.

Increased defecation we have mentioned as a work-associate. Cattle, when suddenly disturbed, defecate and set off space. The horse passes faeces, which become increasingly fluid while engaged in the chase. A cockatoo and a blue mountain, lately taken from the bush in Australia, were observed to defecate whenever a stranger approached their cages, and they continued to do so for some time from the commencement of their captivity. Again, in man, relief from constipation is very generally afforded by physical work or excitement.

These and other facts point to an association between work, excitement, and defecation which results in reduction of weight. The cockatoo, defecating at the approach of strangers, simultaneously raised its head-plume—a preparation for defence.

With action, moreover, there is increased temperature, a contracting muscle rises in temperature, and there seems to be a very considerable total increase of heat in the body during action.

With action, with excitement, with alarm (if not too great) there is also associated an accelerated pulse. The pulse of an excitable thoroughbred, or even of a cart-horse, is much higher if roughly approached than it otherwise is, and the same holds with other animals as with man.

WORK AND REST.—Muscles freely exercised hypertrophy; but if rest be not allowed, they atrophy. The same applies to other tissues and organs; this fact, well-known in man, is true also of other animals, and is observable in the case of the heart of the race-horse. All racers acquire hypertrophy of the heart. The hypertrophied tissue, however, by excessive action, degenerates. Mr. Charles Gresswell, M.R.C.V.S., informs me that the race-horse, at five years of a, e. loses form to such an extent that, in handicapping for racing, weight is taken off rather than added to, after the age of six years, and that, when racers go to stud (as most of the best racers do at about the age of six years) the heart no longer called upon to undergo the exertions of former times, fast degenerates; one such heart recently examined, after death, by us, was three times its normal size, fatty and dilated. Mr. Herbert Spencer shows that, by alternate squeezing and relaxation, currents pass to and fro, in plants, in trees, in animals, and he thus explains many normal growths, as also the formation of bone that fills up the arc of the curve in rickets. The same explanation has been applied to the development of ring-bones and bone spavins in the horse, and it may be applied also, we think, to some cases of splints and to side-bones.

Rest and work must alternate. We see the injurious effects of disturbance of this alternation in tissues and organs; we see them, moreover, in the system. Lymphangitis, or "weed" of the horse, for instance, is so common on Monday that it has been

called "Monday morning disease" a fact which indicates its relation to Sunday's usually complete rest and over-feeding. Man, too, pays a like penalty for like indulgence.

The alternation of work and rest in animals has been observed for ages past, and it is important to attend to this rhythm, for the muscle, the limb, the organism, the species suffers when the old alternation is too abruptly interfered with.

DAY AND NIGHT.—Day is characterised by sun-light and sun-heat, and with day there have been manifested in animals for untold ages the associates of work. The pulse and respirations are more frequent by day. Metabolism as evidenced by the separation of carbonic acid and urea is greater. The body temperature is higher. In the *British Medical Journal*, of July 26th, 1884, Dr. D. A. Gresswell recorded evidence to show that light stimulates the heart, and that tropical heat is accompanied by rise of body heat. Moreover, physical work is one expression of increased metabolism, and the absorption of food is accompanied by rise of temperature. The factors then, which constitute day, internal or organic, are each and all concerned in adding to the activity of vital processes. The external factors (light and heat) in reference to the internal, stand to some extent directly in the relation of cause and effect. They stand also indirectly in this relation, as they afford opportunities for working which are not present by night.

A rhythm has thus been established in organisms in relation to day and night. It is, moreover, kept up for a time, even when some of the factors concerned in the causation of the rhythm are altered, just as the variations in the frequency of the pulse which have reference to meal-times persist, even if we pass the whole day without food. For instance, when we commence to work by night and rest by day, it is some time before we can obtain a reversal of the temperature curve, and the reversal is probably never complete.

THE SEASONS.—Summer and winter differ as much as day and night, and they likewise merge into each other imperceptibly in different ways. In summer there is an addition of light, of heat, and of food. There is also an addition to the activity of life's processes. In spring and summer, as compared with winter, the pulse is quicker, the temperature is higher, metabolism is more active. With each recurrence of spring, life, comparatively dormant during the winter, bursts into renewed activity. The hibernating animal takes new life. Spawning and pairing and reproduction of all kinds of animals now take place. There is also a great increase of peripheral growth, as shown in quicker growth of hair, nail, and hoof, and in the shedding of hair and cuticle in moulting.

We concluded above that vital activity had been so long associated with day as to explain the fact that organisms exhibit a rhythm corresponding with summer and winter. The Rev. J. G. Wood records a case in print. Some Australian plants set in the suburbs of London made an attempt to blossom just as our winter had set in, but in the course of a few years they grew gradually late in blossoming, until they had found the proper season, and then they were content to put forth their leaves and flowers at the same time as the indigenous plants. Hilton, in his "Rest and Pain," mentions facts which he interpreted in the same way. Lastly, Dr. J. Crichton Browne says that many children at spring show a restlessness and excitability, a perversity and irascibility of temper, or a listlessness and indisposition for exertion that are not seen at other times, and he suggests that these so-called irregularities are to be classed with the vernal activity of organisms generally.—*The Veterinarian*.

The Dairy.

Should Cream be Churned Sweet.

IN reply to a correspondent asking for information as to the relative merits of butter being made from sweet or sour cream, Professor Long, writing in the *Farmer*, says: "Butter should be made from cream which is ripe, i.e., in which the souring process has just commenced; for this reason, cream should always be stirred, so that the same degree of ripeness attaching to that first put into the cream jar will be communicated to the last. Ripe cream gives a fuller flavour, and a larger yield of butter; it is more nutty, and will keep better. Butter made from sweet cream is very delicious, and, perhaps, milder than any other. I often prefer it; but for market purposes it is not so profitable. Butter will keep if churned at 58 to 60 degrees, if churning is stopped when it commences to form grains, and if then the butter-milk is drained off and the grains rendered crisp by frequent pouring of cold water. The water will also thoroughly cleanse the butter, and if the last washings are rendered salt, or if brine is used, it will be salted as well. This is, in fact, the best plan to salt butter, as it can be salted to taste. The keeping property depends not so much upon the salt as upon the fact that by washing the granular butter in the churn the water is enabled to get round every small grain, removing the caseine or curdy fragments, and all traces of the sugar of milk. In the same way the butter is more perfectly salted than it can possibly be by using dry salt."

Sour Milk.

"THE GUERNSEY BREEDER," a new American monthly, relates an incident in connection with the sale of milk which is exceedingly practical and worthy of attention and remark. It appears that the customer of the milk-seller, calling at the shop on one occasion, was asked if she ever found her milk sour? The reply was, on the contrary, it was always extremely good. At this the dairyman expressed some surprise, and stated that he had received complaints from several of his customers, who declared that milk delivered in the morning had become sour before tea time, and that he had been compelled to make them some return. This had naturally given him some trouble, and would probably have caused him to change the source from which he received his milk. The customer at once threw light upon the matter, and suggested the probable cause was carelessness on the part of the servants of those people whose milk became sour. She said that, being a farmer's daughter, and having had the care of milk for years, she was alive to the importance of cleanliness in connection with milk vessels, and it was her practice to scald every vessel in which milk had been placed, or was to be placed. She urged upon the dairyman to investigate the matter and endeavour to ascertain whether his customers adopted this practice. He did so, and he found that in every case the customers deemed it necessary to do nothing more than merely to rinse or simply to wash the vessels they used; he had become greatly depressed by what had taken place, but this manner of solving the question had answered admirably, and had put him right with his customers.

Silage for Dairy Cows.

MR. BEVAN, Elton House, Knocklong, writes, to *The Farmer's Gazette*:—"All through the winter the butter I made from two strippers, getting nothing but silage, had no bad taste, nor had the milk. Mr. Blunt is quite convinced that there is no better food for dairy cows than good grass silage well made; and so satisfied are the directors of the Leicestershire Dairy Company of this that they have decided in purchasing milk from the farmers, to give the preference to those who feed on silage."

Meeting.

THE ordinary monthly meeting of the Council of the National Agricultural Society of Victoria was held on Tuesday, 10th May, 1887.

Present—Dr. Plummer (President), in the chair, with Messrs. F. Henty, J. Currie, J. M. Peck, F. Peppin, J. Hurst, D. Munro, W. J. Lobb, W. Thomson, W. Learmonth, S. G. Staughton, W. Glover, R. Clarke, D. Mitchell, T. Brunton, J. Garton, C. Lynott, Walter J. Clark, George Young, John Bond, D. White, J. Hearn, J. Finlay, and the Hon. C. Young, M.L.A.

The minutes of the previous meeting were read and confirmed.

The President stated that the next business appearing on the agenda paper, was the election of three members of Council in the event of Mr. Peppin's motion passed last meeting being ratified. He, however, ruled that the election should not properly take place till the next meeting, after the vacancies had been declared at the present one.

Mr. Munro moved that three vacancies be declared in the Council, and that they be filled up at the next monthly meeting, seconded by Mr. Mitchell, and carried.

FINANCE.

The Finance Committee's report was read. It submitted the monthly statement of accounts, recommended payments amounting to £128 0s. 7d., and that the President, the Chairman of the Finance Committee, and the Secretary, wait on the manager of the Bank of Victoria, to ascertain on what terms they could arrange for a loan on the security of the Society's deed (which was now in the possession of the Trustees), the said loan to be paid off in instalments extending over a number of years; also, that the Secretary's salary be increased to £400 per annum, from the beginning of the present year.

The Report was adopted with the following amendments:—1st. That before action was taken to interview the manager of the Bank, a deputation of the whole Council wait on the Government to request them to place a sum of money on the estimates, or lend the Society a sum of money at a low rate of interest. On the motion of Mr. Thomson, seconded by Mr. Lobb.

During the discussion on this motion, Mr. Munro suggested that the Council should, this being Jubilee Year, ask the Government to grant a sum of money to put up a hall, or buy an extended area of land, as he believed the present site before long would be quite inadequate, in view of the progress of the Society.

2nd. That the Secretary's salary be increased to £450 per annum. On the motion of the Hon. C. Young, seconded by Mr. Munro.

CORRESPONDENCE.

From J. Gibb, stating that he would be unable to attend the meeting, and asking leave of absence.

Mr. Peck moved that leave of absence be granted to Mr. Gibb, and that the Secretary express to him the Council's extreme regret at the accident he had met with, and their hope for his speedy recovery. Seconded by Mr. Garton, and carried.

From the Hon. J. Buchanan and J. C. Cochrane, expressing regret that important appointments prevented their attendance at the meeting. Received.

From C. Hallett, Hon. Sec. Australian Wine Association, stating that Mr. Vettler would read a paper on the cultivation of the vine and wine making, at the Town Hall, on the 20th inst., when there would be a sampling of wines; and inviting attendance. Received.

From Secretary Agricultural Society of New South Wales, forwarding complimentary

ticket to the Secretary, and inviting him to visit the Society's Show.

The President stated that he thought the Secretary should go to Sydney and represent the Society at the forthcoming Exhibition. The report he had written when he had last visited the Sydney Show had been of immense service to the Society, as it had suggested lines of action which had been followed up with great success.

Mr. Lynott moved, that the Secretary visit the Sydney Show, and that his expenses be paid. Seconded by Mr. Staughton, and carried.

The Council then suggested that the President should visit the Show. The President promised to comply with the request if he possibly could.

From *The Ironmonger*, suggesting that the Society should use the paper as an advertising medium.—Received. Referred to Executive Committee.

From *Town and Country Journal*, calling attention to correspondence in its columns, and suggesting that the Society should use the paper as an advertising medium.—Received. Referred to Executive Committee.

From Bank of Victoria, re Crown Grant, which the Secretary stated had been received.

Mr. Mitchell moved, that it be deposited with the Bank of Victoria. Seconded by Mr. Peck, and carried.

The Secretary reported that he had received a promise of a special prize of £5 5s. from Messrs. S. K. Grimes & Co., for pen of six bacon pigs, to be judged by bacon curers as most suitable for the trade. To be acknowledged with thanks.

REPORTS.

The Works Committee reported that a letter had been received from the Architects, stating that the outer fence of the trotting track had been put up 3 ft. high instead of 3 ft. 6 in., as required by the specifications. They had inspected the fence. They recommended that it be raised to the height specified. After a discussion, Mr. Munro moved, that the Architects be instructed to see that the Contractor carry out the works according to specifications. Seconded by Mr. Garton, and carried.

DRAUGHT HORSE STUD BOOK COMMITTEE.

The Secretary reported that a meeting of this Committee had been called for that day, but, owing to other engagements of the members, there was no quorum present, so there was no report to present.

The President stated that he thought this Committee should be dissolved. Unless breeders took an interest in the matter, the work of compiling a book could not be carried out. He thought that the matter should be taken up by breeders, and that the Society should then give its assistance.

SPARROWS.

The Sparrow Committee reported that they recommended the Council to suggest to the Government that a united general system of poisoning by means of poisoned grain be organised and carried out, on sparrows, with a view to their extermination, at some time during winter, say about the end of June or beginning of July.

That, in order to make onslaught more effective, it be a recommendation that the birds be fed with sound grain for, say, one week before the day fixed for the poisoning.

In connection with this report the Committee desired to acknowledge the courtesy of Mr. C. R. Blackett in supplying them with information re birdlime.

Mr. Hurst doubted whether the scheme would be effective. He moved that the report be referred back to the Committee for further consideration. Seconded by Mr. Peck, and carried.

OFFICE FURNITURE.

The Office Furniture Committee recommended that a considerable number of new fixings be obtained to facilitate the working of the business of the Society.

Mr. Mitchell moved the adoption of the report, seconded by Mr. Currie, and carried.

The prize list, as partially revised by the Show Committee, was submitted to the Council for completion.

Mr. Munro moved that the meeting at its rising adjourn till such time as the list had been printed in slips and forwarded to each member of the Council; meanwhile the Wine section of the list to be completed by the President, Mr. McGregor, and Mr. Currie. Seconded by Mr. Lynott, and carried.

MOTIONS.

Mr. Peppin submitted the question of which he had given notice, viz., the extension of the Society's Show and the alteration of the arrangement for sales, and moved that the show commence on Wednesday of one week and go on to Saturday of the next week, and that auction sales be held in the yards on Monday and Tuesday of the second week. Seconded by Mr. Lynott. After an animated discussion, the motion was put to the meeting and lost.

Owing to the action in relation to the Draught Horse Stud Book Mr. Lynott withdrew his motion with reference to the Society undertaking the compilation of a cattle, sheep, pig and dog stud book.

Mr. Robert Clarke moved, in accordance with notice, that two judges and a referee be appointed in each class at the next show in August. Seconded by Mr. Peppin.

Mr. Lynott supported the motion, stating that although this was not the single judge system it was an approach to it.

Mr. Peck moved an amendment that the old system of three judges be adhered to. He thought the Society had been very successful in their selection of judges hitherto. Seconded by Mr. Learmonth.

The amendment was lost, Mr. Clarke's motion being declared carried.

The President stated that it was notified on the agenda that there had been three vacancies declared in the Council, which, as per bye-laws, would be filled up at next meeting.

NOTICES OF MOTION.

Mr. Walter J. Clark submitted the following notices of motion:—"That, in the opinion of this Council, stud books and herd books are most desirable in this colony, but that such works should be carried on by those most interested—the breeders—as in Great Britain and Ireland. However, this Council is of opinion that the breeders of draughtstock should be invited to immediately form a stud book under the auspices of this Society."

"That the Secretary be instructed to prepare a loyal address to Her Majesty the Queen on the occasion of the Jubilee."

The meeting then adjourned.

Dandelion, as a Vegetable.—In some countries dandelion is a wholesome vegetable used as salad, or boiled like spinach. For salad use only the delicate young leaves just after they appear among the grass. For cooking, either the young or full grown leaves may be used. Clean and wash the leaves well, as there is usually fine sand or earth between them, and let them stand in cold water for two hours. Drain them, and throw them into boiling salted water, and boil for twenty minutes, if young, and half an hour if full grown. Put the leaves in a colander, and press them to extract all the water, and then chop them fine. Put in a stew pan two ounces of butter to two quarts of leaves, and set it over a brisk fire. As soon as the butter is melted sprinkle in a tablespoonful of flour and some salt and pepper. Add the dandelion, stir until thoroughly heated, and then moisten with broth or milk, and serve.

A Perfect Hack.

A snaffle smooth in her pliant mouth,
A long, lean, clean-cut head,
The satin coat and the gamecock look
That shows she is thoroughbred.
Deep shoulders, legs and feet like flint,
A powerful loin and back,
Stands 15.2, looks 16 hands,
The type of a perfect hack.

An airy walk like a ball-room belle,
A square and regular trot;
She'll cover ten good miles the hour,
And rather would than not.
A perfect canter; and if of speed
You think there is any lack,
Get up in your stirrups, catch hold of her head,
No fear—she's a perfect hack.

If a bit of a ditch or a brook you'd cross,
She'll clear it with easy swing
But a high stone wall, or a post and rails,
Ah! that is another thing.
Just steady her back to a gentle trot,
Heels back, reins not tight nor slack,
Then leave her alone—she'll not put you
down,
She's a fencer as well as a hack.

For temper true and for courage calm,
Her equal I've never met;
Through her spirit is high she was never known
To either pull or fret.
She's "all there" on the road, at home 'twixt
the flags.
Or close to the heels of a pack;
You can hunt her or race her and spoil her not,
My perfectly mannered hack.

Colman's Rural World.

Agricultural Education.

By what means it has come to pass that unskilled labour is thought to be good enough for the agricultural industry we care not to consider; but the fact confronts us, and we can only regard it as a very damning one. We venture to say that agriculture furnishes as much scope for intelligence and skill in harnessing the forces of Nature and making them subservient to human will, as any other industry. Something has done great violence to the truth in this matter, and what that something is may not be very difficult to trace out. Those who till the soil have been degraded by tyrannical and overbearing circumstances, until almost all life and vitality has been squeezed out of the industry. Instead of the industry alluring the labour wealth of the world, it is scaring it! This is a momentous and a potent fact which demands recognition and searching enquiry. It should not be so. That industry which is of all the most important should not have to beg its way to recognition and support; should not gather to itself the acum and refuse of society as it often does; should not be crushed and ground down by tyranny and oppression in many forms as at present history declares it to be; but should be an attraction to our best minds and intelligences, and should engage the best skill and culture the world can furnish.

We do not wonder that our legislators occasionally entertain the thought that agricultural education is necessary. We wonder rather that the thought has not so fully mastered them as to compel them to make the very best provision possible for putting it into execution. Not so, however. A passing thought upon it; just enough to catch the ears of a few to make them believe the thought is like a good seed striking its roots down into the soil of our Legislative hearts, and then it dies. There is something very unhealthy and unnatural about this. Any amount of time is occupied over weak-kneed projects to make men more law-abiding and contented under unnatural pressure; and those things which should have pre-eminence—as being potent to cure more ills than all the laws that were ever enacted—are continually being shelved for a more favourable opportunity. When such things happen in the green tree what may be looked for in the dry? When our Solons are so wonderfully short-sighted that they are continually doing those things they ought not to have done, and are leaving undone those things they ought to have done, what degree of health may be looked for in the bulk

of the body politic? We confess to having no confidence in the progressiveness of the age. Facts do not justify the conclusion. We see a fastness and a fury working itself into a delirium of excitement and misconception, rushing hither and thither trying to correct mistakes without anything like an adequate conception of the evils to be surmounted, or wherein they are originated and bred. We see a lack of sober-mindedness and solid thought, and an immense amount of superficial nonsense spreading itself everywhere into every cranny and nook of man's sentient nature, and filling the world with crude and formless ideas having no foundation in truth or nature. And these are all the evidences which come before us whereby to form our judgment as to the progressiveness or otherwise of the age in which we live. If we go back in thought many centuries, to quieter times in the world's history, we can there gather evidences of a much broader and truer grasp of nature than we find now; and therefore we refuse to have the idea crammed down our throats in opposition to this evidence that the world is marching progressively onward. We believe that if we could only take many steps backwards we should thereby make greater progress. Hope tells a too flattering tale when she poisons our minds with the notion that we are the people, and that none have ever been before us. If we swallow that soothing opiate, and follow on in our present courses, we shall land somewhere by-and-by from whence we shall need to be extricated, for we shall find ourselves helpless.

Our remedy is in the land question and its legitimate uses. As an aid to that we must have superior agricultural education. We want men who have graduated in the school of Nature and mastered her wondrous secrets. Agriculture can only be conducted to a successful issue on a purely natural base. The nature and management of soils, the character and treatment of animals, the requirements and seasons for plants and crops, the knowledge of pests and how to conquer them, the battling with difficulties of all kinds and overcoming them, these form a portion of the curriculum every cultivator needs to pass through before he is qualified to win the treasures nature has in store for him. Until our legislators lay hold of these great fundamentals to do them something like justice, we need not expect to see prosperity written upon the pages of this colony's history. Water conservation and agricultural education, before railways or ought besides, if the colony's weal is duly considered. These are our sentiments.—*The Planter and Farmer.*

An Alleged Preventive for Red Rust

MR. A. B. GRIFFITHS, of the Technical School of Chemistry, Manchester, claims that ferrous sulphate, so far as his experiences show, is an effective preventive of rust in wheat and other cereals; also that, in a partial degree, it acts as a manure. The following is a resume of the results obtained by him:—By the use of $\frac{1}{2}$ cwt. of ferrous sulphate per acre, the increase of crops obtained per acre was—of beans, 16 to 21 bushels; of wheat, 1 to 2½ bushels; of turnips, 3½ tons; of potatoes, 2 tons. Mr. Griffiths, in his paper published on the subject, says:—“From my investigations, an iron manure does not appear to be of so great a value as a plant food in the case of a cereal as in the leguminous crop; for the yield is much the same, whether an iron manure is used or not. But there is one well-ascertained fact in favour of the use of ferrous sulphate for wheat crops, and that is, the plants were healthier and completely resisted the attack of the wheat mildew (rust), while the other crop, not manured with iron, was attacked to a certain extent; and this may account for the increase of one bushel over the crop grown on the normal plot of land. Besides my own experiments on cereal crops, Mr. George W. Edgson, of Eton, near Peterborough, (an agriculturist of great experience) has applied iron sulphate to several acres of wheat crop this year (1885). He tells me that this crop of wheat was better than any he had had for many years, and he never saw “such clean straw” in his life, being perfectly free from wheat mildew. I had the pleasure of seeing these crops last summer, and may remark that they looked the healthiest and finest in the neighbourhood. I have also made a careful microscopic study of the action of iron sulphate on “wheat mildew” in both stages of its life history. First, with the red spores (rust) of the barbery fungus, which produce hyphae in the cells of the stem or leaf of the wheat plant or similar cereals; and also

with the two-celled spores of the wheat mildew, which germinate on the leaf of the barbery. On placing the spores of rust, and also the two-celled spores of wheat mildew on slides under the microscope, mounted in a drop of water then running in between the coverslips, the above solution of iron sulphate, the spores are completely destroyed, not only the spores, but the hyphae which they give rise to are also destroyed by the same solution. Hence, from this experiment, it will be seen that iron sulphate is a useful agent besides being a direct plant-food, for it has a remarkable action on parasitic life. Turning to the more practical side of this investigation, I should recommend the use of a weak solution of iron sulphate to water ordinary farmyard manure before it is applied to the land, for farmyard manure may contain spores from the wheatstraw forming the litter in the farmyard; these and other straws hibernate until the spring (farmyard manure being rather a medium that favours this dormant state than otherwise), and are then ready to live their life-history again. That ferrous sulphate is a good plant-food is proved by the increase of the harvest, as shown above, yet, in excess, it acts as a poison to plant-life, a solution containing one-fifth per cent. of Fe So₄, being fatal to most plants.”—*Sydney Mail.*

Swine.

BY HON. EDWARD BURNETT.

The origin of the modern pig dates back only about a century, and the first cross towards the remarkable improvement brought about during this period was undoubtedly made by the introduction of the Chinese and Siamese blood. This Chinese pig, either white spotted or black, was of medium size, with rather a short face, large, coarse body and smallish bones. This animal fattened rapidly, but the flesh inclined to be soft and flabby and always very thick on the belly. The cross by a survival of the fittest and fresh importations, extending over a period of many years, founded the thorough-bred of to-day—the Yorkshire, Berkshire, Essex and other well-known English breeds. Few people realise what goodwork these early English breeders did, and how much the whole civilized world is indebted to them for their great efforts in the improvement of all our domestic animals, especially those for beef, mutton and pork. They reduced the cost of actual production of least one-half. In our own country I find that the fore-runners began to improve their swine about the beginning of the present century, and to the sea captains of our merchant marine and a few wealthy gentlemen in Philadelphia, New York and Boston, was largely due the infusion of fresh and improved blood. Chinese pigs were the first imported, and from some of these animals bought in Philadelphia by the Quakers of Butler county, Ohio, originates the once famous Magic breed and this stock in turn crossed with an imperfect Berkshire boar produced the Poland-China, a breed of to-day more commonly found among many of the large farms, especially in the West than any other. The Chester White another American family, originated about fifty years ago in Chester county, Penn. It received its first cross from English white stock, and is found quite extensively among the eastern farmers. The so-called American breeds, in my opinion, are not true thoroughbreds, and this opinion has been formed by personal observation at the State Fair, not only here in the East but also in the West. I have also found a marked difference in the same litters. Among the Poland-Chinas some pigs with long sugar-loaf head of the old-fashion Magic type, and others with the short face of the thoroughbred Berkshire. Among the Chester-Whites in the same litter I have found the drooping ear, coarse bones and crooked legs, the early characteristics of this breed, and with these same pigs the finer shorter head and clean limbs of the Yorkshire or Suffolk. The definition of a thoroughbred is where “like begets like, or the likeness of some ancestor,” and how clearly this is proved in the modern English breeds, every pig in the latter having the characteristics, and only the characteristics of its distinct family, even to the making of the bristles.

AMERICAN BREEDERS CRITICISED.

I fully appreciate that I am casting a bomb into the camp of our American breeders; but I will stand my ground. In Greenfield, a few years ago, I found that the Chester-Whites were no more like the parent brought from Chester county twenty-five years ago, than the improved

Shorthorn steer is like the coarse ox to-day. In England intelligent and wealthy men make the development of a breed a life study. Mr. Sanford Howard's paper on swine in the Report of the State Board of Agriculture in 1863, speaks of Capt. John Mackay, a wealthy sea captain and ship owner of Boston, who brought pigs on his ships from all points of the world, beginning in 1830. He did a great deal to improve our stock, and a breed called the Mackay breed was soon well-known throughout New England, the Middle States, varied much in size and shape, as one might naturally suppose. The Stickneys, William and Josiah, imported from 1842 to 1848 a number of the improved Suffolk, and created a great demand for this stock throughout the country, and the effects of this importation are found to-day in many a New England pen. Later the old Massachusetts Society for Promoting Agriculture imported Berkshires, Essex and Yorkshires, from the best pens in England, and from time to time has distributed them throughout the State.

THE MOST PROFITABLE PIG.

The question of to-day is, what pig is the most profitable for us to breed for our home market? This can be easily answered by saying that the pig which in the shortest space of time, on a given amount of food, will produce the most pork. The market has changed even in my day very greatly; formerly the packers wanted a large hog weighing from 400 to 600 pounds, from one to two years old, and paid the highest price for such pork. To-day these same buyers want pigs weighing from 200 to 300 pounds, and prefer those not over ten months old. Compare the grade Shorthorn steers of to-day, with its almost perfect symmetry and small amount of waste to the beef animal of fifty years ago, and what do we find? In the former as much beef at two years of age, and of much better quality than in the latter at four years of age. Similar results are obtained with our best grade pigs, for we get as much pork in eight months as we formerly did in twelve. Nearly all writers on the subject agree that for the ordinary farmer, with his usual facilities for fattening pigs, a thoroughbred boar of small bone crossed on sows that have plenty of constitution, and that might perhaps be considered a little coarse, produce the best average results. I have followed this practice myself, and will give you the results of my experience. My first boar was an Essex, and his pigs were most satisfactory, maturing early, docile and easily fattened. At the bench, in cutting up, I found the strips for the barrel of fine quality and very thick, but the belly stock, which I put into bacon, was heavy and too fat. The hams were very large and the fresh meat a little dark. My next purchase was a Yorkshire boar. The pigs were most easily kept and always fat. I obtained the whitest and best loins and spare ribs for the market, a firm and thin rind pork for salting down, but a belly strip that was the reverse of the Essex grades, too light and thin. A Berkshire boar gave pigs that did not fatten readily, but had perfect bacon and hams. After many experiments I should select strong, heavy, grade Yorkshire sows and cross with the Berkshire boar. Pigs require plenty of good feed, fed regularly, clean quarters and proper care. Without either one of these requirements, no matter how good stock a farmer may have to begin with, he will not be successful, and his stock will soon begin to deteriorate.

No other animals require greater skill in and in-and-in breeding, and for the ordinary farmer fresh blood every few years is indispensable. Nothing should be bred under a year old, and experience has shown me that a well-shaped sow that throws a large litter can be kept to advantage eight or nine years. The flow of milk increases up to four years, and will hold as long as she continues to be a good breeder. There is, perhaps, more skill in feeding swine than any other domestic animal. There is nothing like skim milk for young pigs, and yet it cannot be fed profitably for any length of time at over one cent a quart. As a substitute I have used to advantage good bran and crushed oats, scalded so as to make a thin mush. After the third month some meal can be added and gradually increased until it takes the place entirely of the bran and constitutes three-quarters of the grain fed.

With spring pigs this feed of grain can be supplemented by one feed a day of green fodder, freshly cut fodder being the best of all. Young pigs should be fed three times a day. Some of the farmers that supply me with pork have been most successful in turning wean pigs out to clover and feeding only a small ration of skim milk or slops once a day, continuing this for

six weeks before marketing them, finishing off in close beans with corn meal and whole corn. One litter of sixteen by a Berkshire boar out of a very good Chester White sow, raised in this way by Mr. Childs of East Melford, Vt., only costs the owner 35 dol. for grain at six months, averaged 250 pounds dressed weights. Mr. Childs was a skillful feeder. A neighbor of mine last season obtained almost similar results with eleven pigs, very high grade Berkshire. He cut his clover from an old garden patch, and fed daily in a large dry pen. Farm crops of clover were cut off the same ground during the summer. I never saw finer pigs of their age than those. They average 200 pounds at less than eleven months.

THE ANATOMY OF THE PIG.

The anatomy of the pig resembles very much that of a man. The stomach is very small, but they have great power of assimilating food, and if fed properly, will put on flesh very rapidly. Originally an herbivorous animal, the modern pig requires more or less condensed and nitrogenous food, the latter explains perhaps the value of clover. In England a few years ago, a thoroughbred Yorkshire pig, weighing 600 pounds dressed, was dissected. His bones weighed only twenty-one pounds, and he was twelve months old. This shows how great an improvement has been made.

HOG CHOLERA.

Speaking of hog cholera, the essayist said that experiments were being carried on with a view to finding some effectual method of inoculation. From recent reports by Dr. F. S. Billings of the State experiment station in Nebraska, there are hopes of success. In conclusion, Mr. Burnett said that for his business he wanted good bacon, and for that purpose the Berkshire was the best, and he courted discussion of his various positions.

DISCUSSION.

Mr. Allen of Barre, said pigs and pork always interested him. He liked a hog better than a horse. He must be kept dry and clean. Because he seems to enjoy wallowing in the mud it must not be inferred that it is a natural enjoyment. I know of no animals that will keep their nest cleaner and neater than the pig, if he has a chance. I think small pigs should be fed at least five times a day in order to do well. If fed only three times a day they overeat. Skim milk is good. Bran should be ground finer than the ordinary article. They won't eat the coarse food.

In answer to questions, Mr. Burnett said that his method of curing had cost him a good deal of time and money and he was not willing to give away his recipe. Even temperature is absolutely indispensable. He did not believe in the dry-cure process. About the same temperature as for butter is desirable. In answer to Mr. Bill of Paxton, Mr. Burnett said: "I do not begin to raise all the pork I put into the market. My customers generally understand this, and I am always ready to acknowledge it. I have three competent, honest, reliable agents in different parts of the country all the year round, buying hogs for me. They know a good hog and what makes one, and they know where to get it. Much of the stock is engaged six months in advance, and good prices are paid. I am so much of an expert in the business myself that I can tell a slop-fed hog from a corn-fed hog the moment I put a knife into him. You can stop feeding skim milk at the end of four months, if necessary. If I had it to give, I would feed it till killing time. In England they are feeding hogs on barley, and the pork thus made is prescribed for consumptives. The fat is not obnoxious, but glutinous, like that of the feet, and it commands four to six cents a pound more than ordinary pork."

In answer to Mr. Wheeler of Great Barrington, Mr. Burnett said he had not found buttermilk a complete food, though it is good to mix with skim milk. To young pigs skim milk can be fed at about the same temperature as they get from the sow—ninety-five or one hundred degrees. It will pay you to warm it. The same is true with calves. "I said little pigs should be fed at least three times a day." To Mr. Porter of Hatfield he said that he should think buttermilk and corn meal might make good pork. "My establishment," he said "is a creamery and pork-packing establishment on a small scale, and I have steam on all the year round. Hence it is easy to heat milk at any time. Above all things don't make gluttons of pigs or calves. You can avoid it, but you can also very easily make them so, and they will help you to do it.—*Colman's Rural World.*

Cured of Sheep-Killing.

A dog that had once learned the trick of making mutton is usually regarded as incorrigible; but the Santa Rosa Democrat reports one radical cure, and describes how the case was treated.

It appears that one of the oldest residents of that city, who is fond of shooting, and prides himself on his fine dogs and guns, bought a "purr" which had been represented to him as invaluable in the deer-chase; and so he proved—"a finer dog never bayed a buck." But he had one fault, a fault which has cost many of his kind their lives—he would kill sheep. Upon this fact being developed, he was on the point of shooting him on the spot, but he thought himself that perhaps the trait was not incurable, as has been so often stated; so he lowered the gun from his shoulder, and paid the owner of the dead sheep

A few days afterward he had occasion to visit a friend in the country, and took the dog with him for the purpose of trying his experiment. Informing his friend of his design, they proceeded to the field where a large flock of sheep were feeding. The dog at once pricked up his ears and started for them. After he had succeeded in "rounding them up," the two men came to the rescue of the timid animals and singled out a large and well-horned ram. The dog was muzzled and fastened to the horns of the ram by a rope 12 feet in length. In a moment the fun commenced. The ram, true to its instinct, made a dash to free itself; the dog, true to its habit, "made a break" for the ram. Finding that flight was of no avail, the ram turned and made fierce fight. The dog being muzzled was at a disadvantage, and the way he was butted around that field was very lively. No sooner would he regain his feet than the frantic ram was upon him, and over he would go, sometimes being thrown the length of his rope. At last he weakened, and strove to break the bands which held him at the mercy of the avenging ram. When the sport was over the dog was nearly dead. From that time he has never offered to molest a sheep.

Recent experiments show that land manured with superphosphates shows more abundant crops than that manured with bone dust. But land manured with ordinary stable manure shows the best crops of all. This proves that the last mentioned manure is the best fertilizer after all. A good deal, however, depends upon the natural conditions of soil and climate, and upon the purity of the manures used.

SWEETENED MORTAR.—A letter in the London Times, by Mr. Thompson Hankey, points out that cane sugar and lime form a definite chemical compound, which has very strong binding qualities, and forms a cement of exceptional strength. Equal quantities of finely powdered lime of a common kind and of good brown sugar, mixed with water, form a mortar which has been found to join stones and even glass with great success. It is important that the lime should be thoroughly air-slaked; for if any dry particles be left they will swell and eventually break the joint. It is stated that this mortar is equal in strength to Portland cement, and that the latter may probably be improved by the addition of sugar, or perhaps even of treacle. A number of small experiments which have been made have proved entirely successful, and it now remains to see whether the material offers advantages in actual work sufficient to pay for its extra cost.

PREVENTING HENS SITTING.—A correspondent in *Gardening* describes a very ingenious and effective method of preventing hens remaining broody. When they show a desire to sit, he says that for the last two years he has been very successful in preventing them from sitting. He has divided his run into two with wire netting, keeping half the fowls in one division, and half in the other. As soon as a hen in one yard shows any signs of broodiness she is placed in the other, when she invariably spends the first three days in running backwards and forwards, trying to get back through the wire; at the end of that time she has quite forgotten that she wants to sit, and can be returned, and will probably commence laying again in about three weeks. The plan is obviously far superior to that usually followed of cooping a hen when broody, as the incessant exercise must have a strong effect in lessening the tendency to sit.

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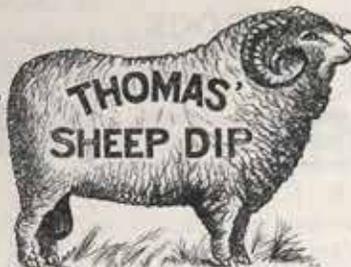
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The Total Prizes taken at the places referred to number 157, including nearly £600 in Sterling Money.

TESTIMONIAL.

"I have very much pleasure in sending you a testimonial of my high appreciation of Thomas' Sheep Dipping Specific, with which you have supplied me. I have found it to answer well. The complete failure of an English Poisonous Dip to kill the Ticks, induced me to try the above, I am glad to state, with the greatest success. The eradication of the Ticks and Ova was so complete that on several occasions I have challenged inspection of my Stud Sheep and General Flock to find a living Tick amongst them. As for the condition of the Wool, and the health of the Sheep—the fact of my taking so many First Prizes at each of the Agricultural Shows, viz., Melbourne, Ballarat, Echuca, Sandhurst, Rochester, Kyneton, and several other Shows—sufficiently testifies, and my Sheep were entirely free of Ticks at Shearing. I have now much pleasure in giving in writing my opinion of your Specific, which I never hesitate to express publicly whenever the subject of Dip is referred to. Scale Park, Clunes, Victoria, Jan. 29, 1887. (Signed) LEONARD R. CARTER."

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HOPBINES FOR CATTLE FEED.—Hop-growers in Australia will be interested in hearing that the hopbines, which are now usually burned or else find their way to the manure heaps, are really a valuable cattle-fodder, and can be ensilaged. Mr. T. M. Hopkins, a well-known Worcestershire hop-grower and agriculturist, has been making some important experiments with hopbines, the results of which have been published. Last year he ensilaged about seventy tons of hopbines, and found that they contained more nutritive qualities than ordinary hay. During the winter months he fed his horses and cattle with the ensilage; and the animals ate it with avidity and thrrove upon it. This year he gathered all the hopbines he could, and has stored them for winter fodder. The bines are gathered in their succulent condition after the pickers have done with them, carted to the rickyard, and stacked in the ordinary way. They heat considerably, but by powerful pressure they become a compact mass. A rick of hopbines 16ft. in length, breadth and thickness, when it is settled, contains from 80 to 100 tons; whereas a rick of hay of the same dimensions contains only about 23 tons. An acre of hopbines yields between two and three tons. Mr. Hopkins chaffs and steams his bine fodder before giving it to his cattle.

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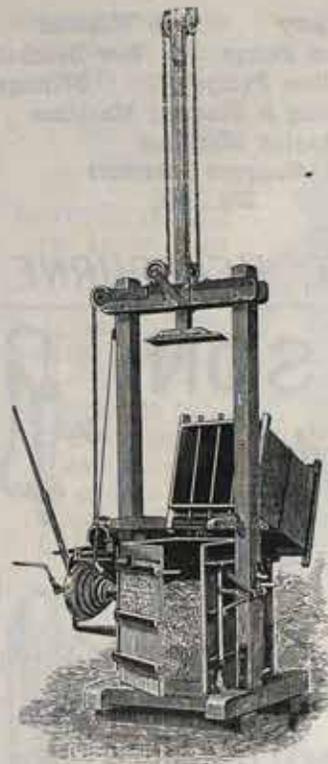
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It will be understood how very much quicker the power is brought into application by this means than by the ordinary screw press, and double the work is got through by the same number of men.

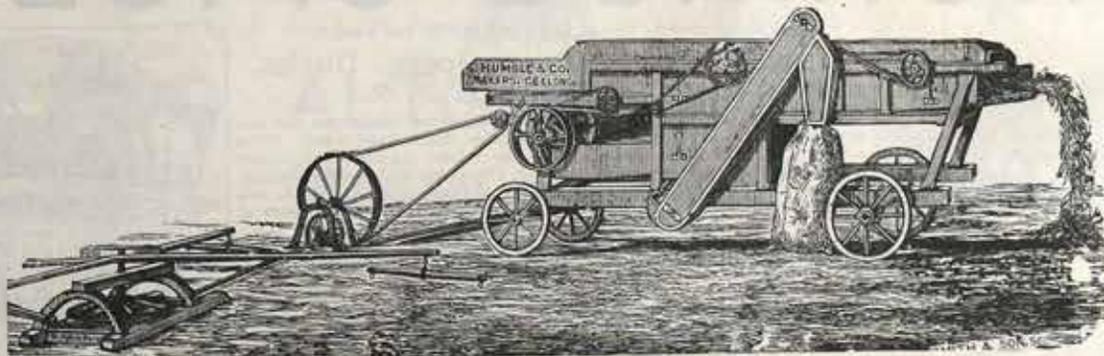
Special attention is directed to the fastening of the Packs before the Wool is put in, which is done in an exceedingly quick and simple manner: four pieces of wood are fitted into the recesses of doors, which hold the Pack securely in position and to the side catches for fastening the doors, which are held in position by a vertical bar, and relieve them simultaneously.

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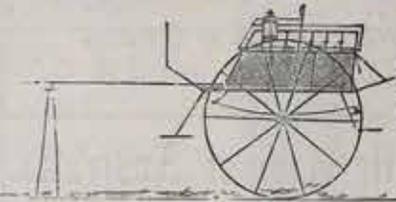
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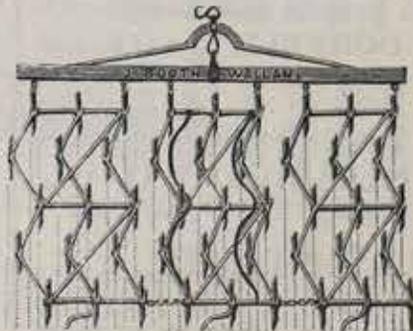
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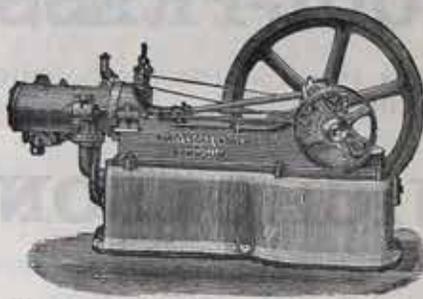
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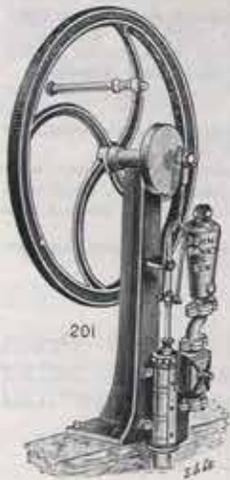
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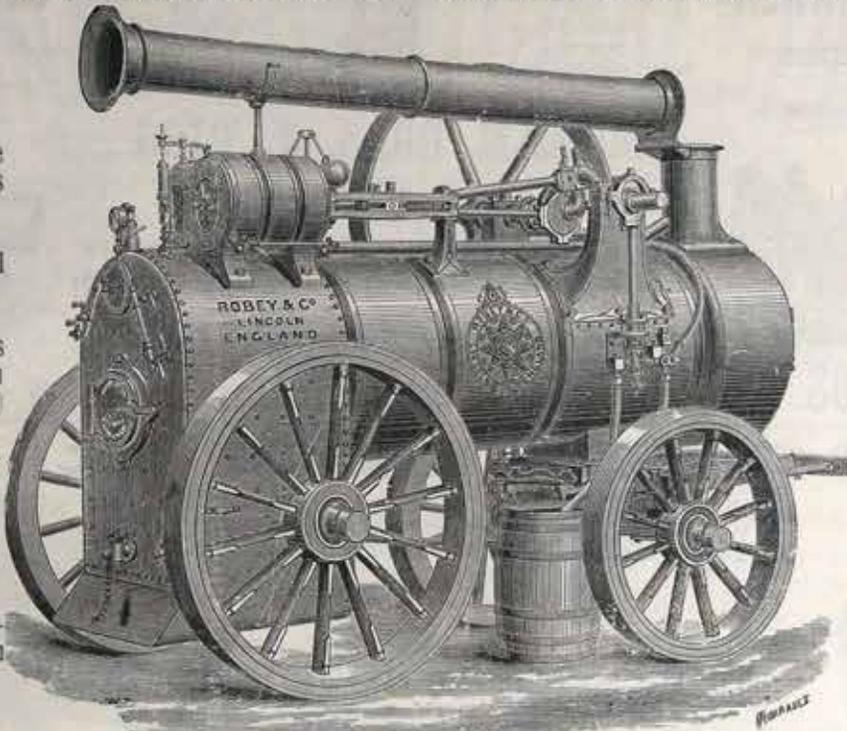
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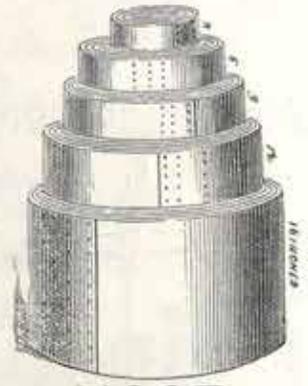
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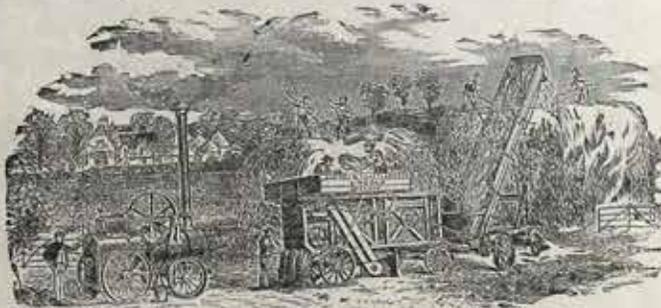
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VOL. II.—No. 23. [Read, as a Newspaper.]

MELBOURNE, JUNE 17TH, 1887.

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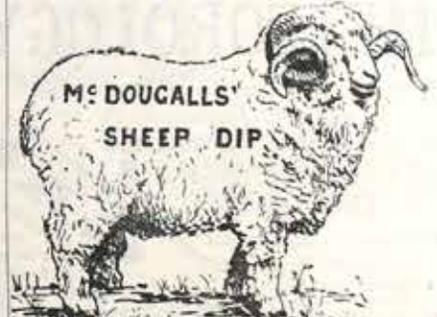
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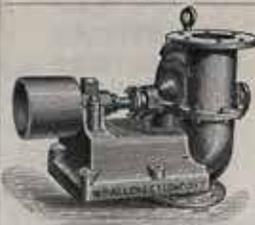
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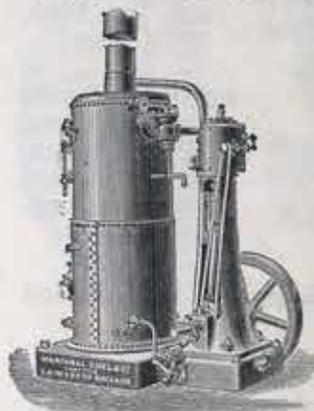
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YES FANNY SO IT SEEMS INEED
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OH CHARLIE WHAT AN AWFUL SPILL
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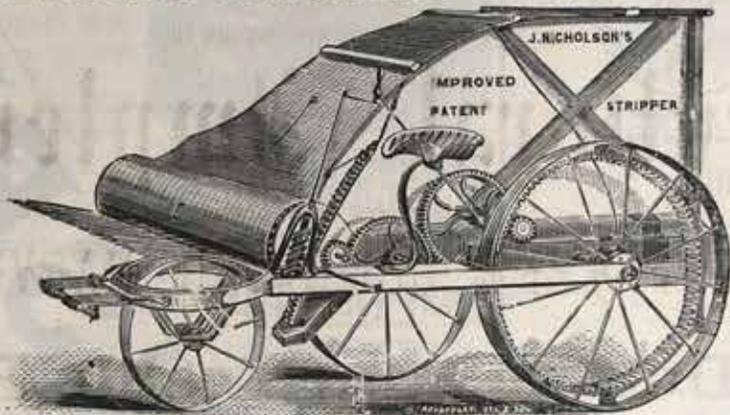
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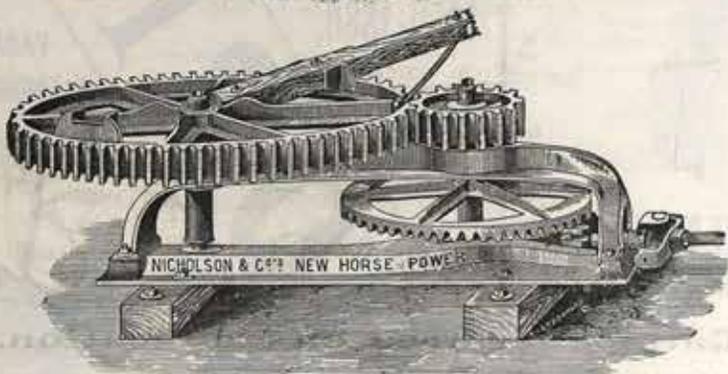


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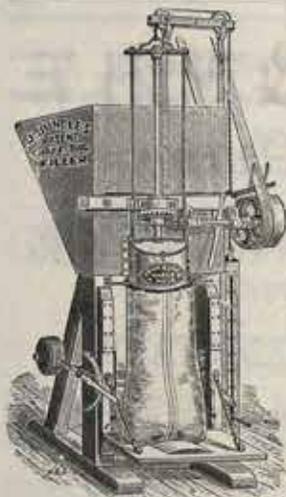
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For the information and convenience of customers, a machine is kept constantly set up ready to show at work in **BUNCLE'S PARKSIDE IRONWORKS**, and many customers have witnessed **80 to 90 lbs.** of Chaff put in a bag in 15 seconds!!! which, after making allowances for time removing the full bag and replacing an empty one, would easily on an average keep **Four of Buncle's No. 1 Chaffcutters**—well, if there is any doubt, say Three Machines clear of all the Chaff they cut (medium length.) Of course the Machines are arranged to put in as light weight as you like, or you can fill up and burst all your Bags—to pieces. As a trade requirement (in addition to filling bags) the necessity for a **Mixing Machine** is a long felt want, the laborious and unsatisfactory way at present adopted cannot much longer be endured, and there is no necessity for it!! as J. Buncle can arrange to "Blend" the worst and the best samples "To a Hair" at the least possible expense with the best results.

The season is now coming on when all those who intend having the latest improved Machines should forward their orders as early as possible, to prevent disappointment in the day of their need.

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Chaffcutters with 14-in. wide mouthpieces and Newest Designs, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

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Single, Double, and Treble Ploughs.

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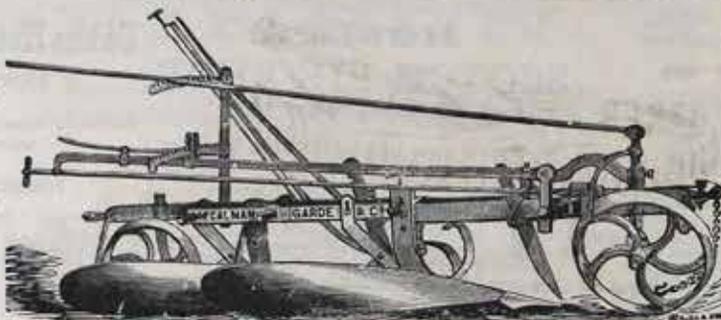
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For dam sinking.

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Special Ploughs

Made to any design.

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All kinds of Implements kept in Stock to select from at their Manufactory.

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Have met with such unpre-
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Williams' Rack & Pinion Wool Press

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Lever and Chain Farmer's & Selector's Press. Price, £22 10s.

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Testimonials to hand for those supplied last season:—

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Dear Sir,—I have much pleasure in informing you that the Farmer's Wool Press I
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A Sweepstakes of £1 each (10s. at time of nomina-
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of date of birth. Nominators to fully describe the
color of each calf entered, and to state the name of
the sire, dam, and sire of dam, together with the
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All communications for the Editor to be
addressed to the Society's Office, Kirk's Bazaar,
Bourke Street West, Melbourne.

Business communications to the Publishers,
Melbourne Place, off Russell Street, Melbourne.

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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
requested to forward to the editor the dates on
which their respective exhibitions will be held,
also copies of their prize schedules as soon as
they are published.

JULY.

21.—Denillquin, N.S.W.
27, 28, 29, 30.—Victorian Poultry and Dog Society.

AUGUST.

2, 3.—Corowa, N.S.W.
16, 17, 18, 19.—National, Brisbane.
23, 24, 25, 26, 27.—National, Melbourne.

SEPTEMBER.

1.—Yarravonga.	14, 15.—Albury, N.S.W.
1, 2.—Ballarat (Sheep).	15, 16.—Hamilton.
7.—Balmoral.	20.—Chiltern.
7, 8.—Wimmera District,	22, 23.—Echuca.
Stawell.	28.—Boort.
8, 9.—Ovens & Murray,	28.—Numurkah.
Wangaratta	28.—Elmore.
13.—Ararat.	29, 30.—Benalla.
13.—Rupanyup.	29, 30.—Horsham and
14, 15.—Donald.	Wimmera (National).

OCTOBER.

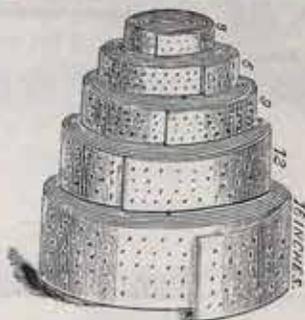
4, 5.—Rochester.	12, 13.—Warrnambool.
5.—Belfast.	13.—Murchison.
5.—Euros.	16.—Nagambie.
5.—St. Arnaud.	19, 20.—Tatura.
6.—Bacchus Marsh.	20.—Sale.
6.—Cashel.	20, 21.—Geelong.
6.—Tungamah.	26, 27.—Shepparton.
12, 13.—Bendigo, at	27.—Talbot.
Sandhurst.	

NOVEMBER.

2.—Castlemaine.
10.—Heathcote.
10, 11.—Sneaton.
16, 17.—Kyneton.
24.—Ballarat.
24.—Traralgon.
24.—Kilmore.



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TESTIMONIAL.—[CONT.]

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Messrs. Frank Vial & Co.,
Macauley Road, Hotham.

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We therefore feel great pleasure in recommending your belting to anyone requiring the same.

We are, Gentlemen, yours truly,
(Signed) W. S. KIMPTON & SONS.

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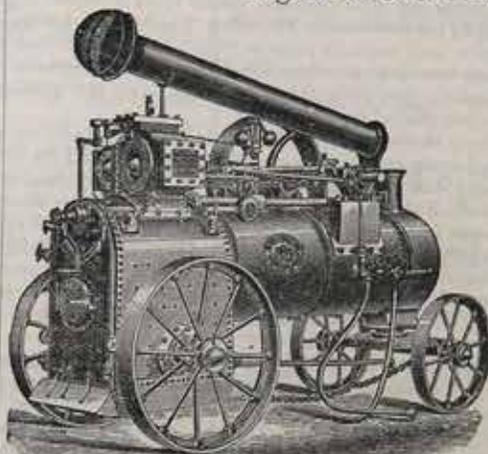


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green foliage of summer, were yet resplendent in autumn tints. As we have heard from Mr. Francis Henty the measurement of the largest oak in this colony, we are safe in saying that we have nothing in Victoria approaching the finest of these trees. Mr. Town has let the homestead and grounds here, as he prefers living at Clarendon, which is more convenient to the Richmond Station. Before leaving the high ground a magnificent view is obtained across the Hawkesbury Valley to the Curryjong Mountains on beyond. The scene here as we had an opportunity of viewing it, under a glorious autumn sun, is admittedly one of the finest in Australia. Down on the river flats we came across some lucerne, but Mr. Town says if this plant is grazed couch-grass will run it out in about two years. Here were some of the gems of the thoroughbred mares, with very fine foals at foot. Blue and White, Agitation, Romping Girl, Gondola (a grand mare), Aureolo (own sister to Robinson Crusoe), Banksia (by Wild Oats), Rosedale (by Tyndale), the dam of Iolanthe, and others were browsing about, and, like all Mr. Town's mares, were in splendid condition, and were so quiet that it was a pleasure to go among them. The stallions at Hobartville were Monmouth (own brother to Chester), the first prize horse at the Sydney Show; Fergus First, Segenhoe, and Gloucester. All Mr. Town's stallions are in fine healthy condition, not one of them being pampered; indeed, they are almost entirely innocent of rugs, as their owner does not believe in coddling. On this farm Mr. Town milks about 100 cows, and sends their milk into Sydney. The farm is worked in connection with the Curryjong paddocks, about 1000 acres in extent, which are required for winter use. On leaving the steading at Hobartville we were driven through some nice little paddocks, in which the yearlings are allowed to exercise before the sales. In these paddocks we saw some beautiful native gums, called apple trees, which went far to prove our constant contention—in which we were glad to find that Mr. Town concurred—that some of our native trees are just as fine as anything imported. We were then driven back to Clarendon, and, after a rest and some refreshment, to the Richmond Station, whence we returned to Sydney, delighted with our visit, and only sorry we had not had longer time at our disposal to spend in the inspection of a stud of horses in which Mr. Town informs us he has invested the sum of £80,000.

Notes.

In New South Wales they feed their cattle largely on pumpkins. Heaps of pumpkins were lying about the show yards at the feeding places for the stock, especially near the cattle stalls. This has been the practice for years past, for Mr. William Lyall of Western Port once wittily remarked at dinner over in Sydney, when responding to the toast of the judges—after officiating on an unusually good show of stock—there was evidently "some pumpkins" in the cattle there. But, joking apart, pumpkins are rare good feed.

We have been informed that a very considerable area of the colony of New South Wales is covered with pine scrub, which in many places is coming up thickly and spreading rapidly, and that unless prompt measures are taken to deal with it, it will become a very serious matter for the colony. While action is delayed the scrub is growing higher and stronger, and spreading further and further, rendering it more difficult to deal with. Parliament, however, apparently forgetful of this fact, continues to squabble over personal matters while practical legislation is neglected.

At the request of the Committee of the National Society which was appointed to draw up recommendations on the sparrow question, Mr. C. R. Blackett, F.C.S., was good enough to supply some particulars regarding bird lime, which we now publish for general information:—Birdlime is prepared from the middle bark of the holly, which is boiled for several hours until it becomes soft, the water is drained off, it is placed in a heap, covered over and left to ferment two or three weeks until it assumes a mucilaginous state, and it is greenish coloured and gluey. Birdlime can be made also from mistletoe berries. A factitious birdlime is made by boiling linseed oil with a little yellow resin until it becomes sticky. The price of birdlime in Melbourne is quoted by Felton Grimwade and Co. at 2s. per pound; at which price it could not be made here, as the holly is not very obtainable, and there is a good deal of labor involved in the manufacture.

We have been favored by Mr. D. G. Clarke, of Richmond, with the following description, supplied him by a friend, of Evergreen Millet, or Johnson's Grass:—It is a true sorghum and a perennial, its roots continuing to live and increase from year to year until the plant has taken complete possession of the soil. The leaf, stalk, and panicle of this grass resemble those of other sorghums. It grows on any land where corn will grow, and, like the latter, the better the land the heavier the crop. In the Southern States it attains a height of seven feet; on rich land near Marysville, this State, it made a growth of fourteen feet the past season. It should be cut while tender, and then all live stock are fond of it. If not cut when tender it becomes coarse and hard, and animals refuse or eat of it sparingly. The want of knowledge on this important point has, no doubt, excited the prejudice of some against its culture. N. B. Moore, who has had forty years' experience in the growing of grass crops, says he prefers it to all other, after having faithfully tried many. John J. Dilchamps reports 15 tons of good hay and 6½ tons of roots from an acre as the product of one year's growth. The roots are as edible as the stalks, and are as much relished by hogs as sweet potatoes. For dairymen, stock growers, and farmers in general, it certainly is one of the most valuable forage plants that can be brought to their attention. Unlike some grasses, it takes possession, and will hold its ground against all intruders. Culture.—Prepare the ground, thoroughly pulverizing it, and sow broadcast in spring while soil is moist, at the rate of twenty pounds to the acre; if drilling is preferred, which it is by some, ten to twelve pounds will be found sufficient for an acre—the seed should be covered lightly. Considerable difficulty has been expressed by some in getting the seed to germinate, and partial failures have been the result. There need be no such experience if roots are planted, they sprout readily, and make a vigorous growth. The roots can be cut and dropped in every second or third furrow in the same manner as practised in potatoes. A shallow furrow turned on them is all that will be found necessary to insure a good stand.

Australian Character.

"WE are all slaves of our organism." This is an expression the truth of which cannot be doubted, for every type of man has certain peculiar characteristics. Types, which are to a great extent hereditary are, however, subject to much modification through local influences, the character of a people being often entirely changed by altered climatic conditions and surroundings. In this connection, therefore, the interesting question arises, What change will be effected in the Anglo-Saxon race by our Australian climate? Already it is apparent that a new type is being developed, that the rising generation is unlike the old, and that it possesses characteristics peculiar to the clime and ray of the soil. Strong as is the force of heredity, and powerful as is the tendency of like to produce like, both must yield to altered circumstances. In our case, in what direction is this influence tending? Physically the Australian native is lighter built and cleaner cut than the type from which he has sprung, losing in breadth but generally gaining in height of frame. As in all new lands where there is a mingling of people from many different places, the natives are possessed of wondrous physical energy. To the inter-marriage of people from many European countries, Dr. Simms attributes the characteristic energy and enterprise of the Americans. Australians show their energy in their love of out-door sports, which travellers tell us are indulged in to quite an unusual extent. However, when the natives reproduce themselves, and when the hereditary predisposition already alluded to has abated, this characteristic will be very much modified, for the warm climate will certainly reduce the amount of their energy. The love of being out of doors may remain, but the amount of work put into sport will be sensibly reduced. Body and mind react on one another, so that mentally also the race is changing. Brilliance rather than depth, quick perception, readiness of resource, independence, and impatience of control, are characteristic of Australians. Their possession of a variety of faculties is undoubted, but the union of these in harmonious action with a high degree of strength of purpose and intensity is rare among them.

Meetings.

An adjourned meeting of the Council of the National Agricultural Society of Victoria was held on Tuesday, May 31st, 1887.

Present—E. Peppin, Esq. (in the chair), with Messrs. F. Henty, W. J. Lobb, J. Hurst, J. Currie, W. Learmonth, Robert Clarke, J. M. Peck, W. Glover, George Young, W. Thomson, D. Munro, T. Learmonth, C. Lynott, Walter J. Clark, James Garton, James Hearn, D. R. McGregor, D. White, J. Finlay, the Hon. J. Buchanan, M.L.C., and C. Young, M.L.A., and Dr. Plummer, who came in late in the afternoon.

Apologies for non attendance were received from Messrs. John Blyth and D. Mitchell.

Letter read from Hon. Secretary Military Tournament, asking permission to use the Show Grounds on the 21st June instead of the date previously fixed.

Mr. Peck moved that the Grounds be granted, on the same conditions as before. Seconded by Mr. Currie, and carried.

The prize list for the Spring Show, as revised by the Show Committee, was then considered.

Mr. Clarke moved that the word "class" be substituted for "section" and *vice versa*, and that the classes be numbered continuously throughout the whole list. Seconded by Mr. Lynott, and carried.

The Journal
OF THE
National Agricultural Society
OF VICTORIA.

MELBOURNE, JUNE 17th, 1887.

The National Society's Prize List.

As a supplement of this number of our journal we publish the prize schedule of the Great Annual Exhibition of the National Agricultural Society of Victoria, which will be held on the Show grounds, Flemington, on Tuesday, Wednesday, Thursday, Friday, and Saturday, the 23rd, 24th, 25th, 26th, and 27th of August next. The programme is the most attractive which has yet been issued by the Society; a sum of more than £2500 being offered in prizes, which sum will be still further increased when the sweepstakes entries are made for the Grand Draught Horse Produce Stakes, and the Cattle Derbies. The above amount includes the sum of £500 offered by the Parliament of Victoria as Grand Champion Prizes of Australia. Without doubt these prizes have done much towards improving the standard of excellence in exhibits brought forward to the Society's shows. Particularly is this the case in the live stock classes, where only animals of the very highest merit have any chance of a championship. The very difficulty of obtaining a prize on the Melbourne grounds, however, only acts as an additional incentive to owners to endeavor to gain the coveted honour, for when it is gained it is worth a good deal more than the actual cash value of the prize. As was the case last year, a large number of the prizes have been liberally contributed as donations. The Grand Draught Horse Produce Stakes for colts and fillies, respectively, has valuable prizes which have been subscribed by the owners of most of the picked horses of the colony. The entries of the yearlings for these stakes close on the 30th July. The attention of owners of stallions is called to the stakes for 1889, for which sires are required to be entered on or before the last Saturday in August. In the light horses, a separate section has been added for roadsters, in which there are two special prizes offered. His Excellency the Governor again offers valuable special prizes for the encouragement of the production of superior carriage horses—a class of animal very difficult to obtain. Our breeders should really bestir themselves, and for the credit of the colony as well as for their own individual profits, show us that the high-class carriage horse is not an extinct species of animal. In the pony class, a special prize, which should excite large interest, is offered for the best turn-out, pony, boy, and equipments, the get-up of the rider, his style of riding, in fact the whole turn-out being considered in awarding the prize. In the cattle section classes have been introduced for Devons, a very pretty breed, which, although not numerous at present in Victoria, is expected to be well represented at the Show. The cattle Derbies are also a new feature in the

prize list, which, although brought in this year, will not be in regular swing till 1888. In the carriage and buggy section of the list, an entirely new classification has been adopted, which should meet with the approval of exhibitors in this rapidly increasing department of the Show. In the produce classes which hitherto have not filled well, second prizes have been added as an inducement for exhibitors to come forward. A special prize is offered for the best dry load of oaten hay, the object being to bring the cutting and loading of hay to such perfection that a load on a dray shall appear like one solid mass without showing any join whatever in the trusses. A new classification has been adopted in the wines, which should encourage those engaged in the wine industry to exhibit largely. No prizes are offered for machinery and implements, but exhibitors by applying early and securing sites for stands, will have every facility for showing off their collections or individual exhibits. General entries close on Saturday, 6th August, at noon.

A Run to Richmond.

WHEN in Sydney we received and accepted a very kind invitation from Mr. Andrew Town to visit his well-known stud-farms and inspect his far-famed stock. Mr. Town met us at Clarendon Siding with an open waggonette and a stout horse, and drove across the adjoining common, which is a large reserve for use in case of floods. On this common is to be seen the stone erection which marks the starting point of the geometrical survey of New South Wales, which cost the colony over £130,000, and which, so far, has been of no practical utility. A drive of about a mile brought us to the Clarendon Farm, the first of Mr. Town's estates, which is situated in the valley of the Hawkesbury, about thirty-six miles north-west of Sydney, and comprises 500 acres of some of the finest land in the colony—deep, rich river flats, worth £40 an acre. It is sub-divided into convenient paddocks, and most securely fenced. The pasture consists principally of couch-grass and white clover, the couch predominating. In the first paddock we came to a group of Clydesdale mares and foals such as could not be seen anywhere else in Australia. Here were descendants of the celebrated mares Strathblane Mary and Glasgow Maggie, and old Glasgow Maggie herself. Though now "in the sere and yellow leaf," she leaves some grand young mares to keep her memory green. Mr. Town's draught stock comprise about fifteen imported mares, claiming such sires as Prince of Wales, Darnley, &c.; while he has some high-class colonial-bred mares, one of which had just returned from winning the championship at Singleton. On this farm, also, were a number of thoroughbred mares and foals of the very highest lineage. To a lover of horses it is one of the greatest treats possible to drive round with Mr. Town, who knows every animal, as well as the pedigree of each, and who tells all about them in the most interesting manner imaginable. Indeed, it is nothing short of an education, with object lessons. It would, perhaps, be superfluous to name all

the celebrated mares seen here, and invidious to institute comparisons where all were good alike. Many of them were imported from England, several of which were by Blair Athol, the pale chestnut Derby winner; and there were others by no less celebrated sires. Amongst the colonial-breds were an own sister to Goldsbrough, the "mighty" Goldsbrough, and an own sister to Richmond, the "champion" Richmond, whose yearlings were so much admired when Mr. Yuille sold them not long ago. The last one looked at was the celebrated mare The Fawn, the dam of Richmond, Bosworth, Palmyra, &c. Mr. Town has sold 10,700 guineas worth of yearlings from this grand old mare, and he has still two of her progeny which he is breeding from. We then drove up to the house, where the horses had just arrived from the Sydney Show, and had a look at the stallions. The first interviewed was the unbeaten Grand Flaneur, the horse so many others chased to the winning-post but never caught. He is not a big horse, but he has thickened out considerably since he left the post for the paddock. Cheviot, a smart-looking horse, occupied the adjoining box, and the upstanding Epigram (he of the pleasing countenance) was next to him. The handsome Sardonyx was having his turn in the little exercise paddock, and Moorhorpe (a powerful imported Doncaster horse) was in a box adjoining. The last of the thoroughbred stallions here was the celebrated old horse Maribyrrong. He is, of course, very much faded, but is still wonderfully vigorous, and his mouth is remarkably sound. We have such respect for honourable old age, even in a horse, that we raised our hat on leaving his box. The Clydesdale stallion Davy, a most successful sire, occupied an adjoining box. He is a very even dark bay or bright brown horse, with black points. Gallant Scotchman, another Clydesdale, just returned with the championship of the Sydney Show, was next him. He is a bright bay, with some white on his legs—a powerful, heavy horse. The American trotter Honesty, well known in Victoria, was next him; and in a little exercise paddock the famous American trotter, Child Harold, was exercising himself. We had a great desire to look this horse over, as Mr. Town, who gave a very long price for him, considers him the best of his kind of all the horses he has in his possession. He is the best American trotting horse we have seen, being a dark bright bay, with black points, lengthy and pretty close to the ground. His stock are turning out fast, Tommy, a three-year old by him, having won the trotting contest at the Sydney Show. In the yard there were three imported American mares, big, useful, roomy animals; but some way or another we could not help thinking that they would be all the better of being mated with a thoroughbred sire, in order that their progeny might have a little more quality. After dinner, with a fresh horse and a lighter buggy, Mr. Town drove us over to Hobartville, about a mile further on. This farm comprises 600 acres nearly all river flats, of the same description as those at Clarendon. Approaching the house, the famous avenue of oaks came into view. These grand trees, under the shade of which Mr. Town's annual sale of yearlings is held, although not clothed in the rich

The prizes was then read over seriatim.

Mr. Peck moved that the special prizes for Trotters time test be—1st, £26 5s.; 2nd, £10 10s.; 3rd, £5 5s. Seconded by Mr. Lynott, and carried.

Mr. Lynott moved that an extra section be introduced for Roadsters, with two classes, viz., for Roadster Stallion and Roadster Mare, the prizes in each case to be—1st, £10 10s.; 2nd, £5 5s.; 3rd, certificate of merit.

Mr. White signified his intention of giving a special prize of £5 5s. for the Mare calculated to produce the best Indian remnants, which was accepted with thanks, as was Mr. John Menzies' special, of £5 5s., for three Roadsters.

Mr. Lynott moved that the weight in the high jumping contest be reduced to 11 stone. Seconded by Mr. Currie, and carried.

Mr. Walter J. Clarke moved that there be prizes offered for Ladies' Hackneys—1st, £8 8s.; 2nd, £3 3s.; 3rd, certificate of merit. Seconded by Mr. R. Clarke, and carried.

Mr. Peck moved that the prizes offered for Rough-riding be struck out of the list, and (on Mr. T. Learmonth's suggestion) that prizes for Tilting at the Ring be substituted—1st, £21; 2nd, £10 10s.; 3rd, £5 5s. Competition to take place on Friday, and the entry fee to be £1. Seconded by Mr. Garton, and carried.

Mr. Robert Clarke then offered a special prize of £3 3s. for the best Turn-out, Pony (under 14 hands), and Equipments, and Boy (under 15 years), which was accepted with thanks.

Mr. Lynott moved that an extra section for Devon Cattle be introduced into the list, after the Herefords. That the classes be the same as in the Polled Angus, and the prizes be the same in the Herefords, the Devons, and the Polled Angus sections. Seconded by Mr. Walter Clark, and carried.

It was also agreed that Grand Champion prizes should be given for Devons and Polled Angus, £5 each, for male and female, in each section.

The regulations were then considered.

Mr. R. Clarke moved that Mr. Peppin's clause, relating to the placing of reserve numbers, be substituted for clause 14. Seconded by Mr. Thomson, and carried.

The balance on the regulations were then agreed to, as now printed.

The consideration of the arrangement for sales was postponed, and Mr. Thomson moved that the prize schedule and the regulations, as revised, be adopted. Seconded by Mr. Lobb, and carried.

The meeting then closed.

The ordinary monthly meeting of the Council of the National Agricultural Society of Victoria was held on Tuesday, 14th June, 1887.

Present—Dr. Plummer (President), in the chair, with Messrs. D. Munro, F. Peppin, George Young, J. M. Peck, R. Clarke, W. Thomson, John Bond, T. Learmonth, T. Brunton, W. Glover, J. C. Cochrane, J. Hurst, Walter J. Clark, D. Mitchell, J. Bunce, S. G. Staughton, C. Lynott, John Currie, D. R. McGregor, J. Finlay, D. White, J. Garton, and the Hon. C. Young, M.L.A.

The minutes of the previous ordinary and adjourned meetings were read and confirmed.

ELECTION OF THREE MEMBERS OF COUNCIL.

The following nominations were made:—G. Ramsden, J. Jones, W. Wragge, W. Rose, I. G. Foster, T. Harner, F. W. Peers, T. Henderson, and L. L. Smith. An open ballot was taken, the result being that Messrs. Jones, Wragge, and Harner were elected.

FINANCE.

The Finance Committee's report was read. It submitted the monthly statement of accounts, and recommended payments amounting to £160 11s. 6d. The report further recommended the Council to reconsider their determination at the last meeting to do away with rough-riding at the exhibition, inasmuch as the excision of that item from the prize-list would very materially reduce the income of the society.

Mr. McGregor moved the adoption of the report, which was seconded by Mr. Currie.

A discussion ensued on the latter clause, which the Council desired to consider apart from the other portions of the report, when Mr. McGregor altered his motion to the adoption of the report without the clause relating to rough-riding, and the motion was carried.

Mr. Brunton then moved that the prize-list be re-opened for discussion: seconded by Mr. Lynott and carried.

Mr. Brunton moved that prizes for rough-riding be introduced into the list: seconded by Mr. White, and carried after an animated discussion.

Mr. Thomson moved that prizes for tilting at rings be struck out of the list: seconded by Mr. Currie and carried.

CORRESPONDENCE.

From John Blyth, apologising for non-attendance.

Mr. Finlay moved that Mr. Blyth be granted leave of absence: seconded by Mr. Garton and carried.

From J. Hearn, regretting inability to attend meeting. Received.

From J. H. Angus, S.A., offering £5 5s. as a donation for a prize at the show. The Secretary to write and thank Mr. Angus for his donation.

From Bacchus Marsh Agricultural Society, asking the use of the Society's office on the 24th August next, for the purpose of holding a rabbit conference.

Mr. W. J. Clark moved that the request be granted: seconded by Mr. Currie and carried.

From Secretary for Agriculture as follows:—

"I have the honour to inform you that an International Exhibition of Dairy Products and Implements will be held next September, at Parma, in Italy. Prizes in gold, silver, and bronze medals will be awarded, and a sum of five thousand lire will be provided for the purchase by the Minister of Agriculture in Italy, of some of the best implements that have obtained first prizes.

"The competition will comprise ten classes, as follows:—milk preserves, butter, cheese, inferior products of milk, dairy machines and implements, subsidiary dairy stuffs, instruments for assaying, and for preserving milk, dairy buildings and premises, dairy administration, and dairy teaching.

Further particulars and forms of application for entry may be obtained on application here, or to the Italian Consul."

Mr. Munro moved that the letter be received, and publicity be given to it: seconded by Mr. Brunton, and carried.

From R. D. Passmore, re judges for saddlery and harness.

Mr. Peck moved that there be two sets of judges appointed for buggies and harness: seconded by Mr. Garton and carried.

From N. Billing & Son, stating that Mr. Rees Davies recommended that the outside fence of the trotting track be picketed—a recommendation in which they concurred.

Mr. Peck moved that the matter be referred to the Works Committee, with authority to have it carried out if approved: seconded by Mr. Munro and carried.

From D. E. Martin, Secretary for Agriculture, approving of list of Grand Champion prizes, and agreeing to withdraw the regu-

lation requiring three exhibits, on the understanding that there shall be a regulation that no prizes shall be awarded unless the judges report the exhibits to be of exceptional merit and worthy of the prizes. Received with thanks.

The tender of Messrs. Fergusson & Mitchell, £137 10s., for the privilege of publishing catalogues at the Show was accepted on the motion of Mr. Munro, seconded by Mr. Peck.

THE SYDNEY SHOW.

The Secretary submitted a report on the Sydney Show. Mr. Munro moved that the report be received and published: seconded by Mr. White and carried. (The report appears elsewhere.)

Mr. Finlay moved that the appointment of judges be postponed: seconded by Mr. Munro and carried.

The arrangements for the sales of stock at the show grounds, which were postponed from last meeting, were then considered.

Mr. Peck moved that stock for sale only be not required to come into the grounds till Monday—the day of sale: seconded by Mr. Peppin.

Mr. Lynott moved an amendment that all stock be entered and shown during the exhibition, and that no stock be allowed to be offered for sale except those duly entered for exhibition: seconded by Mr. Hurst.

After an animated discussion the amendment was lost, and Mr. Peck's motion was declared carried.

Mr. R. Clarke moved that a separate entry be required for exhibits intended for sale: seconded by Mr. Young and carried.

Mr. Walter Clark moved that carriages and buggies be required to be in the show yards on the same days as machinery and implements: seconded by Mr. White and carried.

Mr. Walter Clark moved that a Grand Champion prize of £5 (an amount remaining unallotted) be offered for a roadster stallion: seconded by Mr. Robert Clarke and carried.

Mr. Staughton moved that the matter of water supply, and sheep and pig pens, be referred to the Works Committee to deal with at once: seconded by Mr. Peppin and carried.

Mr. Walter Clark then moved in accordance with notice—"That the Secretary be instructed to prepare a loyal address to the Queen on the occasion of her jubilee:" seconded by Mr. Munro and carried.

The Secretary read a draft he had prepared.

Mr. Munro moved that the address and the arrangements connected therewith, be referred to the President, Messrs. Walter Clark, T. Brunton, and the mover: seconded by Mr. Brunton and carried.

Mr. Munro moved that the meeting adjourn to Friday, the 17th inst., at 2 p.m., for the appointment of judges for the show and other business: seconded by Mr. Clark and carried.

The meeting then adjourned.

Correspondence.

Judging Stock at Shows.

To the Editor of the Journal of the National Agricultural Society of Victoria.

SIR,—Will you kindly allow me space in your interesting Journal to put a spoke in the wheel of suggestions concerning judging stock at shows. As considerable diversity of opinion seems to exist as to whether the judging can be most satisfactorily performed by plural judges

or a single one, I will endeavour to explain the plan adopted here to a certain extent during past two years for sheep, viz.: We have four sets of judges, two in each set, and one referee for all four sets; each set has about six classes, with an average of say twelve entries in each class to go through; the work being carried out as follows:—The twelve entries are placed in a row of twelve pens, one judge enters a pen at one end, the other judge the pen at the other end; both go through the twelve pens, making independent notes—passing each other, but not consulting until both have gone through the twelve pens; then comparing notes, the usual result being that six or seven of the twelve entries will be brought out of the pens on to the boards for the closer examination and comparison; and the referee called if required. By this means we have all the advantages of the single judge system, excepting the individual responsibility, but with the additional security to exhibitors of having every sheep twice examined before being rejected as unfit to place. We have not always been able to carry this out, because sometimes the judges object; but it is a matter for consideration as to whether the proposal lately made here to judge sheep by points could not be incorporated with the method above mentioned. Having a scale of divisions agreed upon, such as length, density, evenness, colour, &c., &c., with say ten points as the maximum for each division, cards printed for each class, ruled and showing the divisions and the numbers of the pens handed to the judges, they would allot points instead of making notes; then in each case where the two judges' allotted points differed, have the sheep brought out for closer examination, calling the referee if required. This would probably carry out the educational purposes of the show to the greatest possible advantage and benefit. If a few of the leading societies adopted judging sheep by points, and at the same time adopted the same set of divisions and maximum number of points, the judges would soon get accustomed to using them, and would get through the entries as quickly as under the usual method; in any case, if more time is required, more judges, and a division of the work, will tide over that difficulty.

The undivided responsibility of a single judge, with written reasons for his awards, would probably be an advantage and benefit, and in many cases give satisfaction, but it would be necessary that he should be a man of high attainments, give all his time to it, be employed by a large number of societies, and be well paid. The great drawback to the single judge is that even with written reasons for his awards, he would not only be liable to, but would occasionally have unpleasant imputations made, and the sort of man that ought to hold such a position would not stand that; therefore it is doubtful as to whether the single judge system will be likely to be generally adopted in Australia for some years yet.—I remain, yours, &c.

H. J. WOOLIDGE,
Secretary Deniliquin P. & A. Society.
May 30th, 1887.

Clean and Dirty Samples of Grain.

To the Editor of the Journal of the National Agricultural Society of Victoria

Sir,—Allow me to call your attention to your article dated 22nd April, on the Selection of Seed, in which the following passage occurs:—"Our leading grain merchants say that it is almost impossible to procure clean samples of grain, which directly shows the carelessness of the bulk of the farming community in a matter affecting not only themselves but others." I admit this is quite true, but I wish to show that the leading grain merchants themselves are in a great measure responsible for this carelessness with reference to clean and dirty grain. About five years ago the leading Melbourne papers pointed out that our surplus grain would have to be exported, hence the necessity of farmers sending clean grain to market, and further impressed on them that in the event of the advice not being taken it would end in the farmers having to sell their grain at a price that would leave a handsome margin for grain merchants to have it re-dressed. This warning had a good effect, as most of the farmers put their wheat twice and three times through the winnow, and a few adopted the old plan of once through never mind whether clean or dirty, risking the chance of getting the top price. True enough the dirty samples brought the same price as the clean, and it is just the same thing at the present day. Go to any railway station or flour mill up country in the wheat season, and if the

top price is 3s. 6d. they give the same for clean or dirty; a slight reduction may be made on a very smutty sample. I would ask if the leading grain merchants are not responsible for the carelessness complained of, through sending out agents and allowing them to buy clean and dirty grain at the same price. If merchants regulated the price so as to give from sixpence to ninepence per bushel more for clean than dirty grain, it would be found that much of the farmers' carelessness would disappear. It is only reasonable that farmers will not give the preparation of their grain any special care unless there is something to be gained. There is the satisfaction, as you remarked, of producing a first-class article, but there is also the disappointment when it is not appreciated. In conclusion I have tried to point out where the farmers' carelessness is encouraged, and if the grain merchants demand clean and pure grain, let them show in a substantial manner that it is wanted, and they will have no cause to complain, as we have still thousands of acres of virgin soil capable of producing the golden crop to perfection.—Yours, etc.,

FARMER.

Rochester, June 8th, 1887.

A Draught Horse Stud Book.

To the Editor of the Journal of the National Agricultural Society of Victoria.

Sir,—I regret the Committee appointed to compile a Draught Horse Stud Book should be dissolved as breeders took no interest in the matter. I am sure breeders would only be too anxious to give assistance; but for them to take up the matter appears to me almost impossible, as many who would be likely to take an interest are so widely separated that the difficulty of getting them together and the loss of time would, I am sure, only end in failure. The work of compiling a stud book, I think, could be managed by the National Society's Committee better than by the breeders, and if the exact nature of the assistance required were made known, I believe it would be forthcoming. Why not ask the assistance of every Agricultural Society in Victoria? A large number in every Committee are associated with breeding, and must be deeply interested.—Yours, &c.,

NATIVE.

June 9th, 1887.

Prizes for Machinery at Shows, &c.

To the Editor of the Journal of the National Agricultural Society of Victoria.

Sir,—The enquiry by the Committees of several Agricultural Societies, as to whether it is advisable to award prizes for machinery and implements every year at every Show held in Victoria, opens up a question that may well be given a little consideration at this season of the year, before the various prize lists are issued; and as to whether such a system as previously carried out at the Shows, produces the desired results. That there is a difference of opinion on the subject, is evident from the prize list of the National Agricultural Society of Victoria, when in reference to Machinery and Implements, it is stated:—"No prizes will be offered in this class, the majority of makers and importers having expressed their willingness to exhibit without competing. Entries will be received, and space allotted in the yards for this class of exhibits, and exhibitors will have every facility for showing off their collections or individual exhibits to the best advantage." This, in my opinion, is the proper guide for all the Societies, and shows the good judgment of the central Society, and the manufacturers and importers connected with it. Past experience in exhibiting, and the manner of judging has shown conclusively that little knowledge is gained by the agriculturist who from any cause, has not an opportunity of attending the many Agricultural Shows now held in Victoria, and examining for himself the various exhibits which he can only read about as having been judged, and the awards published for his information (?) Regretting his isolation, but quietly reading his daily paper at home, of the list of awards at Shows held during the week what knowledge is gained, or is the state of his mind as he puts down the paper, and looking at the ceiling of the room, exclaims all *First*, all *Second*, all *Third* prizes! What does this mean? This question is just the point. Why do the same exhibits, having run the round of

the Shows in the district, become scorched by so many different brands. The fact proves that as it is the same exhibit unaltered. Some of the judges must have been wrong, and committed an error of judgment, or they may have been influenced entirely by a friendly knowledge of the exhibitor, and irrespective of the quality of his exhibit, desired to give him a *lift* in public opinion. This is proved every season, as almost the worst exhibit that can be shown, will be advertised as having received *First Prize* at such-and-such Shows.

It is evident that the past must be no guide for the future. In years gone by, there were but comparatively few Agricultural Shows. Manufacturers had time to keep improving each year, and were not saddled with the enormous expenses now incurred by either personally attending, or sending a representative to every little Show now existing, and yearly still increasing. In this week's *Leader* (11th June, 1887), there are notices of FIFTY Agricultural Shows to come on, from July 27th to November 24th, and *nine* ploughing matches between now and August, and from the fact that some of Shows are within ten miles of each other—an hour's drive only—can anything be more absurd than having so many Shows, causing a sinking fund of large sums of money in the various districts, and entailing both upon the Government and Exhibitors a most unnecessary outlay; while the farmers themselves are the first to cry out against the cost, and are continually requesting a reduction in price, and the large profits (?) of the manufacturers upon their goods. To hear the wail of the Agriculturists, it would be imagined they were buying machinery and implements *every month* instead of only *once in their life*, if they have judgment in the first instance to give a fair price for a good article, instead of a cheap and inferior, which so many go in for innocently enough, perhaps, because the value of money they have learnt from childhood, but the principles of mechanics and machines are to them a mystery, and the difference in them an unknown quantity, hence the mistake so frequently made in relative value, and subsequent losses in having to renew or replace a worthless article. I will, with your permission, continue this subject in your next issue.—Yours, &c.

AN OLD EXHIBITOR.

Report on Sydney Show.

TO THE PRESIDENT AND MEMBERS OF THE COUNCIL OF THE NATIONAL AGRICULTURAL SOCIETY OF VICTORIA.

Gentlemen—

I have the honour to submit the following report on the Sydney Metropolitan Show, which I visited last month pursuant to resolution of Council.

As I described the show grounds and improvements in the report I wrote after my visit in 1882, it is unnecessary to do so again, except in so far as alterations and additions have been made. At that time the area of the yards was 25 acres, but the whole of the available ground, 40 acres in extent, is now enclosed with a substantial corrugated-iron fence; a total amount of about £15,000 having been spent in fencing and permanent improvements. The additional features are a new trotting-track half a mile long, 60 feet wide, fenced on both sides, well made with sandy loam; a grand stand, and a pony shed, which is an enclosed building with a double row of small stalls for ponies exclusively. As more classes have been introduced into our prize-list for ponies, either something of this kind or a sub-division of our present boxes would be an advantage on our grounds, for in allotting stalls when the entries exceed the accommodation, I have always given our present large ones with a grudge to ponies, which boxes half the size would serve equally well. The Sydney plan of admitting the public to the grounds is a good one. They do not sell tickets, but have four iron self-registering turnstiles fixed in passages, through which visitors pass. These turnstiles duly register the number of admissions, the man in charge of each being made responsible for the amount of money which should be forthcoming to cover the registered admissions. There is a separate passage for members;

also a box where change can be procured, in order that each person may present the exact amount of admission, and pass on without delay. If any confusion arises, the man in charge, by simply pressing his foot on a lever, stops the turnstile, and effectually blocks the way. The change box adjoins one of the turnstiles, so that the person in charge does not require a very large supply of silver on commencing, for at a slack time the man at the turnstile can hand over change collected for admissions, receiving gold or notes for it, and thus keep up his supply of silver. These arrangements appeared to work satisfactorily.

Although the exhibition was very interesting in some classes, on the whole it was not so extensive and representative as might have been expected, considering it was that of the Metropolitan Society of a great colony like New South Wales. However, as on the last occasion I was over, it was interfered with by the wet weather before it commenced, which doubtless kept back a number of exhibits; still, making all allowances on this score, it certainly fell far short of what its well-wishers would desire. It occurred to me that the fact of Sydney being in a measure shut off from the large agricultural and pastoral areas by the Blue Mountains had something to do with failure to produce a thoroughly representative show, the inducements to exhibit under the circumstances being inadequate. Before crossing these mountains five years ago I was at a loss to understand why Sydney had for years not gone ahead at a corresponding pace with Melbourne, but when I saw the barrier between the metropolis and the great producing areas of the colony the matter was at once explained. The same cause, doubtless, also effects the show, for though the ranges are crossed by the celebrated Zig-zag railway, I understand that a goods train has practically to be cut in four pieces over these parts, so that the handicap can readily be realised. Additional weight is given to this idea by the fact, freely admitted, that more thoroughly representative exhibitions are to be seen at one or two of the inland towns, which are in the centres of large agricultural and pastoral areas. In this respect the Metropolitan Society of New South Wales is placed at a disadvantage as compared with our Society in Melbourne, which is so centrally situated, and which is so easy of access from all parts of the colony. But to deal with the exhibits. The draught horse section of the show comprised some very good classes, though the numbers were limited. The principal stock came from one breeder on the Hawkesbury. There were separate classes for active farm horses, such as we do not have in Victoria. In these classes one or two very useful stallions were shown, which were something of the style of the Suffolk punch, with an admixture of the characteristics of the Clydesdale—very attractive animals. The thoroughbred stallions were a very good class, but not equal to those exhibited five years ago, which was, as I said, the best class of thoroughbreds I had ever seen in a show-ring. The mares and young stock were not numerous. The trotting classes contained some animals of considerable merit, and there was a fair display of coaching stock. There were a number of exhibits of light-harness horses, hackneys, ladies' hackneys, and an attractive lot of ponies. By far the largest class in the horses was the hunters entered for the Tribune Hunters' Plate, of which about forty came forward. As these were all brought into the centre of the ground with the colours up they made a pretty spectacle; while their trials were watched with keen interest. The trotting contest, in which the drivers appeared in colours, was also a feature of considerable interest. The grand stand was not largely patronised, as the contour of the ground is such that the jumping and trotting on their fine level track can be seen from many good positions—so different from our yards, where

a seat on the stand is absolutely necessary to obtain a good view of the course. During these displays, and while the judging of other classes of stock was going on, the number of the class being judged and the catalogue number of each exhibit in the ring were displayed on an elevated board—an innovation worth adoption here. In the cattle section of the yard, only a few shorthorns were shown, but there were some high-class exhibits from Victoria. The Herefords, though few in number, also comprised some superior exhibits. A number of Devons were exhibited in very fine condition. These cattle, which are much appreciated in many parts of New South Wales, look very attractive in herds on pasture, as I had opportunity of observing. In Ayrshires the females were an excellent class, the best amongst the cattle, containing some specimens of what is called the new type of this breed—which were really beautiful animals. The Jerseys contained one or two exhibits of great merit, but otherwise the breed was poorly represented. Very few sheep were shown, and there was a very limited number of swine. Dogs were fairly well represented; and there was a good display of poultry and pigeons, as well as canaries. Farm and dairy produce were almost complete blanks; but in the large hall there were some interesting miscellaneous exhibits—not, however, specially connected with agriculture. Near this shed was to be seen a very interesting collection of curios, consisting of roots of trees and scrubs, which wonderfully represented men, elephants, birds, fish, &c. The collector of these, who is an enthusiast, maintains that all animals have their prototypes in the roots of trees and other plants, and that representations of every one may be found with a little trouble—a contention his exhibited collection went far to prove. There was a poor display of buggies, harness, and kindred exhibits. The exhibition of machinery and implements was not an extensive one, nor was it effectively arranged.

It will be remembered that in my last report I drew special attention to the prominence given by the Sydney Society to exhibits which attracted the outside public, and were thus the means of producing revenue; and suggested that this Society, while not forgetting its primary objects, should yet adopt a somewhat similar system. Since that time this has been done with results with which you are all familiar, so that in this regard I have nothing further to submit. In order, however, that before concluding my report, I may bring forward something of general interest, beyond the details already mentioned, as the result of my visit, I wish to allude to the management of this exhibition, and with your permission endeavour to say something on the carrying out of shows generally. As is often the case at shows, complaints were made regarding the management—complaints, however, which might have been prevented, and which, I am certain, would not have been made if a properly organised system had been adopted and adhered to. For the purpose of satisfactory management—a methodical plan—which you, Mr. President, have always personally advocated, is more and more necessary the larger and more important an exhibition becomes. A small one-day's show may be scrambled through without much organisation, but in the carrying out of a large exhibition, embracing a multiplicity of details, and extending over a considerable time, thorough organisation is absolutely necessary, for if any hitch occurs it brings about a complete block. There can be no doubt, therefore, that in order to carry out an exhibition successfully, everything as far as practicable should be definitely arranged before the show commences. The Council, either as a body or by means of Committees, should thresh out every question thoroughly, and exhibitions being made up of so very many details, all interdependent, this is no small undertaking, as those best acquainted

with the matter will most readily admit. Then, when this is done, the secretary is provided with a good definite plan with the authority of the Council behind it on which to manage the exhibition. Recognising the mathematical axiom that the whole is greater than a part, every individual should work in accordance with that plan which has been agreed on by the executive as a body, and should not make any departure without acquainting the responsible head, or in the event of a modification being required, having it done through the office by the Council or some special committee appointed to deal with contingencies or emergencies. This is organisation supplemented by discipline. The want of a system such as I have endeavored to describe was, apart from the complaints already alluded to, the cause of annoyance at the Sydney Show, for I myself heard orders given which were shortly afterwards contradicted by someone else, thus giving rise to considerable confusion.

At the special luncheon, at which His Excellency the Governor, the Chinese Commissioners, and other invited guests were present—and to which I, as your representative, was courteously presented with an invitation—I heard favorable allusion made to the importance the Melbourne Society had assumed, and the way its Shows were managed. Now, no one surely would suppose anything else than that this allusion was made to this Society's management relatively to that of some others and not absolutely, for absolute perfection in management is scarcely to be expected. Still, it may be attempted, and as this Society evidently has a reputation to maintain, and, further, as everything points to its coming show being again larger than the preceding one, making the necessity for thorough organisation and perfect discipline greater than ever, I have ventured on these remarks, believing they may be of some service to the Council.

I have the honor to be, &c.

THOMAS PATTERSON,
SECRETARY.

Melbourne, 14th June, 1887.

The Veterinarian.

Veterinary Notes.

At the annual general meeting of the members of the West Bourke Agricultural Society on the 4th inst (Mr. John Hurst in the chair) the following paper was read by Mr. W. Allen, M.R.C.V.S., on "Australian Stringhalt."

"As a number of gentlemen have asked me to write a treatise on the disease commonly called Stringhalt, I beg to lay my observations under the public notice. I have made the subject an object of study for some time, and find the malady erroneously called Stringhalt to be quite a different disease. My suspicions leading me to suppose it was caused by parasites in the nerves and muscles, I performed an operation on an animal in a muscle of the thigh called triceps femoris, better known as the three-headed muscle, and extracted therefrom a large quantity of parasites of a most minute description. Having been so far right in my surmises, I proceeded to make *post-mortem* examinations of animals so affected, to ascertain how the parasites got there. On the 16th of April I dissected a horse which had suffered from this disease, and found in the intestines a great number of intestinal worms, from a quarter to half an inch in length, and scarcely as thick as a pin. A good number I found in the duodenum, the first of the small intestines; they were partially encysted, the head protruding through the peritoneum, or outer membrane of the intestine. I also found them in the anus, or lower portion of the bowel near the tail. On examination under the microscope I found



WESTWARD HO!

The subject of our illustration this month is Westward Ho, an Irish hunter, bred in County Limerick. He was imported by Mr. John McCulloch, and is now the property of Mr. Walter J. Clark. He is a rich brown horse, with tan muzzle, 4 years old, standing 16 hands 1 inch high; a grand jumper, with magnificent action and extra bone, quality, and substance. His sire was the well-known steeplechase horse Tally Ho, by Broad Arrow; his dam, Kathleen, was by St. James, and his grand dam by Sir Hercules (a great performer over fences, and the sire of many famous hunters and steeplechasers). Westward Ho, who is a splendid specimen of a cross-country horse, is at present located at Glenara, Bulla, but, owing to the forthcoming sale of that property, his locality for the season is uncertain. However, his owner has promised to place him at the service of the public at an easy distance from town, and at a reasonable price. Surely, with stallions of this stamp in the land, we should be able to produce something superior in the way of upstanding hackneys, hunters, and carriage horses—a class of stock of which at present we have all too few.

each worm to contain from 20 to 30 of the minute parasites I have before mentioned. From the thigh to the pastern I took a great quantity of parasites, principally embedded round the artery and nerves. I have since made a few more *post-mortem* examinations, and find them all more or less the same. I have had cases of the disease in all its forms. The first symptom we see of it is the horse dragging its hind feet on the ground; secondly, the wasting away of the muscles of the thigh; and, thirdly, there is a severe pain in the kidneys, which can easily be detected by pinching the horse over the kidneys, when it will crouch down almost to the ground. Horses affected with this disease pass daily a number of the worms with the dung, which spread over the grass, and I am sure other horses pick them up. In several places I also found the parasites passed from the animal in small masses about the size of, or, if anything, larger than, a pea. The breeding propensities of these animals are very great. One dozen put into a bottle, with fresh water added daily, each parasite will produce at least one hundred a week. When alive they are as hard and sharp as a piece of glass. When found in the nerves the head only is inserted. Animals on pasture near the sea have never been known to be affected with this disease. This I attribute to the quantity of salt in the grass. I may conclude by saying that there is very much yet undiscovered on this subject, but I hope in a few months' time to have made many fresh discoveries."

At the conclusion of the paper Mr. Allen exhibited two bottles containing specimens of the worms and parasites he had alluded to, which were inspected with much interest.

Mr. Graham Mitchell, F.R.C.V.S., said Mr. Allen had explained a theory which was of the greatest importance, and if he could claim for it entire originality the horse-breeders of the colony would be indebted to him. The theory, however, was not new, as Mr. Edward Stanley, the Government Veterinarian of New South Wales, had propounded it in 1886, in a report to the Chief Inspector of Stock of that colony, in which he stated that "he had formed the opinion that the origin of the disease was intestinal parasites; in other words, it was caused by worms attacking the mucous membranes of

the horses' digestive organs." He (Mr. Mitchell) would like Mr. Allen to say whether or not he was aware of Mr. Stanley's views before he wrote his paper. Parasites were by no means uncommonly met with in horses, and had never been so, as he (the speaker) had frequently seen them taken out of a horse's eye, and had performed the operation himself. Neither was it improbable that horses put to grass close to the sea-shore would not contract stringhalt, as everybody knew that horses affected with the disease were shipped to India, and recovered on the voyage. His (the speaker's) opinion had always been that stringhalt was caused by either a vegetable or an animal parasite, and he felt convinced that food had a great deal to do with it, for the reason that it was invariably to be found where the land was poor, and the pasture sour and deficient in nutritious substances.

Theories of Pig Breeding.

BEFORE a man can hope to become a successful breeder of high class stock of any of our domestic animals, he must be *au fait* as to what he desires to cultivate and retain. He must also make excellence hereditary, so that it may be transmitted with certainty from one generation to another. Nor is this by any means so easy as it may appear, for, as I understand, it is a rule (to which the pig certainly cannot be quoted as an exception) that the farther removed in habit and conformation from the natural wild progenitor, so much the more difficult to breed true to what we consider the higher types of the artificially developed animal. Different breeders, however, have different theories, and this is mine, that absolute fixity of type depends almost entirely upon close consanguinity. And while many whose idea of improving their stock is to look out for likely males to cross them, may to a certain extent succeed in their aim, they fail to secure to their animals that propensity which will insure them (and especially the males) improving other stock if introduced to them for a like purpose. There is little or no difference in appearance, in quality, or constitution, except as regards age or sex, in the different individuals of the families of wild beasts and birds, left to their natural existence and its contingencies. Yet they nearly all inter-breed, one generation after another, without disease or deterioration; nay, more, they are all endued with a prepotency so remarkable that any two individuals are almost certain to

reproduce *fac similes* of themselves and their parents before them. Close consanguinity, then, in breeding stock of itself cannot be harmful. It only becomes so through man's interference, and in proportion to that interference with natural laws do the laws themselves become unbearable.

Left to themselves, the young of the immature and decrepit die off. The weaklings of the hatch or litter succumb to privation and their natural enemies. In most animals the more robust males assert their supremacy, and to them the greater portion of the progeny owe their being. Consequently, none but the offspring of the more robust live themselves to become progenitors, and all such—and this law holds good alike in the vegetable and the animal kingdom—breed true to type. How far removed is the domestic pig from the natural conditions of his wild state? From early youth he is exposed to cold and privation, getting a precarious existence the greater part of the year from the roots and leaves of vegetables, till autumn brings the more welcome acorns and beechmast. He is transferred into a warm sty, when the young are farrowed in the warmest of warm beds. The weaklings, and those which would have succumbed to the privations they would have to undergo, are carefully reared. Stimulating and highly nutritious food is given to them; nay, more, the very qualities that are being developed, and which are so serviceable to man, are most frequently found in the more delicate of the litter, and these are selected as the parents of the future herd. Is it any wonder, then, that those whose existence is so essentially artificial cannot comply with the natural laws of their existence?

CLOSE BREEDING.—I hold that the great prepotency and fixity of type of animals and birds in a wild state is largely, if not entirely, due to close consanguinity and interbreeding. Where, from any disturbing influence, the type is varied there is a constant effort to revert to the original type, and the coarser and more robust of each generation become nearer akin to it, and are far more prepotent than the others. And this is especially so as regards our domestic breeds. While the more artificial the existence, and the farther removed in character, &c., from the original progenitors, the greater resistance to the natural laws that once governed them is observed. The cow, which, though domestic, leads a life somewhat akin to its primitive existence, not only will mate and breed with those connected with it by the closest ties of relationship, but often produces offspring noted for its high qualities. The sow, whose existence is more artificial, will under like circumstances, produce only offspring whose deterioration is marked, while one of a high-class stock will bring them mal-formed and absolutely unbrearable. Three cases have come to my knowledge where, by accident, the mother has been mated with her son. The first was a small-breed sow to which a very young boar had access. The litter were nearly all mal-formed; more than half were entirely without a passage for their evacuations, and died in a day or two. Some lived over six weeks, but all eventually died. Another common bred one did rear three little rats out of a large litter, but these never did any good. In the last case, where a well-bred sow had had two or three intervening litters, the same peculiarities as in the first instance were apparent, and of fourteen only one little wretch lived.

PURCHASING.—While the breeder who contents himself with purchasing well-bred young boars of different families, selecting them for their individual good qualities for crossing with his sows, may, by carefully selecting his young gilts, considerably improve his original stock, still, by such a course he can never depend upon the prepotency of his young boars to perpetuate that improvement like the one who sticks to one family of males, and so breeds that all his herd have some blood in common. The breeder's motto should be "consanguinity." Close consanguinity will not do in pig-breeding; nor will brother and sister, except in rare cases. The really successful breeder, therefore, must learn how to steer so as to avoid the sandbanks that on either hand impede his course. And this is no easy matter, especially to small breeders, who naturally have less choice of mates than those who breed upon an extensive scale. The most successful breeder I ever met with, and one whose retirement from the pursuit has been a serious injury to the breeds he fancied, told me that he commenced with two of the best boars (not related but well bred) and six of the likeliest sows he could procure. He mated three sows to each boar, and kept the best of the gilts, which were in turn mated with the unrelated boar. Their gilts again were mated with their grandires, and so on, till after a few generations he began to save the young boars showing most quality. He also kept a careful

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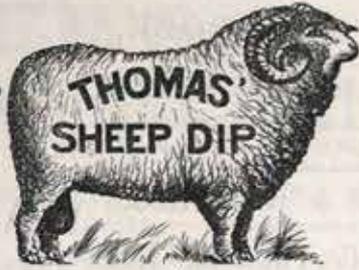
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record of the breeding of each, and having an innate taste for mating, he bred such a class of animals, without any extraneous crosses, that I have never seen equalled. I wrote "excelled" first, but substitute "equalled," as the more correct expression. These carried their prepotency with them, till even now the offspring of some of the old boars can be recognised to the tenth or more generations.

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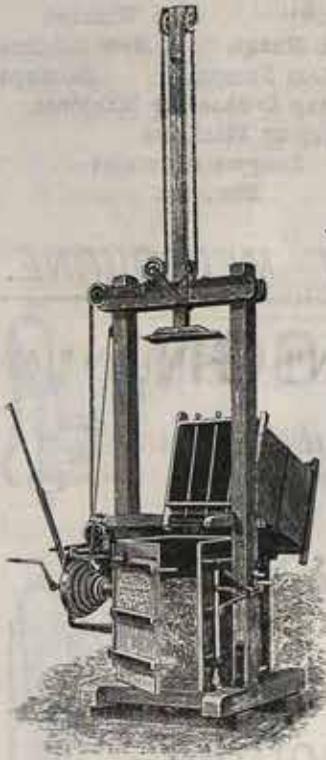
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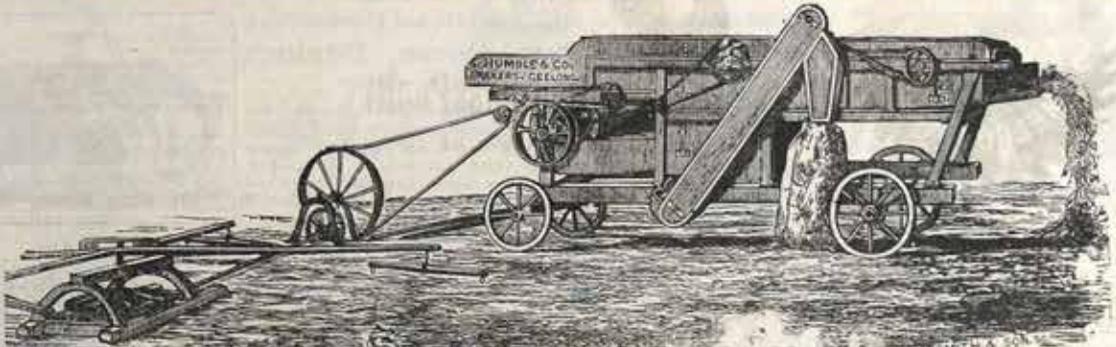
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Awarded GOLD MEDAL for Special Merit at London Exhibition of 1873, and TWO GOLD MEDALS for best Carriages at Melbourne Shows of 1883 and 1884, and THIRTY-TWO MEDALS (1st Prizes), at Exhibitions and Shows of 1872, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, and 85. Also, THREE FIRST AWARDS OF MERIT (1st Prizes), at International Exhibition of 1880.

NOTICE.—Referring to above, D. WHITE desires to inform his numerous Customers and the Public generally that he has secured and completed EXTENSIVE ADDITIONS TO HIS COACH FACTORY, and with the increased accommodation and Steam Plant, and the Largest Stock of Seasoned Timber in Melbourne, is now prepared to meet the increasing demand for his well-known Carriages and Vehicles. The new premises are in Stewart Street, immediately opposite the present Factory. Patentees of the Improved Carriage and Buggy Hood Apparatus, for raising or lowering the Hood from the inside. Every description of Vehicle built from the best imported Materials and Well-seasoned Timber.

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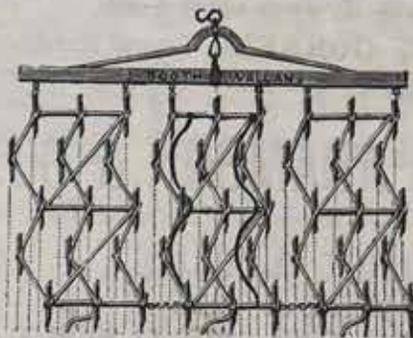
MESSRS. CAMPBELL, GUTHRIDGE & Co.,
Agents for Lancashire Patent Belting and Hose Company,
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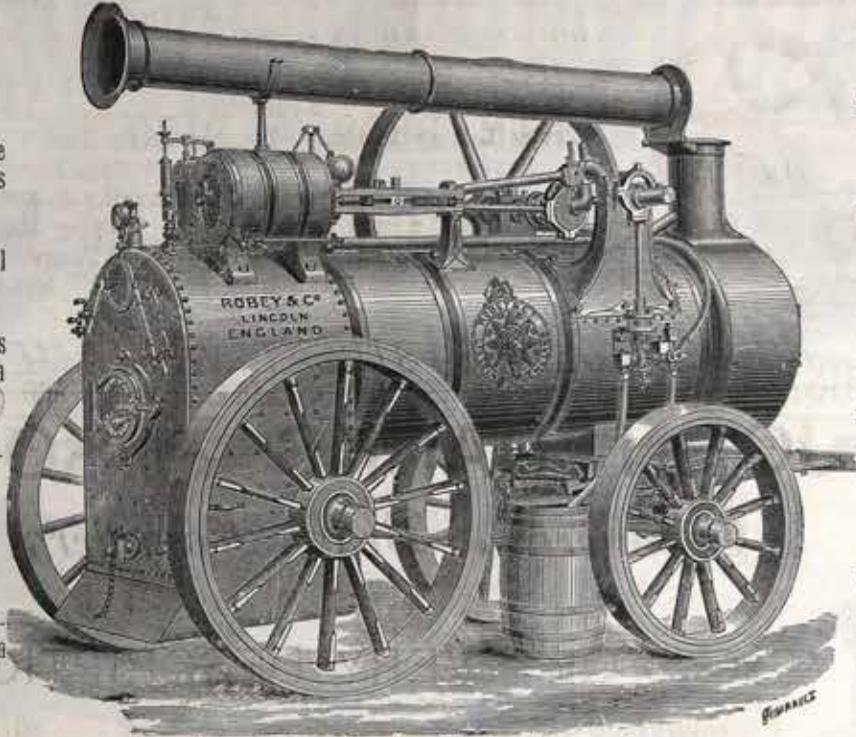
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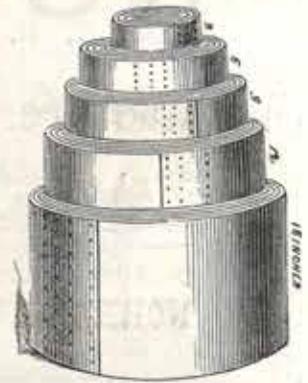
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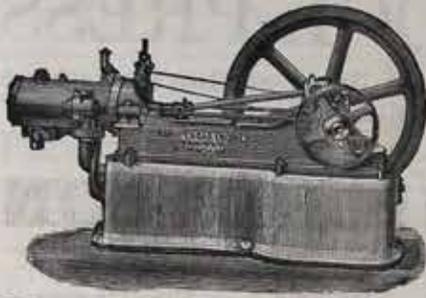
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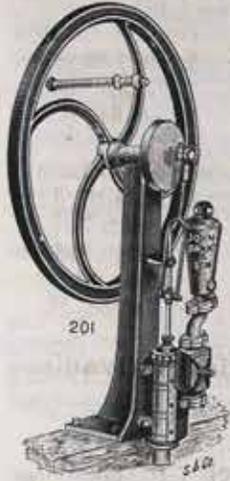
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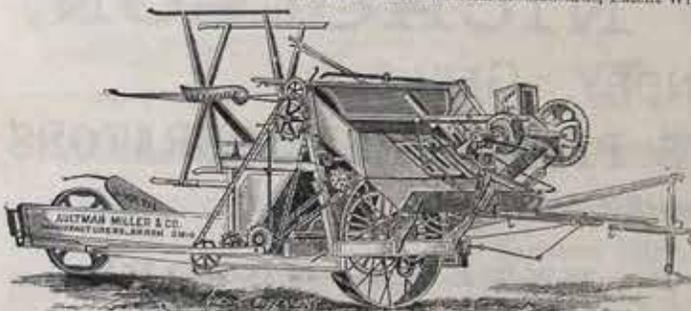
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VICTORIA

Vol. II.—No. 24. [Sent as a Newspaper.]

MELBOURNE, JULY 15th, 1887.

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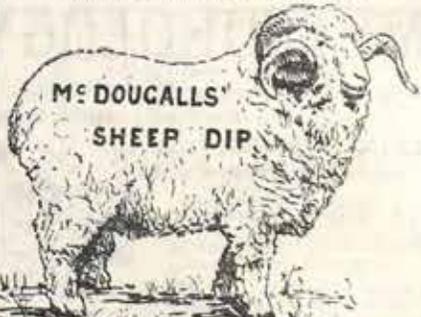
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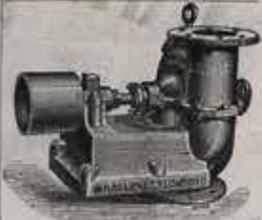


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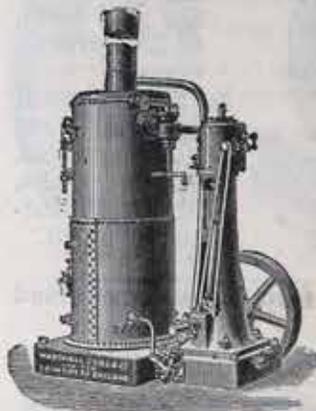
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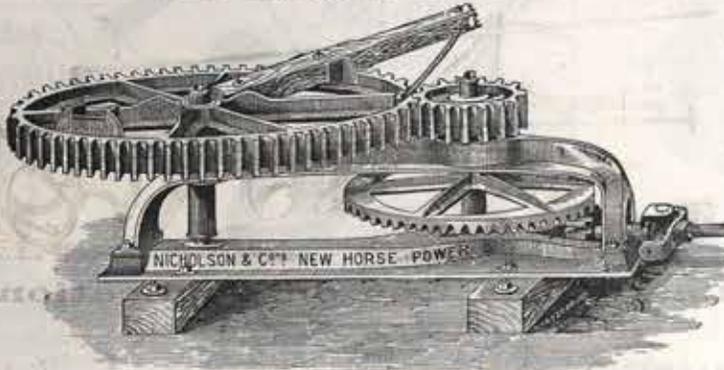
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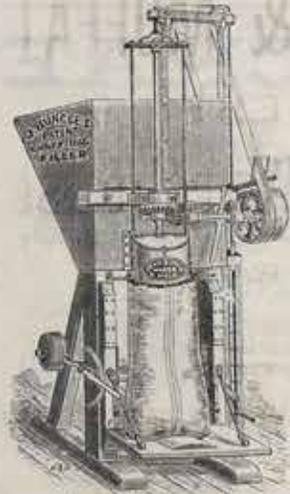
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J. Buncle's Machines have, as usual, been awarded First Prize at all the leading shows wherever he exhibited last year (1885), and the many improvements introduced and constantly copied by other makers, is the best proof of the value of the continued consideration in all that affects the profits and welfare of his customers.

Chaffcutters with 14-in. wide mouthpieces and Newest Designs, are now being manufactured to suit the increasing output of many of the leading Chaff Merchants. May your fortunes ever be associated with the earnest efforts to assist making them by,

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Single, Double, and Treble Ploughs.

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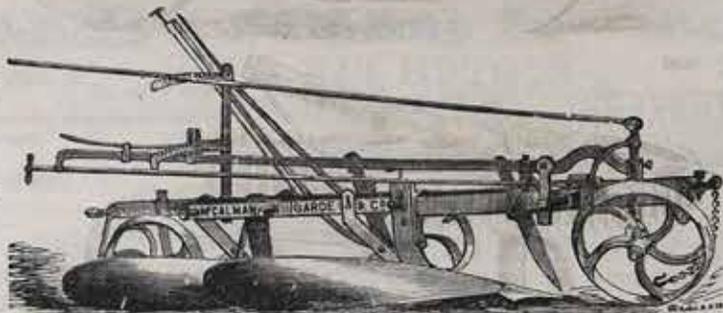
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For dam sinking.

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Williams' Rack & Pinion Wool Press

Rack and Gear Steel Press for the use of large stations.
Lever & Chain Press, with Folding Top Box, for the use of smaller stations
Lever and Chain Farmer's & Selector's Press. Price, £22 10s.

As the season for this latter kind is now approaching, those requiring them should lose no time in sending their orders. Owing to the general satisfaction given by those supplied for last season, orders are now freely coming in, and a large demand is looked for. The following is a fair sample of a large number of Testimonials to hand for those supplied last season:—

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HUGH GORDON.

VICTORIAN RIFLE CLUBS.

Members are informed that
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The above lot are from the very best strains, direct male
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MELBOURNE RAGE (brother to Melbourne Joker),
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THE

GREAT ANNUAL EXHIBITION

Will be held on the Show Grounds,

FLEMINGTON,

ON TUESDAY, WEDNESDAY, THURSDAY,
 FRIDAY, and SATURDAY.

23rd, 24th, 25th, 26th, & 27th AUGUST, 1887.

Entries of Yearlings for Grand Draught Horse
 Produce Stakes close 30th JULY.

GENERAL ENTRIES CLOSE AUGUST 6, AT NOON.

(This condition will be strictly enforced.)

Exhibitors of Machinery, Implements, and Stands
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THE NATIONAL

Agricultural Society of Victoria.

Shorthorn Derby Sweepstakes, 1889.
 Hereford do do 1889.
 Ayrshire do do 1889.
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A Sweepstakes of £1 each (10s. at time of nomination,
 and 10s. at date of general entry for Show), with
 25 added in each case for Heifers calved between 1st
 July, 1886, and 1st July, 1887, to be divided and
 awarded as 1st, 2nd, and 3rd Prizes, for three-year
 olds, at the Society's Show, 1889.

Nomination of Calves of each breed respectively
 will be received on payment of a nomination fee of
 10s. each. Calves to be nominated within one month
 of date of birth. Nominators to fully describe the
 color of each calf entered, and to state the name of
 the sire, dam, and sire of dam, together with the
 date of calving. Entry forms on application.

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One Month's Free Storage allowed on Grain.

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Notices.

All communications for the Editor to be
 addressed to the Society's Office, Kirk's Bazaar,
 Bourke Street West, Melbourne.

Business communications to the Publishers,
 Melbourne Place, off Russell Street, Melbourne.

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Dates of Forthcoming Shows.

SECRETARIES of agricultural societies are
 requested to forward to the editor the dates on
 which their respective exhibitions will be held,
 also copies of their prize schedules as soon as
 they are published.

JULY.

21.—Deniliquin, N.S.W.
 27, 28, 29, 30.—Victorian Poultry and Dog Society.

AUGUST.

2, 3.—Corowa, N.S.W.
 15, 17, 18, 19.—National, Brisbane.
 23, 24, 25, 26, 27.—National, Melbourne.
 31 and 1 September.—Donald.

SEPTEMBER.

L.—Yarrowong.	15, 16.—Hamilton.
1, 2.—Ballarat (Sheep).	15, 16.—Murtoa.
6.—Wychoproof.	16.—Kerang.
7.—Balmoral.	20.—Chiltern.
7, 8.—Wimmera District, Stawell.	21.—Ingleswood.
8, 9.—Ovens & Murray, Wangaratta	22, 23.—Echuca.
13.—Rupanyup.	28.—Boort.
14.—Ararat.	28.—Numurkah.
14.—Moira, at Cashel	28.—Elmore.
14, 15.—Albury, N. S. W.	29, 30.—Benalla.
	30, 30.—Horsham and Wimmera (National).

OCTOBER.

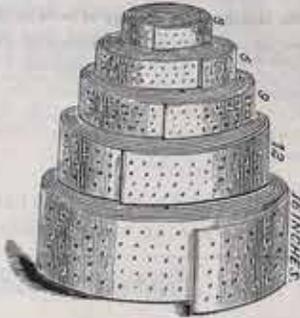
4, 5.—Rochester.	12, 13.—Warrnambool.
5.—Belfast.	13.—Murchison.
5.—Euroa.	19, 20.—Tatura.
5.—St. Arnaud.	20.—Rutherglen.
6.—Bacchus Marsh.	20.—Sale.
6.—Tungamah.	20, 21.—Geelong.
11.—Nagambie.	25.—Kerrol.
12, 13.—Bendigo, at Sandhurst.	26, 27.—Shepparton.
	27.—Talbot.

NOVEMBER.

10.—Heathcote.
10, 11.—Smeaton.
16, 17.—Kyneton.
23.—Castlemaine.
24.—Ballarat.
24.—Traralgon.
24.—Kilmore.



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WELL-STRETCHED
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TESTIMONIAL.—[copy.]

UNION FLOUR MILLS,
Brunswick-street, Fitzroy,
March 17th, 1886.

Messrs. Frank Vial & Co.,
Macauley Road, Hotham.

Gentlemen,—In reply to your enquiry respecting the (23") twenty-three inch double belt supplied by you to ourselves, we beg to state we have been working it for a period of seven months, and we find it to be all we could desire, as also is the other belting which we had from you.

We therefore feel great pleasure in recommending your belting to anyone requiring the same.

We are, Gentlemen, yours truly,
(Signed) W. S. KIMPTON & SONS.

Other Testimonials received too numerous to print, which with Price Lists, can be had on application.



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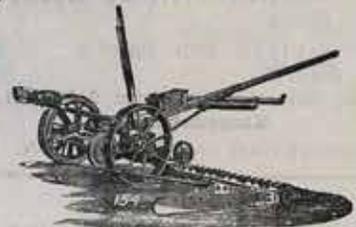


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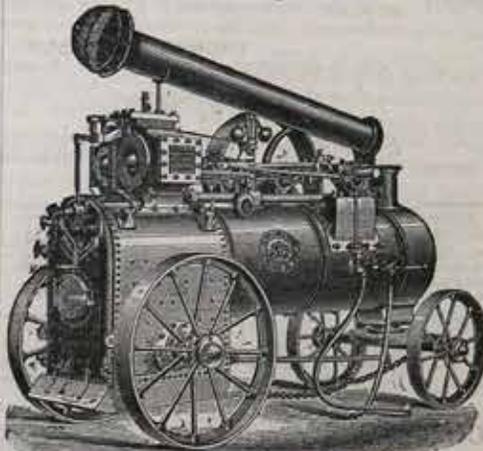
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AIRD & McCRAE, as Stock and Station Agents and Machinery Merchants, are prepared to supply Plant for Irrigation Works, and when necessary, obtain services of Eminent Engineers for the purpose of taking levels and advising generally.

Berkshire pigs, the stock of which have been widely spread throughout Australia.

When the National Agricultural Society of Victoria was established Mr. McDougall was elected a trustee, along with Sir James McCulloch and the late Hon. T. J. Sumner. This position he held till a few years ago, when a new deed was issued to the Society he thought it well to give place to a younger man. Mr. McDougall was considered the best Gaelic scholar, as he was also one of the best read men, in the colony. He was a remarkably original and forcible writer, whatever he penned, though sometimes rather severe, always commanding attention. His information on all matters relating to the breeding of stock and kindred subjects was unusually copious and exact. He had a very retentive memory, and in conversation a remarkable power of conveying information, including minute details, in a most interesting manner, without ever becoming tedious. His death removes another of those old pioneers to whom the latter-day colonists owe so much.

Meetings.

AN adjourned meeting of the Council of the National Agricultural Society of Victoria was held on Friday, 17th June, 1887, for the appointment of judges for the show.

Present—Dr. Plummer (President), in the chair, with Messrs. F. Peppin, D. Mitchell, D. Munro, W. Glover, J. C. Cochrane, W. Wragge, J. Currie, D. R. McGregor, W. Learmonth, D. White, Walter J. Clark, and the Hon. J. Buchanan, M.L.C.

A discussion arose on several matters in connection with the appointment of judges, when Mr. Munro moved—"That, in view of the smallness of the attendance, the meeting at its rising adjourn to Tuesday, the 28th inst., for the appointment of judges, and that a special call of the Council be made for that day at 12 noon; the work to be finished before rising." Seconded by Mr. Garton, and carried.

Mr. Clark then brought up the question of altering the colour of the prize cards, and giving coloured ribbons as well.

After considerable discussion Mr. Munro moved—"That the colours of the prize-cards remain as before, but that ribbons of corresponding colours, as suggested by Mr. Clark, also be given to prize-winners." Seconded by Mr. Currie, and carried.

The meeting then adjourned.

AN adjourned meeting of the Council of the National Agricultural Society of Victoria was held on Tuesday, 28th June, 1887.

Present—D. R. McGregor, Esq. (in the chair), with Messrs. F. Peppin, C. Lynott, T. Harmer, John Bond, W. Glover, W. Thomson, J. Currie, John Blyth, J. M. Peck, W. Wragge, John Jones, J. C. Cochrane, T. Learmonth, D. Mitchell, and W. J. Lobb.

CORRESPONDENCE.

Telegram from Dr. Plummer, president, stating he could not be present. Received.

From Collector Shire of Essendon, enclosing receipt for £56 5s., rates for Show Grounds, and asking if the Council desired the same names as heretofore to be placed on the roll.

Mr. Peck moved—"That Mr. John Blyth's name be substituted for that of Mr. Job Smith, who was now in England." Seconded by Mr. Glover, and carried.

From West Bourke Society, asking the Council to appoint a representative at a meeting to be held on the 2nd of July, when a discussion would take place on the disease in horses known as stringhalt.

Mr. Lynott moved—"That Mr. Thomson, the hon. veterinary surgeon, Mr. Graham

Mitchell, and the Secretary represent the Society." Seconded by Mr. Currie, and carried.

From R. D. Passmore, suggesting that better accommodation should be provided for the exhibition of saddlery and harness, and enclosing cheque for £1 1s., as a second prize in class 53 for boy pony and equipments, &c.

The letter was received, and the Secretary was instructed to acknowledge it with thanks.

Several letters were submitted from members of Council who were unable to be present at the meeting, enclosing names of gentlemen they wished to nominate as judges. These letters were considered during the appointment of judges.

WORKS AT SHOW GROUNDS.

The Works Committee reported that they recommended the erection of entirely new sheep pens, with longitudinal rails only, the pens to be three in a bay, or about 4ft. 6in. centres.

Also, that the present pig shed be extended 48 feet westward; that the whole of the floor be asphalted, and that entirely new pens be erected, six to be made extra large; the balance of the double row on the north side to be the same size as before, and the whole of the south row to be reduced in size, so that three would only occupy the space previously occupied by two.

Also, that the cattle sheds, where the grounds sloped towards the fence be raised in front by being gravelled at a cost not to exceed £20.

Also, that the large hall under the stand, occupied last year as a luncheon hall, be used for dairy and farm produce, wines, &c., and that a corrugated-iron building be put up for a luncheon-hall, and that a rotunda be erected for a booth site. The Committee had not determined whether the luncheon-hall should be erected on the right hand side of the front gate behind the restaurant or adjoining the rotunda, and wished the Council to decide on the position.

Mr. McGregor moved that the report be adopted, and that the site of the luncheon-hall be fixed by the Works Committee. Seconded by Mr. Thomson, and carried.

Mr. Lynott moved that the Works Committee be authorised to proceed at once with the carrying out of the works recommended in the report. Seconded by Mr. Bond, and carried.

The appointment of judges and referees for the Spring Show was then proceeded with as far as the end of the cattle sections, when Mr. McGregor moved that out of respect to the memory of the late Robert McDougall, of Arundel and Warlaby—a founder, and for years a trustee of this Society—whose remains are to be interred this day in the Melbourne Cemetery, this Council do now rise, and adjourn until 2 p.m. on Thursday. Seconded by Mr. Lobb, and carried unanimously.

Mr. Lobb moved, in connection with the foregoing resolution, that a letter of condolence be written to Mrs. McDougall. Seconded by Mr. Wragge, and carried.

The meeting then adjourned.

AN adjourned meeting of the Council of the National Agricultural Society of Victoria was held on Thursday, 30th June, 1887.

Present—Dr. Plummer (President), in the chair, with Messrs. W. Wragge, J. M. Peck, W. Glover, W. Learmonth, D. R. McGregor, T. Learmonth, D. White, F. Peppin, J. C. Cochrane, J. Currie, C. Lynott, and John Finlay.

WATER SUPPLY.

The Committee appointed to inquire into the water supply at the Show grounds reported that they had seen Mr. Davidson,

who said that there would be no difficulty in extending the main along Epsom-road to the Show grounds, but that, with the present population, it could scarcely be undertaken as a departmental work. However, if the Society could induce the Chief Secretary to consent to place the amount necessary to do the work on the estimates, he would give his consent and approval to the immediate extension of the main.

The referees and the judges for the balance of the sections of the Show were then nominated.

Stewards were then appointed as follow:—
Draught Horses—J. Currie, W. Glover, J. G. Brisbane, J. Daniel.

Thoroughbreds Trotters and Roadsters—T. Learmonth, J. Hearn, J. Garton, H. Griffiths.

Hunters, Ladies' Hunters, and Rough-riding—J. M. Peck, J. Hearn, J. Garton, W. Fleming.

Carriage and Buggy Horses, &c.—W. J. Lobb, W. Rose, H. Hearn.

Shorthorn Cattle—J. M. Peck, C. Lynott, H. Peck, D. C. Morpeth.

Herefords, Devons, and Polled Angus—F. Peppin, W. Wragge.

Ayrshires and Holsteins—W. Thomson, R. G. Stevenson, C. A. Kennett.

Jerseys and Britanias—D. R. McGregor, T. Harmer, H. Delahy.

Fat Cattle and Fat Sheep—J. M. Peck, C. Lynott.

Dairy Cattle—J. Hurst, J. C. Cochrane, J. M. Phail.

Merino Sheep—Robert Clarke, F. W. J. Plummer.

Lincolns, Leicesters, and Downs—S. G. Staughton, Walter J. Clark.

Swine—James Gibb, John Bond.

Poultry—W. Learmonth, George Young.

Dogs—H. Staughton, W. H. Wilson.

Carriages and Buggies—T. McCaw, S. Brunton.

Harness and Saddlery—D. White, R. C. Anderson.

Dairy Produce, Preserves, and Manures—J. Buchanan, H. Hearn.

Grain, &c.—J. Blyth, T. Brunton.

Wine—A. Plummer, D. Munro, J. J. Shillinglaw.

Hops and Malt—Charles Young, John Jones.

TELEPHONE COMMUNICATION.

Mr. Currie reported regarding the subject of telephone communication with the Yards (which had been mentioned to him by the President) that he had seen Mr. Masters, the manager of the Company, and had obtained from him a promise of the use of a telephone during the Show if the Postal Department would allow their wire to be used, and if it could be made available.

Mr. Currie was thanked for the action he had taken, and it was left to the President and Secretary to see the Postmaster-General with a view to arranging, if possible, for the wire to be used for telephone purposes.

NOTICE OF MOTION.

Mr. Thomson gave notice that he would move at next meeting—"That the motion appointing the second Tuesday in the month, at 2 p.m., for the Council's meetings be rescinded, and that the meetings be held on the first Monday in each month, at 11 o'clock a.m."

The meeting then closed.

The ordinary monthly meeting of the Council of the National Agricultural Society of Victoria was held on the 12th July, 1887.

Present—Dr. Plummer, President, in the chair, with Messrs. F. Peppin, J. M. Peck, W. Thomson, C. Lynott, W. Wragge, T. Learmonth, J. C. Cochrane, W. Learmonth, S. G. Staughton, J. Garton, George Young, T. Harmer, F. Henty, J. Hearn, John Bond, D. R. McGregor, D. Munro, John Jones, John Bunels, Walter J. Clark, T. Brunton, D. White, John Finlay, and the Hon. J. Buchanan, M.L.C.

The Journal
OF THE
National Agricultural Society
OF VICTORIA.

MELBOURNE, JULY 15th, 1887.

Heredity.

ALTHOUGH the hereditary transmission of qualities is so obvious that it cannot escape the most superficial observer, the direct influence of heredity is not usually sufficiently taken into account by breeders of stock. It is true indeed that more attention is paid to the breeding of our domestic animals than is given to the re-production of human beings, regarding whom it has been well said by a deep and sound thinker on the subject that if more forethought were exercised in having them properly born the first time, their being born again—which, by the way, so greatly exercises the minds of our spiritual advisers—would be much more easy of accomplishment. But although this subject is one which will receive much attention in the near future from the best men (whose influence is bound to extend), it is rather beyond the scope of this article. In relation to the breeding of our domestic animals it is said that "like produces like, or the likeness of some ancestor." But this does not cover the whole ground, as the following examples serve to show. We have gone into a paddock and have been able to tell that certain colts and fillies were from certain mares, and, at the same time, have also been able to tell which sire could claim them, though there were several in the stud, proving that likeness of both sire and dam may be seen in the same animal. Although, as a rule, it requires a student of breeding and a close observer to do this, in exceptional cases the likeness of both sire and dam in the progeny is very obvious. Again, we have seen a blood mare mated with a thoroughbred sire, a filly being the result. This filly, when grown up to be a mare, has been put to an active draught horse, the progeny being a filly quite unlike the sire, but exactly resembling the usual progeny of her thoroughbred grandsire—so much so, that anyone acquainted with his stock would at once recognise the likeness, with allowance for increased substance through the admixture of draught-horse blood. We therefore hold that the idea of transmitted likeness would be better expressed thus: *Like produces like, or the likeness of some ancestor, or a combined likeness of more than one ancestor.* Were the full significance of what is contained in this expression duly impressed on breeders, they would not carry on the haphazard system of mating their animals which too many at the present time do. The proportion of really superior animals to those of a moderate and indifferent class is small indeed. Too much reliance is placed on the chance of the excellence of one animal counteracting the defects of the other, the "combined likeness" not being sufficiently reckoned on. Faulty animals should, as far as possible, be wholly rejected in breeding, for, though their faults may be partially overcome by a very superior mate, the progeny is bound to inherit the predisposition to revert in its progeny to the inferior type. And the same with diseased animals, or those from diseased stock, for it should be remembered that not the actual disease, but the predisposition to it, is what is usually transmitted. Habits even are directly hereditary. We remember a milking cow which, when bailed up, had a most unusual habit of invariably putting her head only far enough forward into the bail to allow the bail stick to be put up just behind her horns, instead of standing with

her head right through the bail, as quiet cows generally do. Well, this cow had two heifers, of different ages, which afterwards grew up and became milkers, and, strange to say, both had the very same invariable habit of only putting their heads into the bail just far enough to allow it to be closed. We recognise the heredity of habit, and develop it for our advantage, in the case of the pointer dog, in which animal an acquired and imparted habit has become remarkably strong. It is most amusing to see a highly-bred pointer pup standing with fore-leg raised and tail erect, steadily "pointing" a chicken which any other pup would certainly "chevy." The direct influence of heredity is a most interesting and important subject, and it is one which we repeat is not sufficiently taken into account in the re-production of that part of creation over which man has been given dominion.

Notes.

The Council of the National Society has resolved to allot the large hall under the grand stand in the show grounds at Flemington for the exhibition of dairy and farm produce, wines, &c.; so that one of the best-lighted and finest rooms in Australia will be available for these exhibits. No doubt this will lead to a great development in this department of the show.

The following is the jubilee address presented to the Queen by the National Society through His Excellency the Governor:

"TO HER MOST GRACIOUS MAJESTY VICTORIA
QUEEN OF GREAT BRITAIN AND IRELAND,
EMPERESS OF INDIA, &c.

"MAY IT PLEASE YOUR MAJESTY—

"We, the president, vice-presidents, and members of the National Agricultural Society of Victoria, desire humbly to offer to your Majesty our most sincere expressions of loyalty and devotion to your Majesty's throne and person, and to express our heartfelt congratulations on the occasion of the jubilee of Your Majesty's glorious reign.

"As representatives of the great agricultural and pastoral interests of this young and rapidly rising colony, we trust that the bonds of national sympathy and brotherhood between your Majesty's subjects here and in the motherland may ever subsist, and that the ample territory of this new and fertile land, still largely undeveloped through want of population, may yet become the happy home of thousands of our fellow subjects from the older historic realms under your Majesty's sway.

"We pray that Heaven's best blessings may ever rest on your gracious Majesty's throne and person, and that under your auspicious reign your Majesty's subjects in every land may continue to hold their honoured place in the van of civilisation and progress."

The address was beautifully engraved and illuminated by Messrs. Ferguson & Mitchell, in a handsome gilt morocco folding case, the lettering being on one page, and facsimiles of the signatures of the president, vice-presidents, members of council, hon. vet. surgeon and secretary on the other.

Attention has lately been called to a plant which was brought from Buenos Ayres to New Zealand a few years ago, and which is known to botanists as *physianthus auricomus*. It is a beautiful climbing plant, and it has the peculiar property of catching butterflies and other insects, on which account it was named the Cruel Plant. It has been thus described:—"The anthers are so placed that their spreading cells form a series of notches in a ring around the pistil. The insect, in putting its proboscis down for the honey, must press it into one of these notches, and, in attempting to withdraw it, the end is sure to get caught in a notch, boot-jack fashion,

as it were, and the more the insect pulls the more its trunk is drawn towards the point of the notch. Thus caught, the insects slowly starve to death. So effectually does it thus catch butterflies, that it has been suggested that lines of it planted around cabbage fields might be used to lessen the numbers of the white butterfly, the caterpillar of which, the "cabbage worm" is so destructive to the cabbage crop. That insects are certainly caught by it in great numbers is evident. On a single plant the past season, covering a space of 30 square feet, 90 butterflies, besides many other insects, were trapped. The insect-catching plant has never been claimed by even the most pronounced Darwinian to eat the insects, although in my opinion it has just as much claim to be called insectivorous as the Carolina fly-trap, the pitcher plant, or any other plant said to feed on insects." It is to be tried as a means of killing the codlin moth and other insects injurious to trees and plants generally.

The Late Robert McDougall.

THE late Mr. Robert McDougall, of Arundel, Keilor, who died at Ellora, Moonee Ponds, on the 25th of June last, in the 75th year of his age, was one of the most successful breeders of Shorthorn Stud Cattle in Australia. He commenced his herd early in the forties by purchasing some heifers from Messrs. Gardiner and Fletcher, which he mated with an imported sire known as Mollison's Bull. He afterwards increased his females by purchasing heifers from the Circular Head Company, in Tasmania, and a few from Messrs. Meikle and Lyall. From this foundation Mr. McDougall continued to increase and improve his herd by the use of imported bulls. Lord Nelson and Dundas were selected for him, in England, by his brother, and were used extensively in his herd. The next bull used by him was Fusilier, imported by Messrs. Miles, Kingston and Co., of which bull and his stock Mr. McDougall entertained a very high opinion. He was followed by Lord Raglan, and afterwards by Royal Hope, bred by Mr. Torr. This bull was succeeded by Master of Athelstane, which, though not a show bull, yet left excellent stock. In 1862 Mr. McDougall imported the Broughton bull, Prince of the Purple, a very successful sire. In 1870 he went to England and purchased Field Marshal Booth and Major Booth, both by the celebrated bull Commander-in-Chief. With these bulls Mr. McDougall brought out Robin Hood, a bull he shortly afterwards sold to Mr. Devlin, of New South Wales, for 1000 guineas, and the Hereford bull, Oxford Lad, one of the best animals of any kind that ever came to Australia. Mr. McDougall then used a New South Wales bred bull called King Tom, by Lord Blythe, from a Mantilini heifer. He then imported Sir Roderick, a Farewell bull, and Lord Chesterfield, the latter of which, however, soon after died. This rapid sketch shows in outline how Mr. McDougall built up his herd. We have had no more consistent and persistent breeder. He set out on certain lines to which he steadily adhered. Other herds have changed hands and have otherwise changed, and their breeder's fortunes have undergone many fluctuations, but Mr. McDougall maintained the even tenor of his way throughout, and earned a name and acquired a fame which will live long after him. Although Mr. McDougall was best known as The Great Shorthorn Breeder, the colonies are also indebted to him for the introduction of other valuable stock. He imported the draught stallion Cromwell, a horse whose mares were amongst our best breeders; also the well-known Ben Ledi, by Ben Lomond, the latter being imported after his son. When Mr. McDougall brought out Ben Ledi he also imported some high-class

assisting the agricultural interest, I have no doubt but that the committee could arrange with such newspapers to carry out the above idea, and thus help towards making your society not only the National Agricultural Society of Victoria, but of Australia. The present prize-list, now to hand, contains several new classes. Amongst others a class for Devons, for best high-jump horse, for mare likely to produce remounts, cattle derbies, &c. But the new classes are not nearly so noticeable by their presence as some of the old ones are by their absence. For instance, the prize for a thoroughbred mare (dry) is missing, while that for a thoroughbred mare in foal, or with foal at foot, is left in. Why not abolish the prize for mares at once, as who will bring a really good mare to a show in August, when she must either have a foal a few days old at foot or be heavy in foal? The risk is too great, and the conditions of the mare class are such as to court almost certain failure. If the class for dry mares had been left in, good mares might have come forward, as the risk in their case would be trifling. Indeed, for a doubtful breeder a week's show business would do her good, as after the knocking about she would get there she would be probably easily stunted. Lots of cases could be cited where doubtful breeders, cows and heifers especially, have proved fruitful when covered immediately after or during a show. The next noticeable omission is the thoroughbred stallion, likely to improve the breed of thoroughbred horses. An owner takes a thoroughbred mare to your show, but the class of horse he is likely to mate her with is not to be represented. That class of horse is struck out. He would hardly care about mating his good mare with the last year's winner of the prize for the horse likely to produce weight-carriers. Is the Society becoming straight-laced and "unca guid," and in a mild way trying to put down racing amongst us by excluding from its show horses of the Newminster and Suwarrow type? It will be admitted by most people that the owners of the class of horses above named will hardly run the risk of competing against, and being placed behind, big, coarse animals with not enough character about them (although in the stud-book) to produce stock with either action or symmetry, unless mated with mares of much superior quality than themselves.

From a notification in the *Australasian* some time ago, a number of intending visitors hoped to see Newminster at the forthcoming show, but that pleasure is to be deferred (unless the horse be sent as an extra exhibit), and racing is to be put down by the N.A.S. of Victoria. Would it not have been more to the purpose if the conditions of the prize offered for "mare most suitable to produce remounts" had stated what sort of a sire must be used to produce the remount required? Judging from the class of mares shown at other shows for a similar prize, I venture to predict that there will not be a horse at your show suitable to mate with her. It is admitted that the thoroughbred-horse class up till now has been almost a failure. Why? Because and until recently the show was held in November, a time of year when it was impossible to send a stallion away from home; and since the show date was altered to August the prizes offered were not a sufficient inducement for owners or breeders to go to the expense and trouble of exhibiting.

If the prize offered for rough-riding were omitted, and the money offered for the best thoroughbred horse—at the sacrifice, perhaps, of a small amount of gate-money—it would be more in keeping with the aim and object of the Society, and encourage the breeding of horses in particular. The *Australasian's* report states plainly that the Sydney Show is declining, and the reason given is that that institution is neglecting their exhibitors for the sake of gate-money. This should be a warning to other societies to fight shy of a course that has proved itself ruinous to the interests they protect. Ideas strike one when thinking of past shows, such as having the jumps over which the hunters are tried made more like the fences those horses meet when hunting. Good, big, split post and rails might take the places of the beat sawn timber. There are other matters, but I have already encroached too much upon your space, and perhaps exhausted your patience. No, Mr. Editor, I do not wish to pose as mentor to either you or the Committee. I am only one of the many colonials who have watched your Society's growth almost from its infancy, and am proud to see the dimensions and position it has now attained, and I sincerely hope that when your next prize list appears, the thoroughbred horse section will be either thoroughly revised or totally abolished.—Yours, &c.,

SUBSCRIBER.

Melbourne, 7th July, 1887.

Prizes for Machinery at Shows, &c.

To the Editor of the Journal of the National Agricultural Society of Victoria.

SIR—Since my communication of last month the usual Annual Visitation, by deputation and letters to the Melbourne agricultural machine and implement makers, importers, &c., has been going on with a view to levy blackmail by subscribing from a guinea for a member's ticket, to a donation of five guineas or more, to be apportioned as the Committee (should you not specify for what particular purpose) may think fit: the reward for such generosity being that they will put "your name" in the prize-list as the donor. What a benefit! In addition to so much of a manufacturer's time being taken up during the business part of the day by so many worded gentlemen personally visiting them, there is the correspondence received and replied to on the same subject, and the hope expressed that you will not fail both by cash and exhibits to assist "Our Young Society." Now, as not only the old leading societies, with which we have been associated for many years as members, continue to solicit our connection, but also the crop of small societies now in existence, and yearly increasing (as before stated) in their demands, naturally has brought on a crisis, and a feeling that such claims are unjust, and have no right to be made upon the class of manufacturers and importers who are specially put to such heavy expenses in experimenting, designing, and exhibiting; and on whom the various societies are so much dependent to make an attractive appearance of their grounds, by the grand display of ingenuity and thought bestowed on bringing to perfection the various agricultural machines and implements, for the advantage of the farmers in being able to do more work in a given time, or at a much less expense than formerly. It is a fact beyond all dispute that the position of the agriculturist, in a pecuniary sense, is much enhanced by the expenditure of large sums of money and time, devoted by manufacturers and exhibitors in bringing to the present state of perfection the results of the output of Victorian manufacturers for their (agriculturists') benefit; and that the present persistent demand made upon the incomes of such manufacturers who, having supplied value for money received, have no more right to return a portion of their earnings than the customer would view a demand for a subscription by several individuals to raise money to start a number of new implement factories, to enlarge the field of competition, and arguing it was wholly for the advantage of the farmers. Such a demand would be equally consistent as that made upon the present manufacturers by many of the present, and the continually increasing, number of opposition agricultural shows, being an advantage to anybody.

Among the many difficulties surrounding the present position of the colonial manufacturer, and which not only cripple the energy and mind of many men of skill, but prevent them from doing what they would try to do—reduce prices—is the unreasonable demand for long credit now so much insisted upon if making a purchase. The usual commercial rule of whole or part payment by an approved acceptance at three months might be put up with; but when it comes to an offer to pay the amount *next season*, or half next season, the balance the *season after*—this, from a class who are continually stating they are imposed on by high prices, is adding insult to injury to those who are their best friends, trying to assist them on their way to fortune. Now, as workmen's wages have to be paid every week, and all material paid for every month, I would like to ask where, under all the foregoing circumstances, the point shows up in favour of any reduction in prices from the lists now issued, so long as workmen's wages and hours of labour remain as they now are. The only way I can see to supply a good, honestly manufactured machine or implement, at as low a price as possible to carry on any business, is to bring the money along with the order, or the cart for your goods. No more hardship in asking the customer to do this than the fact that the employer has to pay cash weekly for the labour to produce the goods; and, if he cannot get cash from his customer, or payment within a reasonable time, then, like the father's advice to the son, he must try and get money honestly if he can; but, if not, somehow, to pay his way in the manner stated. Colonial, as well as foreign manufacturers, like other commercial men in centres of population, are obliged for the extension of their own business, as well as for the convenience of intending customers, to appoint agents all

through the colonies, who can either show goods on hand, or give all the required information to enable a customer to come to some decision as to what to order. This is a legitimate connection between one man and another. The manufacturer can't be everywhere, and so the agent in each district is employed to do duty for him there, and is allowed payment for services rendered by a commission on actual sales made; but many of the intending customers, after taking up the time, and getting all the information from the agent, ignore him, and come direct to the manufacturer, and, after asking all the questions previously replied to by the agent, and the lowest possible price and discount for cash, then finish up by saying: "You have agents about the country that you allow a commission to?" "Yes." "Well, I'm not going to buy through an agent, but will pay you direct, less what you allow your agents." I need scarcely say but that the customer is viewed as a man either totally ignorant of the ways of business, or takes you to be a fool, in making such a proposition by allowing him for services never rendered; and which no respectable firm, in the interest of their agent, would ever entertain, but treat the offer with the contempt it deserves. On the other hand, I regret to say that some agents don't deserve such consideration, for some of them who have never been interviewed at all, but accidentally hearing of a purchaser who is going to order direct, will wait upon him and offer, if the order is sent through him, to divide his commission as well as the discount for ready cash payment, thus making known generally what is purely a private business arrangement between agent and principal. In addition to this the exhibitors and the customers, like everything in life, have their parasites preying upon them; for at nearly every agricultural show they are beset by some fellow, who neither cares to toil or spin, but a person pretty well acquainted in the district with the intentions and requirements of those resident there, and who volunteers to assist the customer to select the best and cheapest machine or implement he requires; next he interviews each exhibitor as to what discount will be allowed him, should he introduce a customer and make a sale. I am sure that every exhibitor would spurn the services of such a loafing agent, as the customer would only be introduced to the one who offered the most discount, irrespective of the quality of the machine. To be well served deal straight with the exhibitor; or, if for any reason, through a well-known agent, who will guarantee the best machines to his customer, as well as due payment of its value to his principal.

The great advantage also gained in purchasing a colonial manufactured article is that the manufacturer is easily got at or interviewed when required; also that, in the case of accident, the parts of machines or implements, being always kept in stock, can be immediately forwarded on receipt of order.

To bring the question of prizes and shows, and the better understanding and feeling between manufacturers and importers with their customers, to a close, and with a view to reduce exhibitors' expenses, is it not possible to reduce the agricultural shows to be held in Victoria in one year to twelve in number; in such centres of population as may be decided upon, and to where railway transit is most convenient; and also that such societies should follow the example and good sense shown by the committee of the Rapanup Agricultural Society, who have, for the past three years, paid the cartage of exhibits to the show yards; and unsold, back to the station again—a distance each way of about nine miles—and in addition offered prizes, thus showing a proper example of liberality, and a due consideration of reducing the expenses of those who make their show grounds worth visiting for both pleasure and information, and paying the way for the much-looked-for reduction in the price-lists of all our goods.

The reduction of shows to the number stated would not decrease, but rather increase, the opportunity of farmers and others seeing a much larger and better collection of what they are likely to require, and gaining the knowledge which they professed to acquire by a stray lot of exhibits being brought under their noses; while, by the facilities and cheapness of railway travelling now, they could visit all over the colony at a less expense considerably, in money and mind, than in trying to run a consumptive show in their own neighbourhood. My advice is, reduce the number of shows, offer every facility to exhibitors, and substantial prizes only once in three years; shorten the credit, and then a fair reduction in price. A kindly union and friendly feeling between producer and purchaser is sure to follow in the opinion of

AN OLD EXHIBITOR.

The minutes of the previous meetings were read and confirmed.

A deputation representing exhibitors of implements and machinery waited on the Council, when Mr. Downs, of Messrs. T. Henderson & Co., read a protest against any increase in the charge for ground rent for exhibits in the Show Yards, which was signed by twenty-one firms. Mr. Downs said the Secretary had informed him that the Executive Committee had resolved to recommend to the Council that the charge for space be raised from 1s. per foot frontage as heretofore to 3s. per foot, when he had taken steps to call a meeting at which the protest he had read was adopted. Mr. Gibbons, Mr. Danks, and Mr. Garde, members of the deputation, also spoke against any increase in the charge for ground rent.

The President stated that the increased charge had not yet been adopted by the Council, by which body he assured the deputation their views would receive the fullest consideration.

The deputation thanked the President, and withdrew.

REPORTS.

The Finance Committee report, submitting the monthly statement of accounts and recommending payments amounting to £159 12s., was read.

Mr. Brunton moved that the report be adopted. Seconded by Mr. McGregor, and carried.

The Executive Committee reported that they resolved to engage the Band of the Asylum and School for the Blind for the Show.

They also adopted specifications for refreshments and catering, supply of marquee flags, &c., fruit, forage, and photographing, and instructed the Secretary to call for tenders.

It was resolved that the allotment of the machinery ground be on the same basis as last year, but that the charges be raised to 3s. per foot frontage for space.

Also that it be advertised that all applications for space must be in before the 1st August.

It was resolved that the same persons as last year be admitted free to the grand stand, and that donors of £5 5s. be admitted to the yards, stand, and luncheon on opening day, and that donors of £10 10s. be admitted, with two ladies, to yards and stand, and themselves to luncheon on opening day.

The Secretary was instructed to write to the Railway Commissioners, asking them to grant excursion fares over the railways, same as last year, and arrange for special trains to and from grounds during show.

Also to write to the Government asking them to proclaim Thursday, the official opening day of the show, a public holiday, as was done last year.

The Secretary was authorised to advertise in the newspapers, and by means of bills and posters, as done previously.

It was resolved that invitations be issued to His Excellency the Governor, the Members of the Ministry, and the other special guests invited last year, and that His Excellency be requested to open the show on Thursday, and lunch with the Council on the grounds at 1 p.m.

The secretary was instructed to write to the proprietors of the metropolitan papers, asking them the number of tickets they would require for the show, in order that satisfactory arrangements might be made for issuing same.

Also to make arrangements for carrying out the milking test similar to those of last year.

Also to write for police protection, and to request Mr. Rees Davies to act as overseer of the show grounds.

The secretary submitted a list of donations showing the amount collected to be £600 short of the sum contributed last year.

The clauses were passed *seriatim*, excepting that relating to the charge for space for machinery exhibits, which it was resolved should remain the same as in previous years.

Mr. Peppin moved that there be a dinner held in Melbourne, in connection with the Society, on some night during the week of the Show. A long discussion ensued, in which it was urged that great good would result from the interchange of opinions at such a dinner as proposed; but eventually it was resolved to allow the matter to stand over for this year.

The Works Committee reported that they recommended that the matter of erecting a permanent booth or rotunda, on the site hitherto occupied by No. 1 booth, be referred back to the Council.

That the Council's luncheon-hall be placed behind the restaurant near the front gate, and against the old building, and that tenders be called for all the works resolved on.

The secretary was instructed to have the closets and urinals improved and put in order, as required by the Health Department.

Mr. McGregor moved the adoption of the report; seconded by Mr. W. Learmonth and carried.

WATER SUPPLY.

The Committee appointed to endeavour to obtain an increased supply of water at the show grounds report that they waited on the Hon. the Chief Secretary on the 6th inst., at the instance of Mr. W. Davidson. Mr. Deakin said that the matter was outside his department, but he would recommend the Society to request the Hon. the Minister of Public Works to carry out the work, and, at the same time, guarantee his department 5 per cent. on the outlay, when he would be pleased to support the application in his capacity as a member of Parliament.

In accordance with this suggestion, a letter had been written to the Minister of Public Works, and Messrs. Deakin and Staughton had been asked to support the request.

Mr. McGregor moved the adoption of the report; seconded by Mr. Garton and carried.

Mr. Thomson, by the consent of the meeting, then brought forward the motion of which he had given notice, relative to changing the day and hour of the Council's meetings. It was seconded by Mr. Peppin, and after some discussion was put and lost.

CORRESPONDENCE.

From John Blyth, W. Glover and Robert Clarke, apologising for non-attendance. Received.

From Bank of Victoria, allowing the Society to increase its overdraft on the understanding that the same be reduced by £1500 per annum. Agreed to.

From Secretary Colonial and Indian Exhibition, presenting on behalf of Mr. Bosisto, the President of the Victorian Commission, a valuable donation in the form of a handsome case, containing a large number of samples of agricultural products, &c., grown by Messrs. Sutton and Son, and, at the same time, thanking the President of the Society for his valuable assistance in connection with the Exhibition Commission. Mr. McGregor moved that the letter be received and acknowledged, and that the thanks of the Council be conveyed to the President of the Commission for his handsome donation, which should be exhibited in the Society's main hall, on the Show Grounds. Seconded by Mr. Bunce, and carried.

From T. L. Peate, Sydney, asking the Council to take action to induce the steamship companies to offer some concession to exhibitors bringing stock or other exhibits to the show, which would be to the mutual advantage of the companies and exhibitors.

Mr. Peck moved that action be taken, and that the President, and Messrs. Brunton, Peppin, Lynott, and the mover be appointed to see to it. Seconded by Mr. McGregor, and carried.

From A. Rowan, Kyneton, stating that in his opinion strychnine in horses was an affection of the spinal cord, caused both constitutionally and by the food they ate. Received.

A number of other letters of minor public interest were received and dealt with.

The question of stock sales was then discussed, when the President stated that the motion passed in relation to animals being sold which had not been exhibited was *ultra vires*.

Mr. Peck moved that the Government be requested to allow stock to be sold which had not been exhibited. Seconded by Mr. Peppin, put, and lost.

The Secretary was instructed to countermand the regulation admitting animals for sale which had not been exhibited.

Mr. Lynott moved that sales of stock shall commence on Monday, 29th August, at 11 a.m., to be continued each day at same hour, and be carried out in the following order, viz., first Shorthorns, Herefords, Devons, Polled Angus, Ayrshires, Jerseys, Brittanies, Holsteins, Pig, Sheep, and Horses. The order of sale by the different agents to be determined by ballot, which is to take place on Tuesday, August 16th, at 11 a.m., at the Society's rooms, Kirk's Bazaar, under the supervision of the Secretary of the Society. Seconded by Mr. Peck, and carried.

TENDERS.

Tenders were then opened for picketing the outer fence of the trotting track, erecting new sheep pens, extending the pig-shed, and erecting new pens with asphalt floors, and putting up a new Council's luncheon-room; and the tender of Phillips and Townshend, for £895 18s. 6d., was accepted. It was resolved that Mr. Rees Davies be employed as Clerk of Works.

Tenders in connection with the Show were then accepted, as follows:—Privilege of Supplying Refreshments and Catering: C. D. Straker, £400; Fruit: Lister, £18; Forage: Whitelaw, £7 10s.

NOTICE OF MOTION.

Mr. Walter J. Clark gave notice of motion as follows, viz.:—"That this Society should invite by advertisement the draught-horse breeders of this Colony to meet at the Society's Room on some evening during the Show week to consider the question of forming a breeders' association, for the purpose of bringing out a stud-book."

The meeting then closed.

Correspondence.

The National Society's Prize-List.

To the Editor of the Journal of the National Agricultural Society of Victoria.

SIR,—The prize-list recently issued for your forthcoming show was awaited by your members and a large portion of the public generally with some curiosity, and, I think, by some with a certain amount of impatience. Two months seems very short notice to give intending exhibitors to prepare exhibits for such a large and representative show as yours has grown to. In many cases, until the prize-list is seen, owners do not think of exhibiting, and then, on reckoning up the time they have for preparing their exhibits, they find it is too short, and thus many would-be exhibitors are lost. It is all very well for the old exhibitors, who know the routine of the business, but for new ones—and it is to be hoped each year will bring forth many such—three months should be given. Indeed, to give the matter the publicity it deserves, and so reach the people whose interests your society wishes to foster, a prize-list might be enclosed in an edition of either the *Australasian* or the *Leader*, or both, as soon as such prize-list is published. As these papers do an immense amount towards developing the country and

result of a poison, through the horse eating the bastard dandelion or flatweed. It sometimes attacks the front legs as well as the hind ones, and the animal thus affected presents symptoms very much like those of tetanus or lock-jaw; but I have never known a horse with it all round to recover.

When the horse has been feeding on the weed for three or four days, the tongue and roof of the mouth present a very dark appearance; the dung becomes dark also, and throws off an offensive smell; it then becomes hard and dry, passing in an undigested state without the mucous or scum which surrounds healthy dung.

I have opened several, and found them all the same. The mucous membrane or lower part of the intestines was entirely worn away, and a quantity of earth lying at the bottom of the intestines.

The reason why horses are attacked with this disease about Christmas time is, that in December, January, and February, the three driest months of the year, this weed grows luxuriantly when all other vegetation is dried up; consequently the animals eat it more than at any other time of the year; and although it is so injurious to horses, yet cattle and sheep will thrive on it.

I have had the weed with its flower put under the microscope, and carefully examined by an expert, Mr. T. S. Ralph, M.R.C.S.E., and there could not be found the slightest trace of any insect life or worms. This goes to prove that stringhalt is not a parasitic disease, and, further, if a horse be placed in a paddock where bastard dandelion is prevalent, he begins to show signs of stringhalt in four or five days. Now, if it were a parasitic disease, the parasites could not develop in such a short space of time.

Once, after having held a post-mortem on a horse that died with stringhalt, and dissected it thoroughly, I called on Mr. Miscamble, senr., M.R.C.V.S., to get a horse shod, where I saw his men blistering a horse's spine for stringhalt. I then saw Mr. Miscamble, who was ill at the time, and told him that his men were treating the horse wrongly, and that if he came out to my place I would show him the exact cause of the disease.

He came out in the afternoon, and after carefully examining the dissected parts with a magnifying-glass, said it was a new discovery, which upset all former theories about stringhalt, and that when he was well enough, he would write a treatise himself; but I regret to say Mr. Miscamble died shortly afterwards.

Since then I have bought a great many stringhalt horses, physicked them, and sold them at a nominal price in the first instance, stipulating, that if the horses recovered, I should receive their value, which I did in every case.

E. W. EDWARDS.

Glenferrie, Hawthorn.

The Causes and Character of so-called Australian Stringhalt.

MR. PRESIDENT AND GENTLEMEN,

The fact of a special meeting of your Society being held to-day for the purpose of discussing this important subject is sufficient proof that none of the causes to which this peculiar disease has been ascribed have been accepted as entirely satisfactory.

A careful examination of the supposed causes will show that a great many discrepancies and inconsistencies will have to be cleared up before scientific men will accept any of them as final.

In the present paper I propose to submit each theory to the impartial light of reason, with the view of seeing how far they coincide with facts.

By far the most important theory which has yet been promulgated is that the disease is due to the irritation of intestinal parasites. Mr. Stanley, F.R.C.V.S., of Sydney, was the first to advance this explanation, and it has

since been confirmed in a most remarkable way by Mr. W. Allen.

The periodical return of stringhalt at a certain season of the year, namely, during the months of January, February, and March, gives some color to the parasite theory; but it must be remembered that these three months are the hottest and driest of the year, and are consequently the least favourable to the reproduction of these creatures. It is also maintained by the largest majority of horse-owners who have had experience of the disease—and this is also borne out by my own observations—that the disease is more prevalent during seasons of drought.

If stringhalt is due to the irritation of intestinal parasites, how is it that it is not sometimes brought on by the irritation caused by accumulations of sand and other foreign substances in the intestines, which must, in many instances, be quite as great, if not greater, than that caused by worms?

Assuming the disease to be due to irritation and reflex nervous action, it would be reasonable to suppose that the thoroughbred, which has the most highly-developed nervous system, would be the most susceptible. Is this so? I venture to say that if you turn a mixed mob of horses into what Mr. Stanley would term an infected paddock, the draught horses and half-breeds would be the first to become affected.

Horses under three years old seldom become affected with stringhalt, while they are the first to succumb to worms. Horses frequently die from the effects of worms without having shown a symptom of stringhalt. A short time ago I made a post-mortem examination of a draught horse, at Brunswick, which had died from rupture of an aneurism of the aorta, caused by the strongulus armatus, and the large intestines were full of these worms. The horse had been currying heavy loads of road metal the day before it died, and had shown no signs of ill-health.

In the April number of the *Veterinary Journal* Mr. W. L. Williams, of Bloomington, Illinois, describes nine cases in which these wandering parasites caused death in horses, but there were no symptoms of stringhalt exhibited in any of them. In his concluding remarks he states that out of this number there was only one aged horse. Six cases occurred in animals under two years old, and one a foal only two months old. With regard to the symptoms, he states that we note usually a dull, extremely agonising pain, without that violence usually observed in colic, and there is a want of those characteristic periods of relief.

If due to worms, how can we account for such a small per centage of the horses in a given paddock usually becoming affected with the disease?

Horses are frequently brought in from the paddock, apparently quite well, and after being well fed and cared for for a day or two stringhalt suddenly develops. The disease is not confined to low-lying, damp situations, which are best calculated for the reproduction of worms. Horses recover when left in the same paddock where they acquired the disease, notwithstanding their liability to re-infection; and it is only seldom that the horse ever has a second attack.

Horses, when turned out of the stable even in the driest and hottest season of the year, and on the soundest country, will often acquire the disease in from a week to a fortnight, and the symptoms remain about the same for weeks and months as they were the first day the horse was noticed to be ailing. If this is due to becoming infected with intestinal worms, which increase and multiply with such enormous rapidity, how is it that the symptoms do not show some relative proportion to such increase?

Mr. Stanley, when speaking about this wonderful power of reproduction and the great number and variety of worms sometimes found in one animal, mentions the case

of a two-year old colt, recorded by Krause, which contained the following list—500 ascarides, 190 oxyurides, 214 stronguli armati, several millions of stronguli tetra-canthi, 69 tape worms, 287 filaria, and 6 cysticerci. Does it not seem somewhat singular that this unfortunate animal did not have stringhalt?

For months past—in fact, ever since Mr. Stanley's theory was first promulgated—I have made a large number of post-mortem examinations, both of horses that had been affected with stringhalt, and others that have been slaughtered for the *carnicorum* at the Zoological Gardens, with the view of ascertaining the relative proportion of worms in each. The result of these investigations has been to convince me that, taking horse for horse, worms were decidedly more numerous in horses that had never shown a sign of stringhalt.

With regard to the kind of worms discovered, I can safely say that I have found no worms or intestinal parasites that are not common in other countries, and which I have not found equally abundant in horses in England, where this form of disease is unknown. I have here specimens of the parasites I have discovered, and it will be readily seen on reference to any recent English work that they have their representatives elsewhere.

I should, however, state that while the species of worms found in horses affected with stringhalt, and others that had never had the disease, were identical, in every other instance the tape worms produced (the *taeoa manmillari*) were found in those horses that had stringhalt at the time they were destroyed; but, as these worms are equally common in other countries, no importance can be attached to this circumstance.

With regard to Mr. Allen's discovery, I may state in passing that I have not seen anything like the parasites he describes in any of the post-mortem examinations I have made; nor any trace of their ever having been present in any of the tissues, although carefully looked for with microscopic aid. If they occur in such numbers, and are of the character described, I fail to see how an animal could possibly recover from the effects their presence in such situations must inevitably produce, before they could be ultimately removed from the animal's system. As it is impossible from their size that they could bore their way through the blood vessels and enter the circulation without causing fatal haemorrhage, it is difficult to account for the possibility of their return to the intestinal canal from such situations as the pasterns. In Mr. Allen's paper, or at least in the report, it is stated that Mr. Allen made post-mortem examinations for the purpose of ascertaining how they got there. Perhaps he will be good enough to enlighten us.

It will not detract from the credit of Mr. Allen's discovery if I state I cannot personally give credence to it until I have had ocular demonstration.

Mr. Allen is in error about stringhalt not occurring in animals pastured near the coast. One of the worst cases I ever saw was a four-year old colt, bred and reared on the sand hummocks on the coast between Bridgewater and the Glenelg. This horse was so bad that the owner gave me permission to destroy him. The post-mortem revealed about half-a-dozen intestinal parasites.

Mr. Allen also states that horses affected with stringhalt pass worms from day to day. I have had a black mare under observation in the hospital for the last three months, and, although the droppings have been examined carefully every day, not a single worm of any description has ever been noticed to come from her.

This mare had only been ailing a fortnight when she was admitted to the hospital, and the first thing I did was to give a strong course of worm medicine, which did not have

Australian Stringhalt.

A special meeting of the West Bourke Agricultural Society was held at Lancefield Junction on the 2nd inst. (Dr. Plummer in the chair), when representatives from kindred Societies, as well as several veterinary surgeons and other gentlemen, were present, by invitation, to discuss a paper read by Mr. W. Allen, M.R.C.V.S., before the Society on the 4th June.

Mr. W. T. Moffat opened the discussion by reading a paper, in which he assumed that the worm theory advanced by Mr. Allen as the cause of the disease was correct, and stated the results of his examination of the parasites under the microscope.

Mr. W. T. Kendall, M.R.C.V.S., followed with an exhaustive paper, which we publish elsewhere.

The Secretary of the Society then read a letter from Mr. E. Stanley, F.R.C.V.S., Sydney, regretting his inability to attend the meeting, and adhering to the theory in his published report that the cause of the disease was intestinal worms.

Mr. Edwards, junr., followed with a paper by his father, Mr. E. W. Edwards, of Hawthorn, which we also publish.

Mr. Stirling then said he attended to represent the Stock Department, in the absence of Mr. Curr, the Chief Inspector. He stated that if worms caused the disease, what surprised him was, that affected animals showed so little constitutional disturbance. If, as was said, stringhalted horses were so full of worms as some theorists stated, he would expect them to show great constitutional disturbance. Yet animals in good condition, and otherwise healthy, were often seen with the disease. Then, with regard to the flatweed theory, the worst case of stringhalt he had seen was in a paddock where there was no such weed. He thought the Society had done good work in recognising the veterinary profession as they had in this investigation, as it was only with the assistance of professional men that stockowners could hope to satisfactorily cope with diseases in stock.

Mr. J. Sharpe, M.R.C.V.S., thought Mr. Allen must have borrowed his ideas from Mr. Stanley's report. He believed that if these gentlemen—who were not long from the old country—had more experience of the disease they wrote upon, they would not so hastily advance a theory which he considered simply ridiculous. Worms and parasites abounded in countries where stringhalt was unknown.

Mr. Graham Mitchell, F.R.C.V.S., representing the National Agricultural Society of Victoria, said, as he was an old resident of the colony, it would only be natural for the meeting to expect a considerable amount of information from him. He had made stringhalt a subject of the closest study, and it was as well for him to say at once that he believed it was a dietetic disease, arising from the horses eating bastard dandelion—flatweed—which abounded in most Victorian pastures. The first case of the disease that had come under his notice was at Dandenong, ten or twelve years ago, and since that time he had never lost an opportunity of improving his knowledge on the subject. He could not entertain the parasite theory for a moment, although he was prepared to admit that nearly every known disease was now attributed to either parasites or germs. Parasites were as numerous as any other animals in the world. Many of them were the cause of disease, while others arose from disease and did not cause it. He was prepared to say that unless the parasite described by Mr. Allen was a new kind of parasite unknown to veterinarians, stringhalt was not a parasitic disease. In conjunction with Mr. Kendall, he had recently made a *post-mortem* examination of two horses that had suffered from stringhalt. One of them had been

stabled and the other grass fed, and in the latter large quantities of intestinal worms were found. The muscles of the thigh of both horses were white and flabby, while their livers, although not identical in size, presented a dark leathery appearance, which had led him to the conclusion that the liver had been the primary seat of the disease in both cases. He would point out that a horse's digestive system was very powerful; that its stomach was small and its liver large, with no gall-bladder—these conditions being essential to its taking in food at any time, and immediately afterwards being prepared to run away. The state of the liver in the two horses he had examined must, therefore, have been produced by some substance taken either in food or water. He was now prepared to say that taraxacum or bastard dandelion extract would bring about the effects he had described. It was a strong laxative and diuretic, and taken in excess would inevitably cause a serious derangement of the liver. He had made an extract of the weed some years ago, and had proved his opinion by experiment. Baron Von Mueller did not think unwholesomeness had ever been attributed to dandelion, but thought it was possible that flatweed, which was not the real dandelion, might cause injurious effects to horses eating it, particularly as it formed a large proportion of their food in the hot, dry seasons of the year. He, therefore, took the Baron's opinion to confirm his own. The flatweed theory was supported by the experience of practical men in all parts of the colony, and Mr. McIntosh, of Gippsland, who had had as many as 100 horses affected with the disease at one time, was a firm believer in it. Stable-feeding was recognised as almost a certain cure, and the shipping of horses to India had often been known to result in their recovery. Mr. Mitchell concluded by relating two instances in which he had satisfied himself that the bastard dandelion theory was the most tangible that had yet been promulgated. One was the case of three horses belonging to Mr. M. H. Davies, which had recovered from stringhalt after having been removed from a paddock in which he (Mr. Mitchell) had found large quantities of flatweed to be growing. The other case was that of two stable-fed horses in the training stables at Flemington. Upon overhauling their oats he had found it to be full of the seeds and heads of bastard dandelion, and a change of food and some opening medicine had brought about the animals' speedy recovery.

Mr. T. Patterson, also representing the National Society, said that while he gave Mr. Allen credit for his effort to discover the cause of a mysterious disease, he could not believe in his theory that worms were its cause. His (the speaker's) idea was that the disease arose through want of necessary elements in the food, and that there was some connection between the cause of stringhalt and that of the disease known as "cripples" in cattle, both of which occurred towards the end of summer, when the pastures were dried up and deficient in nutriment. In proof of this, he stated that if stringhalted horses were supplied with wholesome succulent food, even in the paddocks in which they contracted the disease, they recovered, as also did "crippled" cattle when changed to good, sound country. He thought that Mr. Moffat had made a great mistake in his opening paper in assuming that Mr. Allen's ideas were correct, and attempting to narrow the discussion to the limits of the theory advanced by him.

Mr. Ross, representing the Kyneton Society, said that although there was plenty of flatweed in his paddocks, none of his blood-horses had been affected by stringhalt.

Mr. J. T. Watson, also representing the Kyneton Society, said that from experience he knew that stringhalt generally came on in January and February, when the grass was dried up. He attributed the disease to the want of suitable or nutritious food.

He had tried change of pasture with success, and had been in the habit of sending affected horses to his farm at Redesdale to recover.

Mr. Lade, representing the Killmore Society, said he had seen stringhalt under different conditions of pasture. He thought the West Bourke Society had done well in taking up this matter, as it and its kindred societies should extend their operations beyond the mere holding of shows if they wished to accomplish the greatest amount of good. With regard to the worm theory of stringhalt, he would merely point out that in the early days horses frequently died from worms, yet stringhalt was then unknown.

Mr. Merry (Gippsland Society) believed in the flatweed theory, as he had never seen stringhalt where this plant did not grow. He corroborated the statements in Mr. Edwards's paper. A remarkable fact in connection with stringhalt was that ponies were exempt from it, though running with horses affected with the disease.

Mr. Robert Clarke said, judging from a plate of a stringhalted horse in an English work, the disease here was the same as that in England. Mr. Allen had said salt was a cure for stringhalt, and that the disease was not found near the coast, but this was quite a mistake. He held strong opinions regarding salt, which, although wholesome for stock in small quantities, he believed to be actually injurious if given in large doses, in proof of which he stated that he had known sheep contract lung worm when fed largely on salt. He rather inclined to the flatweed theory, and he had noticed that horses never took the disease in paddocks in which sheep were running. If hard riding and turning horses out when hot would give them stringhalt, many of his would have become diseased, but none ever had, so that did not cause stringhalt, as some people seemed to think it might.

Mr. John Hurst held that stringhalt was unknown till flatweed grew in our pastures. He noticed that wherever sheep were grazed horses did not take stringhalt, as sheep being very fond of the weed ate it down, so that the horses were not injuriously affected.

Mr. Hugh Campbell believed in the flatweed theory, as he had no stringhalt in his paddocks, which were in good heart, and were sown down with English grasses, while in his neighbour's paddocks, which were exhausted and covered with flatweed, the disease was very prevalent. He said he agreed in the main with the ideas of Mr. Mitchell and Mr. Patterson.

Mr. David Gibson thought that horses were always most liable to stringhalt where flatweed abounded. He was satisfied that if a sound horse were turned into a paddock where flatweed was plentiful, it would in two months show symptoms of stringhalt. A weakness in the worm theory was its failure to account for parasites getting on to good sound pastures, which had never been grazed by infected horses, on which, however, horses previously sound contracted the disease.

Mr. Allen, in replying, said that he still held to his idea of the disease being caused by worms or parasites in the nerves and muscles. He stated that he had not yet even seen Mr. Stanley's report, from which Mr. Sharpe had accused him of borrowing his idea. Flatweed, he said, was plentiful in places where there was no stringhalt. He was writing another paper which would contain some interesting facts in support of his theory.

The meeting closed with votes of thanks to those who had attended and taken part in the discussion.

SINCE there have been so many different theories of Stringhalt placed before the public, I will take the advantage of your kindness in bearing the following, which is the result of many years experience and careful investigation:—

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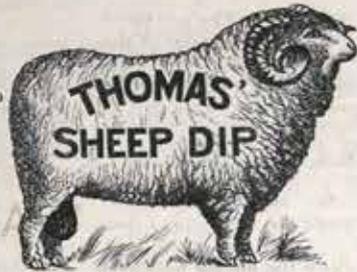
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the slightest apparent effect, either in regard to the expulsion of worms or removal of any of the symptoms of stringhalt. The mare was so bad that she could not get up for weeks without assistance, nor walk out of her box to the water-trough.

THE DANDELION THEORY.

I still hold the same views in regard to this that I held when my first report was written, and will quote the arguments I then used against it:—

"The plant to which the disease has been so frequently attributed is not, however, a true dandelion, but the *hypochaeris radicata*, commonly called flatweed or cat's ear.

"This plant is abundant in scores of paddocks where stringhalt is unknown.

"The disease is frequently acquired where no flatweed exists.

"Horses sometimes acquire the disease in the stable, or when partially stable-fed, when they have no opportunity of getting the weed.

"Horses affected with the disease recover when left in the same paddock where the disease was acquired, and also when removed to paddocks where the plant is more abundant.

"Horses may have been pastured in the same place for months or years, without any sign of the disease, and then, all at once, it makes its appearance.

(To be continued.)

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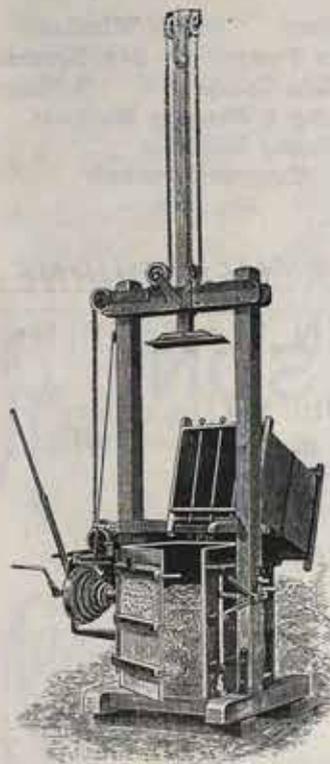
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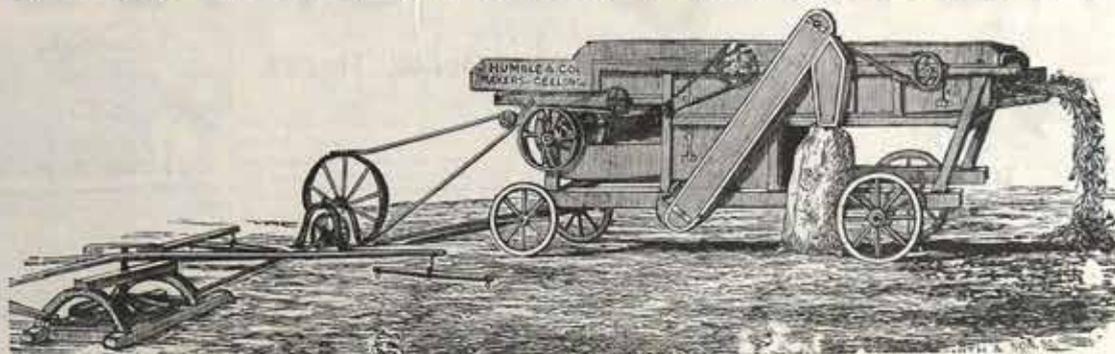
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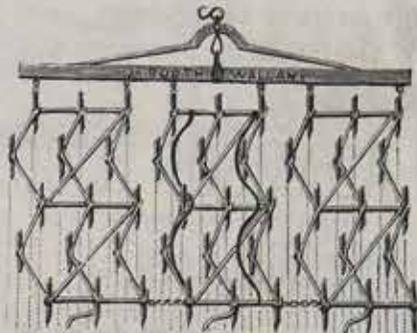
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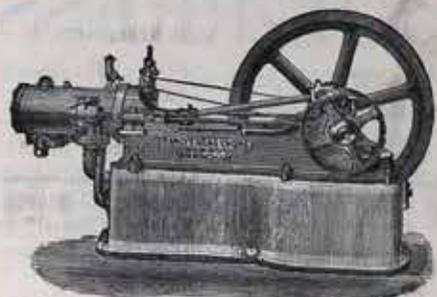
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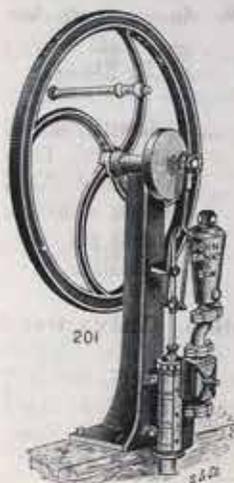
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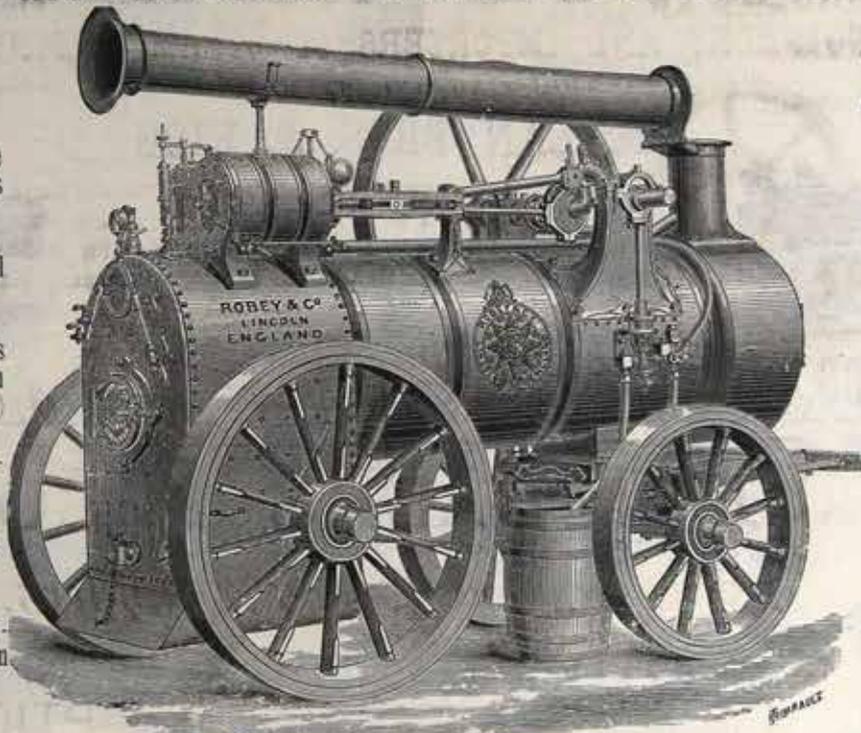
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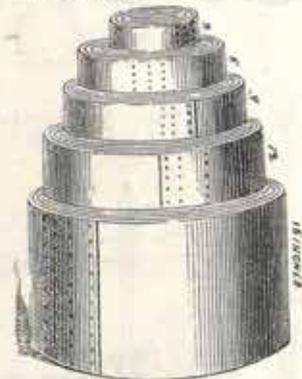
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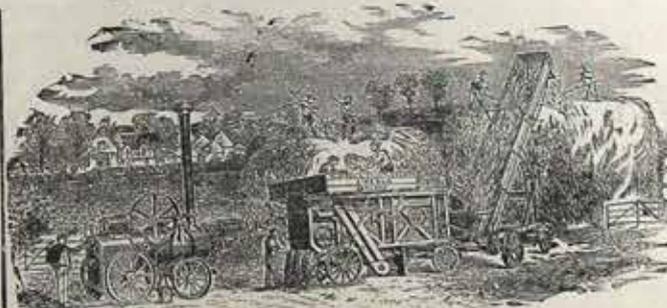
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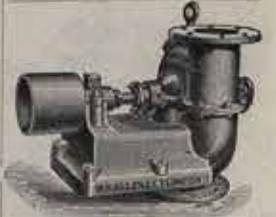


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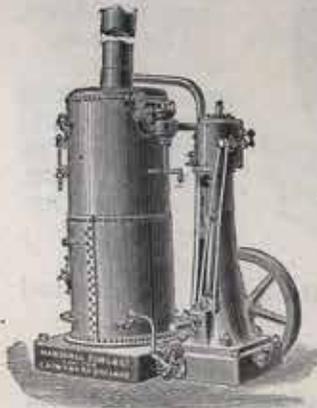
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