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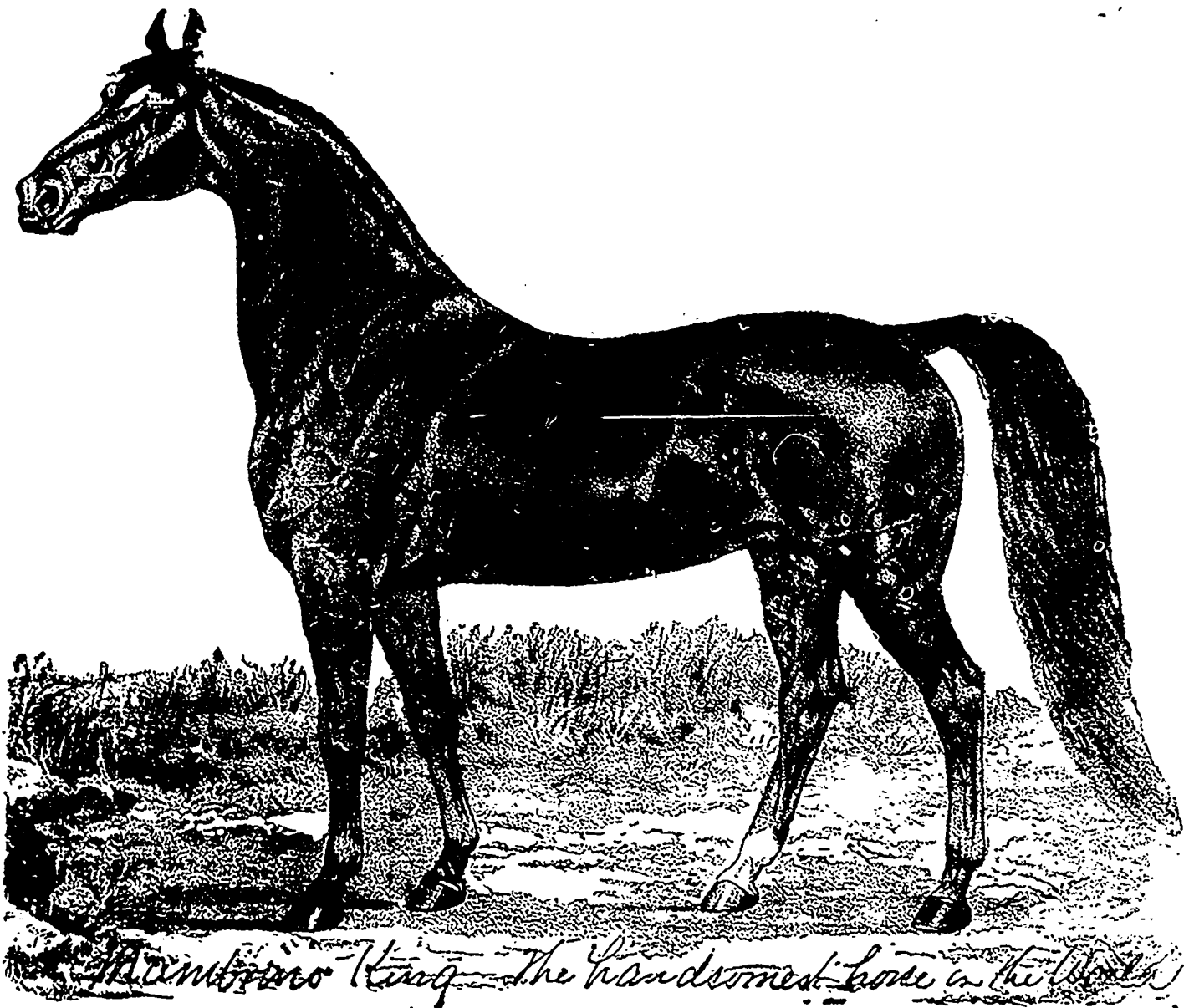
CANADIAN BREEDER

and
AGRICULTURAL REVIEW.

Vol. II.

TORONTO, JULY 17, 1885.

No. 29.



"MAMBRINO KING," the property of C. J. Hamlin, Village Farm, Buffalo, N.Y.

OUR ILLUSTRATION.

MAMBRINO KING.

Mambrino King (sire of Amy King, 2.28½).
—Dark or burnt chestnut stallion. Foaled
1872. Bred by Dr. L. Herr, Lexington, Ky.
Sired by Mambrinc Patchen, brother of Lady
Thorne, 2.18½—1st dam by Alexander's Edwin
Forrest—2nd dam by Birmingham—3rd dam

by Bertrand, by Stockholder, by Sir Archy—
4th dam by Sumpter, by Sir Archy, by imp.
Diomed—5th dam by imp. Buzzard.

Mambrino King stands 15,3 hands, and he is
said to be what the French Commissioners pro-
nounced him: "The handsomest horse in the
world." He combines strength, intelligence,
courage, faultless action and good breeding
with symmetry and style. His second dam was

the dam of Fisk's Mambrino Chief, a horse
that sold for \$12,000. His legs are stoutly
corded and free from blemish, and his feet are
entirely sound. He has no imperfections to
transmit, and, judging from his stud fruits, he
has the power to stamp out defects in the dam.

He has never been put in trotting condition,
but has often been driven by Dr. Herr and his
colored groom, quarters in 34 and 35 seconds,

and 35 and a fraction, in the presence of David Bonner and hundreds of other. In the fall of 1881, he showed in an exhibition trot at the Lexington Fair, when he was speeded a half-mile in 1.14; jogged to the half-mile pole, and repeated in just exactly the same time, without a break or the least urging, and this after the regular season in the stud. He wears light shoes and no toe-weights. We take the following from a description of the horse written by the well-known S. T. H., of Cincinnati: "His rich, satin-like chestnut coat glistening in the sunlight, more handsome in his exquisite proportions, and lofty in his splendid carriage than the proudest Nedjed Arabian in the desert. Indeed, as he stood before us, his eyes flashing and his gazelle ears pointing forward, and his arching neck revealing the delicate network of swelling veins, and his symmetrical barrel revealing every contour of equine beauty, and his full, flowing tail, gracefully floating like a gossamer banner, we thought that if he could be instantly transfixed into marble he would remain forever the sculptor's model of an ideal horse."

Baron Favorot de Kerbeck, French Colonel of Dragoons, who was deputed by his government to make an extensive tour of inspection of the horses of America, says in his official report:—

"Mambrino King is the most splendid specimen we have had an opportunity of admiring. Imagine an Alfred de Dreux, a burnt chestnut, whole colored, standing 15.3 hands, with an expressive head; large, intelligent and spirited eyes; well opened lower jaws, well set ears; the neck and shoulders splendidly shaped, long and gracefully rounded off; the shoulders strong and thrown back well; the withers well in place and top muscular, the ribs round and loin superb; the crupper long and broad; limbs exceedingly fine; the joints powerful; the tail carried majestically, and all the movements high and spirited—imagine all this, and you will have an idea of this stallion."

THE CANADIAN BREEDER AND AGRICULTURAL REVIEW.

Weekly Paper published in the Stock and Farming interests of Canada.

SUBSCRIPTION, \$2.00 per Annum

ADVERTISING RATES.

Per line, each insertion, 20 cents.

(Nonpareil measurement, 12 lines to one inch)

Breeders' cards, five line space, \$25.00 per annum; each additional line \$5.00 per annum.

Condensed advertisements under classified headings, one cent per word, each insertion, for which cash must accompany order, as accounts will not be opened for them.

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All communications to be addressed to

CANADIAN BREEDER,

COR. CRURCH AND FRONT STS.
TORONTO.

S. BEATTY, MANAGER.

Toronto, Friday, July 17th, 1885.

Advertisements of an objectionable or questionable character will not be received for insertion in this paper.

THIS PAPER may be found on file at GEO. P. HOWELL & Co.'s Newspaper Advertising Bureau (110 Spruce Street) where advertising contracts may be made for it in **NEW YORK.**

N. W. AYER & SON, Times building, Philadelphia, are agents for this paper. Files may be seen and contracts made at their office.

THE CANADIAN BREEDER is represented in Liverpool by Mr. J. F. Reid, Chapel Walks, where contracts for advertising may be made and subscriptions sent.

THE RANGE CATTLE BUGBEAR.

It is not uncommon to hear Ontario farmers expressing the belief that in a few years the range cattle from the great ranches of the North-West will completely destroy the market of the local cattle-raiser, inasmuch as these animals that run out and fatten winter and summer without consuming a pound of feed can be delivered in our markets at rates that will drive local cattle-breeders out of the market. So far as the breeder of scrub cattle is concerned this is probably true, while the man who tries to fatten his bullocks at the straw stack on the north side of his barn will doubtless find that the market does not favor him; but the breeder who breeds to none but the best bulls within his reach has nothing to fear from the range cattle. On the other hand he will find a good strong market for every pure Galloway, Polled Angus, Hereford, Sussex, or Shorthorn bull he can breed. The demand for these will be much better than it could have been had the ranges of Alberta been allowed to remain unoccupied. Everything in the shape of an improved beef-producing bull or cow is now in demand for stock purposes, and if our local farmers only have the sense to adapt their methods to the altered condition of things, they will find that the change in the character of the Canadian cattle trade has been a benefit rather than an injury to them. But the advance of the ranching interests in Alberta and western Assiniboia will quickly sound the death-knell to the scrub cattle interests in old Canada. In fact many of our Canadian farmers are now wasting feed and care upon cattle that are vastly inferior to even the lower grades of range cattle in the North-West. In a sensible article entitled "How to Meet the Texan," the *Chicago Breeders' Gazette* discusses this very question as follows:—

"A vast majority of farmers have been practically asleep so far as the improvement of live stock is concerned, but their slumbers are about to be disturbed. * Here the Texan cattle will come in direct competition with cattle raised upon enclosed farms, receiving more or less of the products of cultivated fields, and more or less attention and labor which represents the outlay of money. It requires no prophet to predict that the farmers who are raising, on their enclosed pastures and grain produce, grades of cattle little or no better in quality than the Texan produces upon wild grass and a free range, must meet the Texan in the way of prices. If they raise the same description of cattle, differing in nothing but horns, they must sell them for the same money. That is as plain as plain can be, and the dullest will soon comprehend it. Under these circumstances we predict that there will be a more general disposition upon the part of farmers to avail themselves of their improved surroundings and circumstances, and get out of the scrub business into the raising of improved grades of stock which will not be compelled to compete in the market with the inferior longhorns of the Southwest. There is a

good deal of noise being made about raising bulls for ranchmen, although farmers take the greater number of the surplus bulls produced, but raising bulls for farmers will speedily become even a more important business than it has been in the past."

If our Ontario farmers are only true to their own interests in this matter, they will find that instead of being an injury to them, the opening up and occupying of the vast cattle ranges of the North-West will confer upon them a great and a lasting benefit.

ON BEING LAND POOR.

One of the first features of Canadian and American agriculture that will impress itself upon the intelligent English farmer who visits this country is the perfunctory manner in which we do our farm work. It is not that our farmers do not work hard enough; on the contrary, very many of them are continually overtaxing their own energies as well as those of their children, and still the work is badly done, and much that ought to be done is wholly neglected. One has not to go far to find out the reason. Very many of our farmers live and die land poor. They try to work 80 acres on a capital insufficient to enable them to work fifty acres profitably. An intelligent English tenant farmer writing on this subject says:—"No man can begin farming, with anything like a chance of success, unless he has capital to start with, for stock and crop, to the extent of about £12 for every acre he intends to lease—that is to say, a farm of 200 acres would require a capital of £2,400 to begin with." That is, for a 200-acre farm, after the land is provided, after it is fenced and subdued, and after all the necessary buildings have been erected for dwellings and for the housing of stock and crops, £2,400 additional or \$12,000 in actual money will be required to stock it, purchase implements, pay labor, etc., in order to work it to such advantage as will insure success. Sixty dollars an acre looks like a large capital upon which to run a farm profitably, but we must remember that the men who advise us in this matter are farmers who manage to grow rich and live well in the face of heavy rentals, low prices, and circumstances that would quickly drive a Canadian or American farmer out of the business. How long could an English farmer "make ends meet" if he did his ploughing on the "cut and cover" principle, wintered bands of scrub cattle and mongrel sheep on rye straw and basswood browse, kept a dozen or so razor-backed pigs as "occasional boarders," and sold two-thirds of his hay and nine-tenths of his grain off the farm? This hap-hazard system of farming would never do except in a country like ours, which offers exceptional advantages to the farmer. Necessity drives most of our farmers into this miserable hand-to-mouth system of living, but this necessity arises from the fact that the farmer is land poor. Let him sell half his farm, and thus secure capital to stock and work the remainder of the farm as it should be

stocked and worked. Inferior stock will eat just as much as that which will bring the highest price in the market, and yet year after year thousands of farmers in Canada are wasting precious time and valuable feed upon miserable brutes that will not bring reasonable returns for the food that is consumed in the attempt to fatten them, though no account be taken of what they have consumed during an unnecessarily long period of immaturity.

Had our Canadian and American farmers but the courage to look this question of land poverty squarely in the face, we should hear much less about those farms that are not paying more than three or three and a half per cent. on the money invested in them.

THE FLOCK.

Without attracting a great deal of attention or making any great noise over it, the sheep interest is doing considerable in the way of building up Ontario farming and stock-raising. Every farmer does something in the way of sheep-raising, though comparatively few make the most that can be made of this pursuit. Our average farmers are too apt to satisfied with inferior sheep and results that fall considerably short of what they ought to be. In this, as in other branches of stock-raising, the breeder should always keep in mind that as a rule scrubs eat as much as thoroughbreds without giving anything like the same results. We do not wish it understood that every farmer breeding for mutton and wool should employ only thoroughbred ewes and rams, and that these should necessarily be of the same breed, but the more rapidly the sheep-raiser gets rid of his scrub stock the better. At the outset, for the sake of economy in the initial outlay, a careful selection of ewes from common stock may be allowed, though if a reduction of first cost is not an object, undoubtedly time is saved by using pure-bred ewes as well as a pure-bred ram; the latter is essential in any event. The cross bred seem to be very popular with the butcher, and like other stock, while undesirable to breed from, they are frequently very superior as to individual merit. The Southdown and other Downs, the Lincolns, Shropshires, and Cotswolds will any of them prove useful for the object desired. Care should be taken, however, that while only the best thoroughbred rams are employed, none but the largest, most symmetrical, and vigorous of the ewes should be kept for breeding purposes.

It has been urged as an objection to sheep-raising by the farmer of limited means that the wool and mutton market fall upon the same time of year, and that for the rest of the time the income from the flock is practically *nil*. On the other hand, however, it should be remembered that the income from wool and mutton comes in at a time when it is more than ordinarily acceptable to the ordinary farmer, because its arrival is so timed as to reach him at just the time when his ordinary sources of income are nearly or wholly unproductive.

SHEEP IN CATTLE COUNTRIES.

As the cattle ranching interest is rapidly developing in the North-West it is of the greatest importance that care should be taken to guard against those mistakes that have in the past militated so seriously against the cattle interest in other range districts. One of the most dangerous accidents that can befall a great cattle range is the advent of sheep. Any practical farmer can see at a glance that where cattle are expected to make a living off the grass both in winter and in summer it is absolutely necessary that the ground must not be picked bare by sheep. Everybody knows how closely sheep can mow the grass, and how utterly impossible it would be for range cattle to exist where their woolly-coated cousins were allowed to run in large numbers.

At present and for many years to come we shall have plenty of grass and plenty of room for all the cattle, sheep, and horses that can be brought in, but at the same time it might be as well to prescribe limits beyond which sheep should not be allowed to go, as by this means plenty of grass would be preserved for the cattle and horses while the sheep interest would not suffer by being confined to certain limits. There are hundreds of square miles in the North-West that would make admirable sheep ranges which are quite outside the supposed limit of the cattle ranching country, and were these properly stocked there is little doubt that immense fortunes could be speedily made out of regions that are now regarded as comparatively useless.

Regarding the unwisdom of allowing sheep to invade a cattle ranching country the *Evanston (Wyoming) Chieftain* says:—"Cattle ranchers in this vicinity are driven almost to desperation by the encroachments of large herds of sheep. In numerous places the meadow lands which they depend upon for their supply of hay have been ruined by herds of sheep owned by non-residents of our territory. Some means must be devised to protect our settlers, else they will all have to turn Arabs, live in tents, and wander with their herds from one valley to another all over this mountain country, like the 'sheepmen,' and pay taxes nowhere."

NORMANS.

Dillon Bros., of Normal, Illinois, the largest importers of Normans and Percherons in the United States, have received their first lot this season, consisting of eighteen choice stallions, blacks and dark greys, from three to six years old. They were selected by Mr. J.C. Duncan, and are said to be the best he could procure in France.

LIVE STOCK SHIPMENTS.

During the week ending June 11th, 1885, the shipments of live stock from Canada to Great Britain amounted to 2,636 head of cattle and 3,787 sheep. Among the principal shippers of the above were Thompson & Flannigan, Crawford & Co., P. Bonner, and other Toronto shippers.

Correspondence.

SILVER SPRING JERSEYS.

To the Editor of THE CANADIAN BREEDER.

SIR,—Mendota 3rd [26326], of the Silver Springs herd, Jersey cattle, born May 10, 1875, gave during the week ending June 21st, 301 lbs. of milk, which made 15 lbs. 6 oz. of thoroughly worked salted (1 oz. to the lb.) butter of excellent quality and color. She was milked twice a day; her feed was 3 lbs. crushed oats, 9 lbs. corn meal, 2 ½ lbs. bran, 3 lbs. linseed meal, and 3 ¾ lbs. ground field peas, divided into three feeds per day; ran in the pasture and otherwise received the same treatment as the other cows in the herd. She was ten years old in May, and for nearly two years had entirely lost the use of one quarter of her udder and another had also been greatly injured; with her last calf, which was born May 3, the injured portion of her udder was *partially* restored. Mendota was sired by Omaha [482], he out of Omoo [1247], the dam of the noted Oonan. Her dam was Mendot [26324], out of imported Bonamy [10705], by Robbin's Major [8310], a pure Colonel-Countess-Flora bull.

T. L. HACKER.

Madison, Wis., July 10, 1885.

OUR ENGLISH LETTER.

From our Special Correspondent.

LIVERPOOL, June 30th, 1885.

With shorter supplies during the past eight days business has been rather better for our Dominion cattle, and values are reported higher from nearly all the receiving centres. In Stanley market yesterday there were nearly 700 cattle shown, and a clearance was very nearly made. The stock offered consisted chiefly of good handy steers very suitable for this season, butchers, as a rule, fighting shy from big weighty animals. From the sales made in this market, prices would give a strong 15c. for best bullocks. A number of very fine bulls shipped by Thompson & Co. and handled by J. Sullivan & Co. formed a conspicuous item in the Canadian department. Buyers were plentiful for this class and good returns were got, averaging close on 12c. per lb. Hitherto business for this sort has been slow enough, and I fear it will be difficult to maintain the quotation now reported.

In London the fine cool weather, and short native and Continental supplies, gave increased firmness to the beast trade, which resulted in a further advance for Canadians. About 400 excellent steers were shown and sold readily at prices from 15 to 15 ½ c. per lb. and even a trifle more for some gilt-edged steers.

Grass-fed stock are coming very slowly, and the notion is prevalent that there is a scarcity of home-fed stock. I do not incline to this opinion, and believe, now that markets have touched a remunerative price, we shall see them in strong force before long.

A decrease in United States shipments continues to be noticed—perhaps more to Liverpool and Glasgow than anywhere else. At London, for week ending 26th June, no fewer than 2,138 cattle and 249 sheep were landed,

as against 1,953 at Liverpool for same period. Frozen meat is arriving in considerable quantities at most of the distributive ports, and has, in sympathy with live stock markets, risen slightly in value.

I had an opportunity of seeing the Hindlip and Rowfant purchases of Messrs. T. Nelson & Son, as they appeared on board the "Oxenholme." Judging from the contented way in which they were munching the cut grass, I should say they looked as comfortable as if in their own stalls at home. Mr. Hope has naturally been very solicitous as to the welfare of these splendid animals, and his efforts to secure all that can make their journey as smooth as possible have been largely aided by the practical experience of Mr. Geo. Roddick, managing owner of the "Oxenholme." The Hindlip herd, from which the flower of the flock was picked by Mr. Hope, was gathered together at an immense cost, the choicest animals of the highest Bates blood from the most eminent breeders in the Kingdom being found in it. In spite of munificent offers to tempt a sale the female offspring have, through years of patient breeding, all been retained, and the beautiful young stock now at Hindlip prove the soundness of the system pursued, and the wisdom of the policy of an unwavering refusal to allow any of the best females to be picked out. It is to be hoped the Messrs. Nelson will reap a rich reward for their enterprise in securing such magnificent specimens of the Shorthorn breed as Duchess 124th and Duchess of Hindlip.

The "Oxenholme" had also on board a very fine selection of young Herefords, bought for Mr. Jas. Kay, Ont., by Mr. Vaughan. The "bonnie Whitefaces" were in nice healthy condition, and looked in every way remarkably well. The influence produced upon our Dominion herds by such judicious importations is already beginning to be appreciated. At no time has the cattle from Canada been so well represented as during this present season, their fine condition being all that a butcher could desire. We must maintain this, and to do so, we must get the best that money can buy.

SHORTHORN TRANSACTIONS.

The issue of Thornton's circular of Shorthorn transactions for the quarter ending March 31 is matter of great interest, considering the low prices made for choice strains lately. Besides the Birmingham Shorthorn show and sale (at which 154 females realized an average of £30 os. 8d., and '02 bulls of £35 12s. 6d.), there were nine other sales during the quarter. The results of those sales were as follows:—

Herd.	No. sold.	Average Price.
Mr. J. C. Toppins, Skelton, Penrith..	58	£32 3 5
Mr. W. Duthie, Methlic, Aberdeen-shire.....	33	31 8 5
Messrs. J. Hill and E. H. Moss, Congleton.....	35	21 9 0
Lord Polworth, Mertoun, St. Bos-well's, N.B. (bulls).....	20	35 18 2
Mr. T. G. Dunn, Keyingham.....	38	15 13 11
Captain Moir, Colley, Reigate.....	55	22 13 5
Captain D. H. Mytton, Welshpool... ..	49	18 4 11
Mr. J. Pressland, Harlestone, North-ampton.....	38	17 8 0
Mr. W. T. Talbot Crosbie, Ardferri-Abbey, co. Kerry (bulls).....	13	37 1 6

THE CANADIAN BREEDER AND AGRICULTURAL REVIEW circulates through the entire Dominion, and has a large and increasing circulation in the United States and Great Britain.

THE CENTRIFUGAL SEPARATOR.

The subject of Mr. James Long's paper at the Cheshire Dairy Conference was, "Is the centrifugal separator adapted to the requirements of the British dairy farmer?" He said:—

"It has been stated, and by gentlemen of some experience, that the separator is not suitable to the requirements of the farmer, because his workmen are deficient in the necessary skill which its management requires, and because in order to pay its way it is necessary to work it so many hours a day, and consequently to be a producer of a huge quantity of milk.

"It is my purpose in these remarks to show that all these conclusions are erroneous; that the separator is quite as suitable to the farmer as the factory-man or the milk dealer; that he can manipulate his milk with less trouble and expense by its means; and that, in the manufacture of butter, he will obtain a percentage of increase which will make such a difference to the receipts upon an ordinary sized dairy farm in the course of the year as will almost, if not quite, pay for the whole of the labor entailed in the process of butter-making.

"Now, let us compare the three recognized systems of obtaining butter from milk. By the ordinary method of setting milk in shallow pans it is necessary, when the weather will permit, to let the milk remain so long that, except in the coldest weather, it is spoiled in flavor and unfit for sale to the public. In any case, and however closely it may have been creamed, a proportion of fat is taken away with it, which depreciates the butter return, as compared with the separator, by at least 10 per cent. In summer this loss of fat is infinitely more, as in consequence of the high temperature the milk is often, for from two to three months, given to the pigs before the period of its second creaming has arrived. This loss the farmer does not notice so keenly as he would, for in consequence of the cows being upon the pasture, their yield is generally at its highest point. The loss, then, may be summed up thus—at least 1d. per gallon upon the skim-milk, and ten per cent. upon the butter yield. With regard to the value of the butter, I believe there is little or no difference, this depending more upon the manner in which the cream is ripened than the skill of the butter-maker. It has been urged that in consequence of the quantity of cream taken by the separator there is a depreciation in the quality of the skim-milk, and consequently in its value; but I would point out that the butter-milk is almost as valuable as the skim-milk when it is obtained in a sweet state, whether it be for sale, for conversion into cheese, or for feeding to stock.

"It may be argued that there is no necessity to skim thin cream by the separator. I can only answer this argument by stating that I have myself proved that a greater percentage of butter is obtained by this method of working, and that the Danes are undoubtedly right in their system of preferring, for butter-making, quantity of cream to quality. Any butter-maker doubting this fact has only to make an experiment for himself, if he is fortunate in the possession of a separator. I neither of the cold-setting systems of raising cream is observed, the arguments are not so strong as against the open-pan system, for a greater quantity of butter is obtained—by the Swart system for example; whereas the skim-milk is at almost all seasons of the year perfectly sweet and saleable. There is, however, one more argument which applies to all ordinary skimming systems. A milk-room or dairy-apartment is required, which must be fitted up either with milk vats and a cold-water system, or furnished

with a large number of milk pans, and the usual dairy appliances. These may not cost so much as the separator, but the first cost of a dairy plant in use upon a good butter-making farm would go very far indeed in the purchase of the small Danish or the Laval separator.

"With regard to the time occupied in the work, assuming that in a small dairy of 10 cows 20 gallons of milk are produced daily and I consider that a separator can be used with advantage upon a farm so small as this—one hour would be required each day in the working; or, if it were more convenient to the farmer, he could churn the whole of the four milkings at one time, and thus separate every other day after a morning's milking, having already skimmed the three previous milkings, and passing the skim-milk through the machine. As the churning in this case, just as if the ordinary system were adopted, would probably be only twice a week, the comparison of labor entailed must be between the working of the machine and the time occupied by a pony, as against the time occupied by the dairy-maid in the ordinary process of skimming and in manipulating the milk, which is well known to every one.

"In churning milk, a system still adopted in a part of the north of Ireland and in some parts of Lancashire, and which is claimed to produce more butter than the cream-setting system, there are some points to be considered. Hitherto some of the advocates of this system have urged that they obtain a large quantity of sweet butter-milk, which is equal to sweet skim-milk, and very saleable, and that they obtain a maximum quality of butter; whereas the opponents of churning milk declare that the labor in churning is very great and constant, and that the extra cost it entails is the cause of a smaller pecuniary result than is obtained by the common system. In the first place I have proved by experiment that it is almost impossible to churn whole milk with complete success; that, in other words, the milk must be soured, as it is in Ireland, to obtain a successful result. This being the case, the greatest argument in favor of the system is entirely disposed of, for the milk is spoiled for use in any form but that of consumption by animals.

"Some time ago some questions were put to me by an Irish landowner who had experimented by churning milk, and had found that he obtained a larger quantity of butter than by churning cream. I gave an opinion as to the system in general, but I also made several experiments myself, with the following results:—In one case 43 lbs. of Jersey milk were churned sweet at 60° Fahr., bringing 1 lb. 5 oz. of butter in one hour and 50 minutes. A portion of the butter-milk was set, and at the end of 24 hours it threw what looked like substantial cream. The butter itself, which came in very small grains, was most difficult to make up, and I have found this to be the case with all butter made from whole milk, also that it was almost tasteless, the slight flavor it possessed being rather like animal fat than butter. In the next case, 33 lbs. of whole milk were churned. This had been soured by the addition of a small quantity of sour butter-milk, and by standing 36 hours. The temperature was 66° Fahr., the temperature usually recommended by those who churn whole milk, and in the churn it was almost a thick curd. In 76 minutes the butter came, the temperature being well maintained. It was well washed, but difficult to make up, and only yielded 1 lb. 6 oz. of butter. It will be observed that in this case more butter was yielded from a third less milk, and this is one of the advantages of souring. In the next instance the same quantity of milk was churned in a slightly sour state, and on this occasion 11½ oz. only were obtain-

ed, a sample of the butter-milk showing, upon analysis, $1\frac{1}{2}$ per cent. of fat. In the last instance which I shall quote, 30 lbs. of milk, which had been well soured, yielded $1\frac{3}{4}$ lbs. of butter at a temperature of 66° Fahr., or 5.8 per cent. As this milk was from the same cattle as the former milks, it will be apparent on the one hand that churning whole milk will extract a very large percentage of the fat in the milk, but upon the other that the system is too variable to be satisfactory.

"I have just completed a further set of experiments, in which milk was churned against separated cream. These experiments I need not detail, but I found that an average of 4.8 per cent. butter from the separator, 4.5 per cent. from slightly sour milk, and 5 per cent. from very sour milk, although the quality of the butter from the milk was very inferior to that from the separator.

"I have, for a long time, kept a record of my churning, and I have never obtained the same result from churning cream as from churning milk, although the latter process has varied considerably. I find, however, that the butter is never so good in quality, and that the butter-milk, which is necessarily sour, is of little value. The same objections cannot in any degree be applied to the separator. I find its work is constant. The skim-milk seldom or never shows a trace of fat, and the separated milk is worth to me more than 4d. a gallon, whereas by either of the other systems it would not be worth much more than 1d., unless in cold weather, when milk from which cream had been skimmed would, of course, be sweet. There is another advantage. The separator extracts the whole of the dirt from the milk, and I learn from the manager of the Sudbury factory that in their case $5\frac{1}{2}$ lbs. of dirt are taken from every 1,000 gallons of milk.

"I cannot, perhaps, do better than refer to the work which the separators—which are of the Danish manufacture—have done at Sudbury. In the month of January, analysis showed that the large quantity of milk received averaged 2.85 per cent. of fat, but by means of the separator the actual yield of butter was four per cent. In February the milk averaged 2.9 of fat, but the yield of butter was 3.7. In March the milk averaged 2.77, but the butter yielded was 3.47. The machines at Sudbury skim 95 gallons an hour, and the manager considers that the separated milk is better than that yielded by any other machine worked in England.

"Mr. Barter of Cork, who has long worked a separator, says that it takes $2\frac{1}{2}$ gallons of milk to make 1 lb. of butter, against $3\frac{1}{2}$ gallons under the old system. This means a return of fat, in actual butter, of 3.54; but he finds that a temperature of 75 degrees yields the best results, and as a test of the value of the butter made Mr. Barter says that it receives the superfine brand in the Cork market. Mr. Carrick, who uses the Laval machine in his factory, says that takes 12 quarts to make 1 lb., thus showing 3.25 of butter fat. At a speed of 6,500 revolutions he skims 55 gallons per hour, and he finds that the skim-milk is worth 2d. a gallon for manufacture into cheese.

"With the small Danish machine, which, I believe, now costs £28, and which takes the whole of the fat from the milk at the working of 20 gallons per hour, I have made a number of interesting experiments. The speed adopted is usually about 3,000, and there is no difficulty whatever in skimming as little as five gallons of milk. I have repeatedly run skim-milk through the machine and obtained butter which would otherwise have been lost; this milk having generally been skimmed two or three times. I may quote two or three instances. Thirty-

seven pounds of new milk and 65 lbs. of skim-milk yielded 28 lbs. of cream, which when churned produced 4 lbs. $5\frac{1}{2}$ ozs. of butter. In a second case 35 lbs. of milk which had been skimmed at 36 hours, and 20 lbs. which had been skimmed at 48 hours, yielded cream which produced $12\frac{3}{4}$ ozs. of butter, which, small as it was, was entirely profit. Thus, in an ordinarily good dairy of 20 cows giving, say, eight quarts a day, this would mean 40 lbs. of butter per week extra, or 2 lbs. per cow. A fact like this, combined with another fact—that the skim-milk is absolutely new and its saleable value much enhanced at all seasons of the year—should be a sufficient argument that the centrifugal separator is admirably adapted to the requirements of the British dairy farmer."

LARGE V. SMALL COWS FOR DAIRYING.

"Cambuslang" in North British Agriculturist.

On few matters relating to dairy practice is there so much difference of opinion among breeders as the size dairy cows should be, so as to make them most profitable. Much as many of them differ, they, as a rule, in purchasing a new animal, always prefer the large one to the small, other things being equal. Much of the debatable ground among breeders is taken up by persons insisting that small or medium-sized animals are the best, simply because these particular persons happen to have small or medium-sized cows; and to assist in making anything else more fashionable than the class they possess would, to a greater or less extent, be to lower the value of the ones they presently hold. There is no doubt but that a great amount of the differences of opinion on other matters which crop up in daily life are in great part formed by the effect the proposed alterations are likely to have on the parties interested. There is no disputing the fact that a particular small or medium-sized cow has given more milk than some other large one; or even that a particular herd of small or medium-sized cows has beaten as milkers some other one composed of larger ones. No one doubts the fact, but that does not prove that for the food consumed large cows, as a rule, are worse milkers, or less profitable milkers, than smaller animals, breed, age, and quality all along being taken into account.

At the present time public opinion is unmistakably settling the matter in her own way, and by the old law of supply and demand, by setting a higher money value on full-sized animals than on small ones. Ten and twenty years ago small teats like thimbles were all the rage among Ayrshire showing men, but public opinion decreed that such small teats were a nuisance and loss, and must be abolished, and now the fashionable Ayrshire teat may be considered an inch longer and half an inch thicker than it was then. The present style of teat is yet, I consider, too small; and from personal intercourse with dairymen in other parts of Britain and elsewhere, I feel confident in saying that the smallness of the teat of the Ayrshire has done more to hinder the spread of it as a dairy animal throughout the country than all its other faults put together. In our west-country fairs and auction marts the favor in which large cows and large teats are held is very noticeable at the present time; for a big cow, be she ever so coarse or ugly, if she has good-sized teats, readily sells, even during the present depression, at a good fair price, whereas small cows with small teats are wanted by no one, even supposing they have a good appearance of milk. Such cows can only be sold at what is called a sacrifice, although I question the justness of the expression; for with

the extra labor required in milking and the liability to loss through not being milked dry, it will often be found that they are dear at the small money paid for them.

Few classes of cow-keepers have the opportunities of finding where large or small cows are more profitable than towns' dairy-keepers have, where the animals are changed almost every year; yet these men, as a rule, prefer the largest class of cows. If such holds good in crowded, ill-ventilated, and overheated town byres, much more must it be true in regard to cows in exposed situations; for it stands to reason that a small cow, like everything else small, must be cooled quicker than a large one, and to keep up the normal heat of the body she must use more food, proportionately speaking, than the large one. Whatever butter, cheese, or milk is produced must come from the food after the up-keep of the body has been provided for, and in the case of small cows there must be less left for that purpose. It is well known that exposed farms or districts generally produce small animals, although not because the small animals are more naturally fitted for subsistence in such a locality, but because of the scarcity of food, and its waste by exposure, little is left for the building and up-keep of a large frame.

Unfortunately very few reliable experiments have been carried out on the subject which would give unmistakable evidence that either the one class or the other was the more profitable. A few have, however, been more or less methodically carried out at different places and at different times, which may be fairly relied on, such as the following:—At Frankenfelde, Baron Ockel tested Ayrshires and other small-sized cows against the largest size of Holland cows, four of the latter weighing as much as five of the former. He came to the conclusion that the small cows required $3\frac{1}{2}$ lb. of hay for every 100 lb. of gross live weight to produce a certain quantity of milk, while the large cows required 2 $\frac{4}{5}$ lbs. per 100 lb. of live weight to have the same effect. Thinking that the Ayrshires might be unfavorably placed, as they were incomers into the country, he selected four animals of the native cows he had been experimenting with, and put two of the largest in one stall, and two of the smallest in another. Each pair were then fed alike for sixteen days, all food being weighed when given, and any left being reweighed and deducted off. Both lots were weighed at the beginning of the trial, and at the end it was found neither had gained or lost in weight. During the experiment the large cows consumed $14\frac{1}{2}$ lbs. of grass per 100 lbs. of gross live weight; while the small ones took 16 lbs. per 100 lbs. live weight. The large cows yielded 7 $\frac{1}{2}$ quarts of milk; while the small ones gave $5\frac{1}{2}$ quarts. The large ones required 1-60th of their gross weight as food for their support; while the small ones took 1-50th. In several of the German agricultural schools, where a large number of experiments have been made on cows belonging to the locality, it was also found that the largest cows gave the best yield of milk in proportion to the food consumed. Again, at the Eldina agricultural school in Pomerania, Dr. Rhode estimated that very small cows may require as much as 9 lbs. of hay to produce a quart of milk, while, he thinks, very large ones, of the Holland breed, weighing up to 12 cwt. or 12 $\frac{1}{2}$ cwt., may produce one quart for 5 or 6 lbs. of hay. With Dr. Rhode's experiments I can scarcely agree, more especially as the report on them bears unmistakable evidence about it that there might be other factors at work, the effect of which has not been taken into account. The small cows used were generally Jerseys, Ayrshires, or Tondern cows,

and his figures make these breeds compare very unfavorably with the large Dutch cows.

It must, however, be remembered that quantity of milk, although a great factor in dealing with a dairy animal, is not everything, the crucial test being the amount of butter, cheese, or fat (I mean beef) which each produces for a given quantity of food, under equal conditions. Looked at in this light, the order of breeds was almost reversed at the last milking trials held lately in London. The subject is as yet very imperfectly understood, and deserves considerably more attention than has yet been devoted to it. The movement, however, lately taken by our show-yard directors in giving prizes for the heaviest milkers—date of calving, quality, and quantity being taken into account—is undoubtedly a step in the right direction. Should their endeavors be met with approval, and turn out a success, they might give prizes for the heaviest milkers, say, three and six months calved, undisputable evidence of date of calving being made as sure as possible before competition; as it is well known the most profitable dairy cow is not always the one which gives the most milk shortly after calving, but the one which keeps her quantity well up on to the sixth, seventh, or eighth month, and in exceptional cases even later. The subject is a pretty wide one, and has been little attended to, so that an open and untrodden field in research is yet open to those who care to tread it.

PHALLAS AND MAXEY COBB.

The *Turf, Field, and Farm* furnishes the following graphic description of the great stallion race:—

"In one of the boxes sat Mr. Case, a trifle restless, and gathered around him were members of his family, his wife and daughters wearing purple bows, evidently cut from the silk out of which the jacket of Bither was made. In a box higher up was Mr. Cohnfeld, the picture of anxiety. He was on his feet more than three-fourths of the time, and with the aid of a field glass he followed every movement of his horse. The bell tapped, the band ceased playing, and the drivers took their seats behind the famous stallions. The first score Phallas came down ahead, and the recall was sounded. As the horses jogged back the contrast between their gaits was striking. Phallas shuffled along on his toes, as if sore, while Cobb stepped out with the grace of perfect action. In the second score Phallas left his feet, and a sob bordering on the hysterical rose from the Case box. On the third score Phallas again went into the air, but it was such a nervy, snappy break, that the critics accepted it as an evidence of fine feeling instead of soreness on the part of the horse. But to the less practiced eye of the daughter of the owner of the stallion it foreboded disaster, and a half-suppressed sob again floated on the air. On the fourth score Maxey Cobb grabbed a scalping boot and left his feet, and now agitation ruled the box higher up in the stand. Mr. Cohnfeld rushed down and across the track, held a brief consultation with Murphy, and returned with more deliberation to his seat. In the fifth score Phallas was ahead, but Murphy nodded for the word, and President Edwards gave it clear and strong. Before the first turn had been reached the brown son of Dictator made a snappy lunge into the air, but while the "Ohs!" were dying away Bither settled him, and sent him to the front with a lightning-like rush, cutting in somewhat sharply to the pole, and taking that position from Cobb. Murphy seemed to be satisfied with a slow pace, because the watches showed that the first quarter was trot-

ted in 35 seconds. At the half-mile pole, which was reached in 1.08½, there was plenty of daylight between the two stallions, and at the third quarter, time 1.41, Maxey Cobb was still behind. Murphy now began to drive his horse, evidently hoping to rush his antagonist off his feet, but Phallas was equal to the increased flight, and he did not weaken. The whip fell sharply on the back and shoulders of Maxey Cobb, but Bithers shook out Phallas, and he crossed the score a winner of the heat by a length in 2.14. The last half was trotted in 1.05½, a 2.11 gait. The result, although unexpected, moved the vast throng to cheers. Bither admitted that Phallas had surprised him, and the lament of the stable was that the money had not been put on prior to the start. The groom was the only one who rejoiced. He had risked his savings at \$100 to \$90, and he felt happy. The letting on the second heat was tame, Phallas being an immense favorite. The purple in the Case box was worn more boldly now, and the only spot in the broad park where the sun did not shine was on the chair which held Mr. Cohnfeld. In the second heat the word was given on the second score, and as soon as the horses were in full motion it was plain that Murphy had changed his tactics. Instead of saving his burst for the finish, he tried to take the lead from Phallas at once, feeling confident that Maxey Cobb would fight a gamer battle if allowed to show the way. The clip to the quarter pole was a merry one, 33½ seconds, and the flight to the half was rapid and electrical. The time was 1.06. Something had to crack, and it was the heart of Maxey Cobb. Phallas began widening the gap, and he had to lengths the best of it at the quarter pole in 1.40½. Down the homestretch Bither drove the son of Dictator with one hand, looking back half mockingly, half sympathetically, at Murphy laboring with the son of Happy Medium. The time, as taken by George W. Short and Roddy Patterson, was 2.15½. In the orchard the crowd surged around the ring where Phallas was cooling out, and Carlisle and Harvey and De Mass looked sorrowfully at Crawford for having allowed such a good thing to slip through his fingers. They had come to Cleveland on purpose to back Phallas, but had waited in vain for the bounding odds off the second heat. It is true they had their money in their pockets, but they grieved because they did not have the other man's money on top of it. Maxey Cobb's hair looked harsh and dry and he was a tired horse. The third heat was tame. Bither held Phallas back and Murphy trailed after him. The time was: 35½, 1.11½, 1.46½, 2.20½. Although the sun still shone from a cloudless sky and the green grass smiled in its golden kiss, it was night, and black night at that, for Mr. Cohnfeld and his party. The stallion crown had been staked and lost, and in slower time than was predicted. Maxey Cobb possibly got off a little in being shipped from New York to Cleveland, but at his best he could not have lived the pace with Phallas in the fourth of July."

BREEDING ROADSTERS.

Dr. S. H. Adams in New England Homestead.

The great essentials of a good roadster are endurance, gameness, and speed. Without these three qualities he can never be a first-class road horse; though, of course, if you superadd to these qualities beauty, docility, and style, you materially increase the value of the animal. Experience, the best of teachers, has shown us that no horse can possess endurance, speed, and game without being well bred. Starting, therefore, on this theory, that no horse is fitted to get, and no mare is fitted to bear, a colt in-

tended for a road horse, unless he or she be well bred, let us inquire what are the qualities most to be desired on the part of each. A horse, to be a mover of the right sort, must have his mechanism as perfect as a chronometer watch. A certain style is necessary to go fast and to stay. We all know that those horses that have gone fastest, and been noted stayers, have been possessed of wonderful power across the loins. I have never seen a successful trotting horse in this country without a powerful quarter, and I have seen most of the famous ones. Of course it is necessary to perfection to have, with this powerful lever behind, a sloping shoulder, deep chest, a good rib, and good legs; but unless you have the powerful quarter, these qualities are of no avail. I would, then, endeavor to have both dam and sire provided with this great essential, and if not both, at least one of them. Then the attempt should be to get the sloping shoulder, blood-like neck and head. It is true with an upright shoulder a horse may be fast, but there is not the same ease of action which is so essential for endurance as in the sloping shoulder.

VEGETABLE CULTURE IN BERMUDA.

From the American Cultivator.

Consul Allen says that onions, potatoes, and tomatoes comprise almost the entire production of Bermuda, and give employment to the greater portion of the inhabitants, and the prosperity of the colony depends largely upon the success of the crop and the demands of the markets.

In onion growing the seed used is grown in the Canary Islands, and is imported in the months of August and September; it is sown in the months of September, October, and November, thickly in beds, the ground having been heavily manured with stable manure two or three months before sowing. The white seed is sown first, and produces the earliest crop, the shipment of which commences in March. When the plants are sufficiently large—about six to eight inches high—they are transplanted into beds about four feet wide, the plants being set about seven inches apart each way. The plants from the white seed are transplanted as soon as they are large enough, but those from the red seed are not usually transplanted until the beginning of January, and the ground requires to be only moderately manured. If transplanted too early, and the soil is too rich, the bulb is likely to split into several pieces, and is worthless. After transplanting, the soil requires to be lightened once or twice and the weeds removed before they mature. As soon as the top begins to fall, the onions are pulled and allowed to lie on the ground for two or three days, when they are cut and packed in boxes of fifty pounds each and sent to market.

All the onions are delivered at the port of shipment in boxes, ready for the market, and for the past two years the producer has been compelled by law to place his name or initials conspicuously on each package. It is estimated that a large profit on the outlay is realized when the crop is large and the market good, an acre of ground sometimes returning as much as \$550 to \$800.

For the cultivation of potatoes the seed was formerly nearly all imported from the United States, but of late years has come largely from New Brunswick, Nova Scotia, and Prince Edward Island. The ground for potatoes is usually ploughed or broken up with the spade and raked, the seed cut into pieces with one or two eyes, and planted by forcing into the ground with the finger to the depth of about

four inches, in rows about twenty inches apart, and about eight inches in the rows. From six to eight barrels of seed are used to the acre. When the plants are a little above the ground, the soil is lightened between the rows with a fork, and when about six inches high the earth from between the rows is hoed round the plants, only one hoeing being required.

For growing tomatoes the seed is imported every year, and is sown about October and transplanted in December into rows about six feet apart, and the plants are put about four feet apart in the rows. As soon as transplanted the ground round the plants is covered thickly with brush, chiefly the wild sage which grows over the hills, not only to protect from the wind, but to keep the fruit from the ground. The brush is usually raised once by running a stick under and lifting it enough to clear the soil of weeds, no other cultivation being required. Six or seven quarts of fruit from the hill is considered a fair crop. The fruit is rolled in paper and packed in boxes containing about seven quarts each. The price of land in Bermuda varies from £30 to £40 an acre, and in some cases not more than one-eighth is susceptible of cultivation. It is estimated that there is an annual export of 350,000 boxes of onions, the box containing about fifty pounds, and of potatoes 45,000 barrels.

WHAT IS TO BE DONE WITH SEWAGE?

From the English Farm and Home.

The position which we have arrived at is that, *vi et armis*, the purification of our rivers, streams, and water-courses demands, as the first step, that the sewage of our towns shall not continue to be poured into them; and the question of the disposal of this sewage, therefore, has become one of the great questions of the day. It is needless to go very far into the consideration of the disposal of sewage by means of irrigation. The restriction of the sewage within a limited area makes the system of irrigation at best but a temporary measure, which, working admirably for a few months, gradually, as it approaches the point of saturation, actually ceases to be efficient, and becomes in its turn, not only an unmitigated nuisance, but the source of deadly poison to all living things. Some system—and there are several—which, in the first place, by quick precipitation, permits a clear and practically pure effluent that can be turned into local streams, is the first step in the ladder; and that gained, it only remains to render the residue portable, and whatever its value may be as a manure itself, or as a base on which artificial manures may be manufactured, the whole difficulty will have been met and overcome.

A practical demonstration of the efficiency of a new process is about to be made at Tottenham, where permission has been granted by the local board to erect the necessary plant to treat the sewage outfall of that large and populous suburban district.

By the new system all solid matter is at once precipitated, and most of the organic matters held in solution are taken out, and the effluent water, practically pure, is allowed to flow away. The residue—and this is the turning-point in the whole sewage question—is treated by a simple and practically self-acting process for the extraction of excessive moisture, and is then available as a manure, alike valuable, portable, and absolutely inoffensive. The difficulties attending the irrigation process, the expense of conducting sewage in a liquid state for long distances, the impossibility of continuing to pollute our rivers, and the stringent pre-

cautions everywhere enforced by boards of health and other local authorities, make it imperative that some such decisive system should be adopted. To deal with the sewage of London it has been proposed by Sir Joseph Bazalgette to convey the sewage to the sea, at a cost of 20,000,000, and the value per annum of this sewage for the purpose of manure is estimated at 1,000,000. A strange and anomalous waste of money surely, to expend 20,000,000 in throwing into the sea a product worth 1,000,000 per annum!

ENGLISH ENSILAGE EXPERIMENTS.

The (English) *Agricultural Gazette* of June 2nd says:—

"The evidence given before the Ensilage Commission during the last two or three weeks is, we think, conclusive that whatever margin of spoiled stuff there may sometimes be under imperfect management, the success of this mode of dealing with the growth of our grass and forage fields is unquestionable. Whether under the existing circumstances of agricultural depression landlords are likely on any great scale to re-equip their estates by building silos, or tenants are likely to lend a hand in the absence of the owner's help, may be doubted. The particulars of the experiment at Woburn, one of the very few attempts as yet to measure accurately the nutritive character of the material as food, are well worth studying, as given in the evidence of Dr. Voelcker and his ground steward. It seems that the unfavorable result in feeding on what came out of the silo may, to some extent, be accounted for by the character of the stuff that went in. The grass cut off Woburn Park does not seem to have been of the very best quality, and the swedes and other succulent roots with which the silage was compared in this experiment proved to be the more nourishing of the two. This, we take it, was owing, as we have said, not more to the character of what came out of the silo than to the character of that which went in. We cannot suppose that ensiling fodder will much enrich it; all that can be expected of it is that the process shall preserve it."

A HINT AS TO THE BULL.

From the (Chicago) National Live Stock Journal.

"Never give him a chance to hurt you," was the good advice of an experienced breeder to a young farmer who was showing how gentle his recent acquisition, a pure-bred bull, was. The advice was sound, for there is nothing gives a man more confidence in dealing with a possibly dangerous animal than the knowledge that he is master of the situation. A display of anger by the bull, on the other hand, when ill prepared for him, results in the keeper's displaying either fear or violence, as the case may be, and in either case the effect on the bull is objectionable. Calmness and firmness are great desiderata in dealing with the bull, and are far more easy of attainment when a man feels he is safe from danger. The bull's attendant should therefore never be foolhardy or incautious. Let him make friends with the animal, for bulls, like every other animal, appreciate a kind word or friendly pat, and some say a good grooming with a stiff brush is sure to win them; but however gentle and tractable the bull is, never relax your vigilance, and always handle him with proper precautions. Baiting an animal, when secured from harm, is the favorite amusement of some boys, and even some men. Such persons should be summarily ejected from any premises where bulls or, indeed, any animals are kept.

LEGISLATION AGAINST OLEOMARGARINE.

From the American Cultivator.

The decision of the New York Court of Appeals against the constitutionality of the law to prevent the manufacture of oleomargarine has been received. It affirms principles based on the rights of citizens in all the States as secured by the United States Constitution, and it is probable that what is thus declared the highest law in New York will apply to the other States as well. The idea of the decision is in effect that no State can constitutionally prohibit the manufacture of other animal fats as a substitute for butter, because such manufacture, where no fraud is attempted in palming off these goods as butter, is as legitimate a business as that of the dairyman.

The position of the court will give a wholesome check to a widely prevalent idea that the legislature can legally do whatever public interest or public sentiment may demand. Because the manufacture of oleomargarine is permitted, it does not follow that it can be sold as butter. Such sale would be a fraud which the legislature has an undoubted right to prohibit. By a supplementary law passed in 1885, the people in New York have a right to prosecute those selling oleomargarine for other than what it is. With the proper vigilance on the part of both dairymen and consumers, who are alike interested, the sale of oleomargarine may be so restricted that it will not seriously interfere with the sale of legitimate butter.

The difficulty in New York seems to have been that the public demanded a law which should need no vigilance or care on the part of those interested in the sales of genuine butter. They wanted a law which should somehow enforce itself by its sweeping provisions. In granting this the legislature has transcended its legitimate powers and its work is declared void. If the laws which are clearly constitutional, and which simply prohibit frauds, are enforced, we can accomplish all the practical good that the legislature unwisely attempted to do and failed.

The decision of the court does not, as has been assumed, open the market to the unrestricted sale of oleomargarine. The laws requiring that it be sold under its true name are in full force, and these are sufficient if dairymen are wide awake to protect their interest. If they are not alert, the making of more stringent laws has been shown to be a poor remedy for the evils of which they complain.

DEMAND FOR HORSES.

Thoroughbred Stock Journal, Philadelphia.

The demand for good horses is on the increase from New England to California. An exchange says:—

"We do not believe a man can make mistakes in buying young well-bred horses of good size, provided his judgment enables him to make good selections. The growing demand for young promising horses opens a field for successful operations. There is need that we introduce new methods, and check the shipment of such large quantities of hay. Our farms are suffering from this heavy drain, and we must seek to restore by giving back the elements necessary to increase the productivity. Look well to the characteristic traits of both sire and dam. Size, shape, disposition, and speed of each should be well looked after, for success does not follow hap-hazard matings. Don't commence with idea that every colt is a trotter, but start with the determination to grow the best family horses, those which, having size, symmetry, and good con-

stitutions, are always in demand, and if you secure occasionally one with speed, develop it and make of it all that is possible.

Take good care of the colts; keep them in good condition, and growing, from the day they enter life. Don't be discouraged at the slow development of some. One of our most famous trotters, with a record of 2.15½, sold as a yearling for twelve dollars. Constant application, with the well-earned reputation for honest dealing, will not only restore the farm, but bring financial success. Not every man is fitted for this work. There is a diversity of gifts, and those that love good horses should be encouraged to breed such, for they will perfect them more than any one else can. Farmers should look more to the natural inclinations of their boys, and, learning these, provide means for education. It is high time that we forget the false standard which society has placed on labor. The occupation does not make the man. Rather it is what man makes of his occupation that tells the story of his strength or weakness. An honest horseman is as worthy of public confidence and social recognition as an honest merchant or physician, and the young man who is false to his natural inclination fails of the highest success. We want more honest men who will raise more honest horses for market, and so develop the varied industries of our State."

KEEPING BUTTER IN SUMMER.

The most difficult time for keeping butter is July and August; and this is also the period of poorest pasture, and therefore of the smallest yield of milk. The dairyman must therefore, to meet the case best, have his cows come in in September and go dry in June. This will meet the fluctuations of the market in the best way. The price usually falls in June, is lowest in July, begins to stiffen in August, recovers nearly its spring price in September and October. The cows are then coming up to fresh milk, the dairyman has most time to attend to it, and all the machinery seems to be in order for business. With a view to meet his necessity for good feed when the cows come in fresh, he will provide green crops to feed in connection with pasture. The good dairyman knows that it is very poor economy to put cows on scant feed in the flush of their flow. They need the most succulent green food. He should provide green millet to begin feeding when in blossom, and green corn to be fed in connection with second-crop clover. Let them have all they can eat of these, night and morning, in stable. Sometimes drought reduces the growth and succulence of these green crops, and to meet this contingency, let him always have on hand middlings or other ground grain, to feed moderately, as wanted. This absolute rule should always be carried out in dairying, to supply all the cows can eat of good food, to produce a full yield of the best quality of milk. This rule is only consistent with strict economy, for cows are kept to produce milk in paying quantity, and this can only be done by the most liberal feeding.—*Exchange.*

THE BOAR IS HALF THE HERD.

A first-class boar, properly used, will improve a herd more rapidly than thirty equally good sows. For instance, if this number of sows had each a litter averaging six pigs, they would produce 180 young ones. If sired by a badly bred boar more than half of the progeny would be inferior to their dams, in consequence of the prepotency of the sire. The old truism, that the boar is half the herd, is to-day more

palpable than ever. A person intending to breed pigs should make it his chief business to select a good sire. He should not only visit reputed herds for the purpose, but take care to notice if the quality of the animals composing them is sufficiently high and uniform. As a general rule, it is customary to obtain the sows before the boar is considered, and many people take very little trouble with regard to their selection. Buyers are only too willing to listen to advice which will save them any extra expense. A moderately well-bred, or even a half-bred, sow is oftentimes a desirable animal, she can always be put to a pure-bred boar, and the quality of her progeny will be greatly improved. On the other hand, the slightest blemish or cross in the blood of the boar not only prevents his regular use by other people, but materially diminishes the value of his progeny. It is admitted by many shrewd breeders that in breeding the boar furnishes the form, quality, and fancy points of the herd, while the sow supplies the frame and the internal structure. Others have remarked that sow pigs take after the sire and the boars after the dam in their general characteristics. These ideas cannot both be correct; still, it may be taken for granted that in all pure breeds the boar has the greatest influence upon the quality and the general appearance of his offspring.—*James Long, London, England.*

TAKING OFF HORSES SHOES IN THE SPRING.

Chicago National Live Stock Journal.

There is no better time to repair the injured feet of the horse, kept shod the year through, than now. Some men reason that the average horse, kept up on dry feed during the year, needs a run upon grass to "clean him out." This may be accomplished in other ways; but we cannot say as much of his feet, for the latter, if long upon pavements and plank floor, will necessarily be, to some extent, bruised and feverish, if not contracted. To meet the requirements of the feet, therefore, it will be well to devise some scheme by which the horse that is necessarily kept up and driven upon artificial roads during the year can be put upon a dirt road, or upon grass, for a month at least with his shoes off.

Chronic feverishness from the daily bruising upon hard streets, and contraction, can best be cured by removing the shoes, thus bringing the heel and frog in contact with the ground. This gives an earth or a pasture pad for the foot to rest upon, cool and moist, while the horse is on his feet. The shoes being off, the frog divides the pressure with the rim at the heel, and that has a beneficial effect in the case of any injury that may have been inflicted upon the deep-seated parts of the foot. The frog should be well developed between the heels to prevent contraction, but mainly to furnish a cushion, directly beneath the inner, sensitive part of the foot, thus guarding against concussion. A run on grass is best to restore the lost balance which comes of the damaging influences mentioned.

HOGS IN THE WEST.

The premium list of the Western National Fair Association to be held at Lawrence, Kansas, in Sept. next, requires that all Berkshires competing for premiums must be eligible to registry in the *American Berkshire Record*.

A correspondent writing from Missouri says: "We are using a ham that weighed 50 lbs., closely trimmed, tender, and fine, from a Berkshire pig eighteen months old. Rather heavy for a small Berkshire?" Yes, too heavy.

We should have preferred to shorten that pig's life by about half, thereby saving one winter's feed and keep, and having the hams, when cured, of less size and at less expense.

Some one in describing a model hog pasture mentions, as one grand requisite, a small stream of water that will afford wallowing places for the hogs. This may do well enough where swine plague has never been known, but wherever it has once appeared, these small streams are among the surest means of its continuance and spread. Beware of sluggish streams and pools of standing water, particularly toward the latter part of the summer and in the fall. Keep the hogs away from all such places, and see that they are supplied with good water from the well, daily.

MANURE IN THE BARNYARD.

American Cultivator.

It is a difficult matter to keep manure in the barnyard through the summer without serious loss. A great mistake is made when any finely-rotted manure is left over summer in the yard. Last winter was so cold, however, that much of the manure in Northern barnyards was mixed with snow and ice long after teams were ploughing in the fields. In this shape it was not fit to apply to land, and if mixed with straw it will need to be fermented to fit it. This should be done in low, flat heaps, so as to hold as much rain water as possible, and the heaps should be covered with earth or sods to absorb the ammonia that will be evolved in the fermentation. Treated thus there will be no serious loss, seeds of noxious weeds will be destroyed, and one load of the rotted manure in the fall will be worth two or three of the coarse, strawy stuff piled up in the spring. The heaps should be large enough to cause a high temperature, as the seeds of red root and wild mustard will endure considerable warmth without injuring their vitality.

TRANSFERS OF THOROUGHbred STOCK.

American Berkshire Record.

Billy O'Biff, 12654, Phil D. Miller & Sons, Panora, Iowa, to D. Follon, Peterson, Iowa.
Miller's Choice, 13817, Phil D. Miller & Sons, to David Waldo, Westport, Mo.
Lord Riley, 13737, J. J. Mails, Manhattan, Kan., to J. J. Myers, Leonardsville, Kan.
Sovereign Duke XIII., 13624, N. H. Gentry, Sedalia, Mo., to Jewett & McCoy, Independence, Mo.
Charmer V., 13626, and Cow Boy, 13753, N. H. Gentry, to J. D. Rudd, Waskom, Tex.
Huntsman II., 13631, and Sovereign Duke XI., N. H. Gentry, to Wm. H. Hale, Hamilton, Mo.
Sterling Value, 4719, Alex. M. Fulford, Belair, Md., to N. H. Gentry, Sedalia, Mo.
Sallie Belle, 13354, and Duvall's Choice, 13424, C. Duvall, Jr., Louisville, Ky., to E. M. Bowman, same place.
Slate Valley Chief, 4461, M. B. Keagy, Wellington, Kan., to M. A. McDonald, Longton, Kan.
Pence's Choice, 13868, I. N. Deline, Plymouth, Ind., to Albert Pence, Plymouth, Ind.
Tell, 13865, and Olga, 13866, Clifford & White, Wellington, Ohio, to P. Strunck, DuQuoin, Ill.
Lady Stubb, 11,243, Chas. Elliott & Son, Bladensburg, Ohio, to W. W. Aider, Farmer's City, Ill.
Windsor Belle, 13818, W. Warren Morton, Russellville, Ky., to J. W. Standard, Elkton, Ky.
Mountain Home Echo, 13819, W. Warren Morton, to B. C. Porter, Elkton, Ky.

FROZEN MEAT.

According to the (London) *Grocer*, meat frozen in the carcass is commanding a readier sale in England, and there are grocers who are now selling it instead of bacon, as of the two it is more profitable. A continuous stream of shipments of mutton is pouring into that country from New Zealand, and passes quickly into consumption at the best prices that can be got. The keeping, cooking, and eating qualities of this meat are hardly so pronounced as those for which English fresh-killed meat is justly famous, but this colonial mutton serves as a capital substitute for the home-fed sheep, and is much liked on economical grounds by certain classes of the population. On being landed it is nearly always taken to the Metropolitan Dead-Meat Market, and sold there at the current prices of the day, thence to be distributed to buyers in the provinces and elsewhere. The latest quotations made have been for Canterbury (N.Z.)—which is the best mutton—3s. 8d. to 4s., and for Port Philip 3s. 4d. to 3s. 8d. per stone of eight lb., being about 4d. higher than the rates obtainable a month ago.

Live Stock Notes.

It is the farmer's business to raise young colts, and develop them into fully mature and thoroughly broken horses. When he has accomplished this he should put his horse on the market, and start the training of another and younger one to fill its place. In this way he can always have a good horse to sell at good figures.

Cattle Notes.

At the sale held by the Springfield Jersey Cattle Club, twenty-three females brought \$3,125, or an average of a trifle over \$135 each.

At the sale of Mr. M. Harman's (Milford, Ill.) Shorthorns at Dexter Park, Chicago, twenty-four females averaged \$139.37 and five bulls \$71 per head.

The sale of Thomas Hughes' Shorthorns at Dexter Park, Chicago, averaged \$108.61 each for eighteen females and \$55 each for seven bulls. The cattle were in only fair condition.

Mr. Valancey E. Fuller's famous Mary Anne of St. Lambert has dropped a fine heifer calf by Ida's Stoke Pogis, the bull purchased at a long price by Maj. Campbell Brown, of Tennessee.

The movement of Western cattle (Western Idaho and Oregon), while not large, has been greater this spring than for several years. Montana and Western Wyoming have taken several thousand head of these cattle this year.

Mr. Jos. Jeffery, of Bowmanville, has a Jersey cow three years old in May, 1885, who is now a grandmother, her daughter having calved on June 13th ult., being only thirteen months old. She has a very fine heifer calf. The grandmother cow dropped her second calf on May 31st. Rapid increase, eh?—*Canadian Statesman*.

There is considerable crowding upon some of the ranges in the San Luis valley, and the prospect of successfully wintering stock upon outside ranges is growing poorer every year. The time may come when every stock-owner will have to own an inside winter range, with plenty of feed to carry his stock through.

Alfalfa or other grasses furnish the key to the situation.—*San Juan (Col.) Prospector*.

The Western Hereford Association is the title of a company which has recently filed articles of incorporation. The capital stock of the Company is placed at \$300,000. The incorporators are George F. Morgan, J. Pettibone, John Chase, and C. W. Stewart, all well known to many of our readers. Their headquarters will be in Cheyenne, with ranch on Bear Creek, and the principal business will be the breeding of Hereford cattle.

Mr. F. M. Woods, of Lincoln, Neb., writes the *Chicago Breeders' Gazette*:—"A four-year-old, thoroughbred Galloway heifer, raised and owned by the Call Farm here, was recently killed by the Chipman Bros. for the reason that she was barren, and dressed over 70 per cent. of her live weight. The morning she was killed she weighed 1,485 lbs., and her dressed meat weighed 1,040 lbs.; hide, 90 lbs. She had been fitted for about eight months, with the view of taking her to the Fat Stock Show."

Everyone coming in from the ranges North has the same story to tell of fat beef early in the season. Wyoming is likely to commence beef shipments in the latter part of July or first of August this year..... Reports from the range are nearly uniform in the matter of an unusual calf crop this spring. Even in the far North, where the winter was very severe, the spring has proven exceptionally favorable and the calf branding is likely to be very large.—*Cheyenne Live Stock Journal*.

We regret to record the death of the valuable Polled bull Prince of Livet 2303, which was bred by Mr. Smith Grant, Auchorachan, and was his property. The bull united the Erica and Pride of Aberdeen blood, having for sire the famous Erica bull Young Viscount 736, and for dam the Pride of Aberdeen cow Regina 1179. Prince of Livet won to his breeder the second prize at the Highland Society's Show at Inverness, in 1883, and the second prize at the centenary show of the Highland Society at Edinburgh last year. He was certainly one of the best bulls of the breed. *Banffshire (Scotland) Journal*.

OLD OR POOR COWS.—He who has tried to fatten old cows that have reached the age of twelve or fourteen years, and have lost the power of the assimilation and digesting of food, knows enough to ever put his grain to a more profitable use. These old pieces of farm furniture should be patched up and removed to the butcher before they have lapsed into that decrepit state which makes them mere exhaust machines for your corn cribs. The better plan is never to permit an animal to get old upon your hands. Failing qualities in a cow of eight or nine years of age should be anticipated sufficiently to permit you to make good beef out of her carcass. The dairyman who carefully tests each individual in his herd will not fail to distinguish very quickly those animals that are not profitable to him as dairy cows. Some, on making this discovery, are prone to neglect the feed of the delinquent, and let her remain in poor flesh, thus rendering her doubly unprofitable. This is a mistake. That most practical dairyman, Mr. H. B. Gurler, of DeKalb, says:—"When I discover that a cow is falling off, and that it will not pay to keep her in the dairy herd, I immediately proceed to dry her off, and increase her feed; I give her the last mouthful she will eat, and it is astonishing how soon she will get fat, and how fat. If you dry her off, letting her remain poor, it is terribly hard to get her in good flesh afterwards. By the first plan I come near getting my money back every time—sometimes do get it back and more—from the butcher."

Live Stock & Kindred Markets.

OFFICE OF THE CANADIAN BREEDER AND AGRICULTURAL REVIEW, TORONTO, July 16th, 1885.

The unfavorable turn taken by the British cattle trade last week has been rendered more pronounced, which has produced an additional decline of half a cent, or about one cent per pound in two weeks, so that the shipments now arriving are meeting with a rather poor market. The principal reason for the decline has been the heavy receipts at all the ports from Canada and the United States, which have increased materially during the week and given a decided advantage to buyers. Receipts from other quarters have been fair, and the aggregate supply on hand has been more than the market could take. The latest cables report trade dull, with a light demand and heavy offerings at the decline. At Liverpool on Monday the offerings were heavy and demand poor, considerable numbers being left over. The offerings of sheep were also large and trade was dull.

Quotations at Liverpool on Monday, being calculated at \$4.80 in the £, were.—

Cattle—	\$	c.	\$	c.	
Prime Canadian steers.....	0	14	to	0	00 per lb,
Fair to choice grades.....	0	13½	to	0	00 "
Poor to medium.....	0	12½	to	0	00 "
Inferior and bulls.....	0	9½	to	0	11 "
Sheep—					
Best.....	0	15	to	0	00 "
Secondary.....	0	13	to	0	14 "
Merinoes.....	0	12½	to	0	13½ "
Inferior and rams.....	0	10	to	0	11½ "

TORONTO.

The live stock trade continues active in the local market. The receipts so far this week are large, being 32 loads, against 28 for the same time last week. Prices are generally somewhat easier than they were on Tuesday of last week.

CATTLE.—On Tuesday there was a somewhat better demand for shipping cattle as there were more buyers on the market. There were not many offerings. A load of very choice sold at 5¾c. per lb., but for the general run of good exporters the range is 5 to 5½c. per lb. On the whole the demand may be said to be easy. At present shippers have as many cattle as will fill the space, which is scarce, that they have contracted for. The feeling is therefore in the direction of a shade lower prices. There are a good many butchers' cattle offering, but among these there are very few choice animals. Picked lots have sold at 4¾c. per lb. Good straight lots would bring 4¼ to 4½c. The majority of the offerings, however, sold at 3¾ to 4c. per lb. There were a good many cattle which sold at a cent a pound lower than these prices. The market could do with more good choice animals but the supplies of common are excessive. Milk cows were in lighter supply; prices were firmer, and all offering sold. In stock cattle there is nothing doing.

SHEEP.—About 1,200 head of sheep were offered on the market yesterday. There is a good steady demand, and all offering find a ready sale. Prices this week are a shade easier. About 4c. has been the average price paid. For several hundred head, however, bought to arrive, 4¼c. per lb. weighed off the car was paid. Rams rule at 3 to 3¼c. Butchers' culls have been selling at \$3.50 to \$4.50 per head, very nice animals being got at the latter figure.

LAMBS.—Are in fair demand and good supply; the market is steady and unchanged.

CALVES.—Choice are wanted. Prices steady at last week's quotations.

HOGS.—Are steady and in good demand at the prices given below. Very few are offering. For nice light 4¼ to 4¾c. will be paid, and 4¼ to 5c. for stores. A good-sized bunch of the former was sold to arrive at 4¾c.

Quotations are as follows :

Cattle, export, choice.....	5 1/2	to	5 3/4	per lb.
" " mixed.....	5	to	5 1/4	"
" bulls.....	3 1/2	to	4 1/2	"
" butchers', choice.....	4 1/4	to	4 1/2	"
" good.....	3 3/4	to	4	"
" common grass fed.....	2 3/4	to	3 1/2	"
Milch cows.....	3 30	to	5 50	per lb.
" stockers.....	3	to	0	per lb.
Sheep, export, per lb.....	3 1/4	to	4	"
" inferior and rams.....	3	to	3 1/2	"
" butchers', per head.....	3	50	to	4 50
Spring lambs, per head.....	3	00	to	3 75
Hogs, heavy fat, off the ear.....	4 1/4	to	4 1/2	per lb.
" light fat.....	4 3/4	to	4 7/8	"
" store.....	4 1/4	to	5	"
Calves, choice, per head.....	3 1/2	00	to	5 50
" common.....	2	upwards.		

The receipts of live stock at the Western market here for the week ending last Saturday, with comparisons, were as follows :

	Cattle	Sheep and Lambs	Hogs
Week ending July 11.....	1,057	2,880	324
Week ending July 4.....	695	1,682	115
Cor. week, 1884.....	576	1,934	20
Total to date.....	23,795	10,105	3,359
To same date 1884.....	17,105	10,358	3,170

MONTREAL.

The week's exports of cattle, although showing a falling off as compared with last year, are away ahead of all previous years. The number exported to date was 26,324 head—an increase of 4,693 compared with 1884, an increase of 4,525 compared with 1883, and an increase of 12,400 compared with 1882. The total exports of sheep to date were 8,277 head—an increase of 3,460 head compared with 1884, a decrease of 3,443 compared with 1883, and a decrease of 10,440 compared with 1882. At Point St. Charles shippers were free buyers, and although the supply was larger a good clearance was effected. Good to choice steers brought 5 1/2 to 5 3/4 c. per lb. live weight. Last year at this date shipping cattle were at 5 1/2 to 6 1/4 c. Receipts of sheep during the week have materially increased, but shippers, despite the unfavorable cables, have bought freely at steady prices. Private cables from Glasgow to-day reported the market weak and lower. There was a good demand at 4 to 4 1/2 c. per lb. live weight. Live hogs were steady at 5 1/4 c. per lb. Butchers' cattle at Point St. Charles were quiet, with a moderate business at 4 1/4 to 4 3/4 c. per lb. At Viger market the offerings of cattle were light, there being 200 head, but prices were easier, with a fair demand. Choice beefs brought 4 1/2 c., while common sold at 3 3/4 c. per lb. live weight. Sheep and lambs were in fair supply, with a good demand at steady prices. Sheep sold at \$2.50 to \$4.50, and lambs brought \$3.50 to \$4 each, as to quality. There were 150 calves offered, which met a fair demand at firmer prices. Choice sold at \$7, with inferior at \$1.50 each. Receipts of hogs were light at steady prices, and sold from \$1.50 to \$7.50 each according to quality.

PRODUCE.

The dullness and inactivity of the preceding week have been steadily maintained since our last. There has been scarcely any demand for anything heard, and values have generally been weak. Crop prospects are generally reported favorably, but these reports are not uniform, and we cannot be sure of our ground for a couple of weeks more. Local stocks show a slight decrease, and stood on Monday as follows:—Flour, 3,025 barrels; fall wheat, 129,673 bushels; spring wheat, 95,880; oats, 21,403; barley, 11,047; peas, 12,176; rye, nil. Wheat in transit for England shows a decrease on the week, standing on the 9th inst. at 2,550,000 quarters, against 2,726,000 on the 2nd inst. In the States the visible supply of wheat stood at 36,960,000 bushels, against 37,370,000 in the preceding week.

PRICES AT LIVERPOOL ON DATES INDICATED.

	July 7.	July 14.
Flour.....	00s od	00s od
R. Wheat.....	7s od	6s 11d
R. Winter.....	7s 2d	7s 1d
No. 1 Cal.....	7s 3d	7s 3d
No. 2 Cal.....	6s 11d	6s 11d
Corn.....	4s 7d	4s 6d
Barley.....	00s od	00s od
Oats.....	00s od	00s od

Peas.....	5s 8d	5s 8d
Lard.....	55s od	55s od
Bacon.....	28s 3d	28s 9d
Tallow.....	29s od	29s od
Cheese.....	30s od	40s od

FLLOUR. Holders seem to have been rather more inclined to concede but buyers do not seem to have been inclined to meet them. Superior extra could have been readily obtained at \$3.95 to \$4 and extra for \$3.80 at the close but there was no demand heard for either and prices closed purely nominal.

BRAN. Sold towards close of last week in cars for shipment east at equal to \$10.50 to \$10.75 here, closing with \$10.50 bid.

OATMEAL.—Easier; cars have been offered at \$4 but no sales reported; small lots lower at \$4.25 to \$4.50.

WHEAT. Very little offered but that little apparently sufficient; prices, so far as we can be said to have had any, have been weak. No. 2 fall sold towards the close of last week at 88c. f.o.c., closing with more of it offered at same figure and of No. 3 at 86c. with no buyers. No. 2 spring lying outside has sold at equal to \$5 1/2 c. here but 86c. was bid for a round lot on Monday. No. 1 nominal at 88 to 89c. Red winter lying outside has sold at prices equal to 88 to 90c. here and at close a car sold at 88c. on track. Street receipts small; prices closing at about 83 to 84c. for spring and fall and 70c. for goose.

OATS.—Cars on track sold last week and on Monday and Tuesday at 35c.; but at close there was more offered at 34 1/2 c. On street prices closed easy at 35 to 36c.

BARLEY.—None offered and none wanted and prices purely nominal.

PEAS.—Have sold up the line at prices equal to 67 1/2 to 68c. here but single cars seem not wanted. Street price 64c.

RYE.—Nominally unchanged at about 70c.

HAY.—Receipts have been small but seem to have been sufficient; new has sold at \$8 to \$12 and old has gone up to \$16.50 for timothy.

STRAW.—Very slow of sale at about \$7 for loose and \$9 to \$10 for sheaf, but at the close it seemed as if some more would have found buyers.

POULDOES. Old finished save a few at 30c. on the street; new have sold usually about \$2.25 per barrel.

APPLES.—There have been a few American imported and sold at about \$3.50 per barrel.

POULTRY. Spring chickens have sold at 55 to 60c.; fowl at 60 to 75c. and duck at 65 to 75c. per pair.

TORONTO MARKET.

Flour, p. brl., f.o.c., Sup. extra.....	\$3 95	to	\$4 00
" " Extra.....	3 80	to	0 00
" " Strong Bakers'.....	0 00	to	0 00
" " S. W. Extra.....	0 00	to	0 00
" " Superfine.....	0 00	to	0 00
Oatmeal.....	4 00	to	0 00
Cornmeal.....	0 00	to	3 50
Bran, per ton.....	10 50	to	11 00
Fall wheat, No. 1.....	0 00	to	0 00
" " No. 2.....	0 87	to	0 88
" " No. 3.....	0 85	to	0 86
Spring Wheat, No. 1.....	0 89	to	0 00
" " No. 2.....	0 86	to	0 87
" " No. 3.....	0 00	to	0 00
Barley, No. 1.....	0 00	to	0 00
" " No. 2.....	0 60	to	0 00
" " No. 3 Extra.....	0 55	to	0 00
" " No. 3.....	0 50	to	0 00
Oats.....	0 34	to	0 00
Peas.....	0 66	to	0 67
Rye.....	0 70	to	0 00
Corn.....	0 00	to	0 00
Timothy Seed, per bush.....	2 00	to	2 15
Clover.....	6 75	to	0 00
Flax, screened, 100 lbs.....	0 00	to	0 00

PROVISIONS.

BUTTER.—Choice new has sold well at 12 1/2 to 13c., there being a good demand for all of it offered; but store-packed without buyers. Old has continued to be offered freely; there was a car-load of inferior sold at 3 1/2 c., but for anything like decent quality buyers and sellers apart. Stocks seem to be large and likely to remain so until "grease" prices are accepted. Street receipts fair, but all readily taken at 14 to 16c.

CHEESE.—Firmer; small lots going at 8 1/2 to 9c. for choice, but we believe that some poor can still be had at 8c.

EGGS.—Rather easier and in somewhat better supply at 12 to 12 1/2 c.; on Street 14 to 15c. has been paid.

PORK.—Inactive at \$15 for small lots.

BACON.—Long-clear quiet and easy, and usually going about 7 1/2 c. for case-lots; Cumberland inactively at 7c. Rolls and bellies very scarce and firm at 9 1/4 to 10c. for rolls and 11 to 11 1/2 c. for bellies, with an active demand.

HAMS.—Still wanted and going off readily at 11 1/2 to 12c. for smoked, though we understand that some heavy-weights have sold at 11c. Canvassed unchanged at 12 1/2 c.

LARD.—Rather more steady at 9 to 9 1/4 c. for tinnets and 9 1/4 to 9 3/4 c. for pails of kettle-rendered.

HOGS.—Very scarce, and the few in sold about \$6.50.

SALT.—Canadian unchanged at 80c. for car-lots and 85 to 90c. for small lots per barrel. Liverpool coarse sold slowly at 70c. for small lots; and dairy freely at 40c. for round lots and 45c. for small 50 lb. bags.

DRIED APPLES.—More active; trade-lots have been taken at 4c. and dealers have been selling at 4 1/2 c., while evaporated have been active at 7 1/2 to 8c. per lb.

HOES.—Inactive; trade-lots of good quality have been offered at 9 to 12c., but no sales reported.

WHITE BEANS.—Inactive at \$1.00 to \$1.10.

TORONTO MARKETS.

Butter, choice dairy, new.....	0 12	to	0 13
" " good shipping lots.....	0 05	to	0 06
" " inferior, &c.....	0 03 1/2	to	0 04
Cheese, in small lots.....	0 08	to	0 09
Pork, mess, per brl.....	15 00	to	0 00
Bacon, long clear.....	0 07 1/2	to	0 00
" " Cumberland cut.....	0 07	to	0 00
" " smoked.....	0 00	to	0 00
Hams, smoked.....	0 11 1/2	to	0 12
" " cured and canvassed.....	0 12 1/2	to	0 00
" " in pickle.....	0 10	to	0 00
Lard, in tinnets and pails.....	0 09	to	0 09 1/4
" " in tierces.....	0 09	to	0 00
Eggs.....	0 12	to	0 12 1/2
Dressed hogs.....	6 50	to	0 00
Hops.....	0 09	to	0 12
Dried apples.....	0 04	to	0 04 1/2
White beans.....	0 75	to	1 10
Liverpool coarse salt.....	0 65	to	0 75
" " dairy, per bag 50 lbs.....	0 40	to	0 45
" " fine.....	1 45	to	1 50
Godetich, per barrel.....	0 85	to	0 90
" " per car lot.....	0 80	to	0 00

HIDES, SKINS, AND WOOL.

HIDES.—Prices of green have advanced 25c. per cental, at which rise all offered have been readily taken. Cured seem not to have sustained a corresponding advance but have been steady at 8c.

CALFSKINS.—Quiet, offerings decreasing and prices unchanged.

PELTS.—Prices advanced 10c. and now standing at 35c. for the best green with a fair supply offered.

LAMBSKINS.—Prices have advanced to 40c. for the best green, which have been almost the only sort selling, as no country lots have been yet offered.

WOOL.—Fleeces steady, with sales of coarse but clean at 16c. and of fine Leicester at 18c.; offerings have come forward but slowly. Southdown very scarce and readily taken at 22c. Super has sold to a small extent at 21 to 22c. but nothing doing in either.

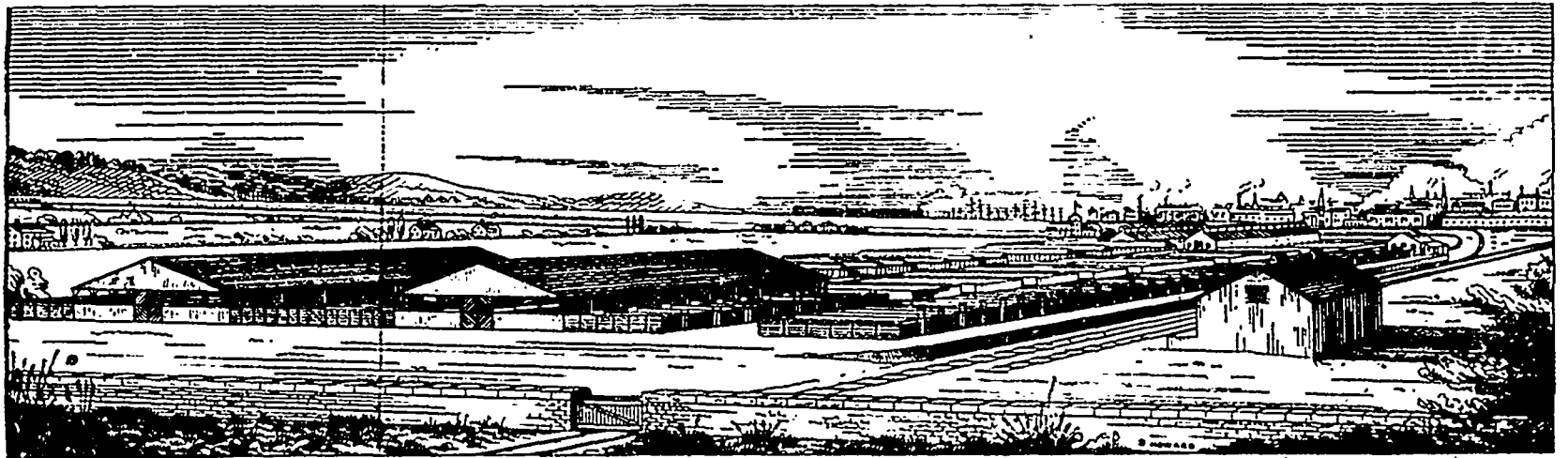
TALLOW.—Very quiet, dealers holding off and refusing to pay over 6 1/2 c. while offering round lots at 6 1/4 c. with no buyers; stocks all over seem to be large.

Hides and Skins.			
Steers, 60 to 90 lbs.....	\$0 08 1/2	to	\$0 00
Cows.....	0 08	to	0 00
Cured and inspected.....	0 08 1/2	to	0 00
Calfskins, green.....	0 11	to	0 13
" " cured.....	0 13	to	0 15
Sheepskins.....	0 00	to	0 00
Lambskins.....	0 40	to	0 00
Pelts.....	0 35	to	0 00
Tallow, rough.....	0 03 1/2	to	0 00
" " rendered.....	0 06 1/4	to	0 00

Wool.			
Fleece, com'b'g ord.....	0 16	to	0 18
" " Southdown.....	0 21	to	0 22
Pulled combing.....	0 17	to	0 18
" " super.....	0 21	to	0 22
Extra.....	0 25	to	0 27

CANADIAN PACIFIC RAILWAY

STOCK YARDS AT MONTREAL.



High Ground, well Drained.
Most Modern arrangements for Feeding
and Watering Cattle.

Convenient to City, Markets and Shipping.
Excelled by no Yards in the World.

Large Easy-riding Stock Cars, Fast Trains, best facilities for Loading and Unloading, Moderate Charges for Feed and Prompt Attention at the Yards

For the convenience of Shippers an Hotel with all modern improvements will be built at the Yards so as to be ready for use about July 1st.

For information about Rates, etc., apply to

G. M. BOSWORTH,...
 General Freight Agent (East'n Div'n),
MONTREAL.

E. TIFFIN,
 Gen'l Freight Agent, (Ont. Div'n),
TORONTO.

T. H. GOFF,
 ARCHITECT, - Toronto.

Had ten years' experience planning and superintending the erection of Farm Buildings, and has visited many of the best Farmsteads in New York, New Jersey, Kentucky, and other States.
 Correspondence invited.

REFERENCES:

GEO. J. AIDLAW, Esq., 25 Brock Street, Toronto.
 JOHN HOPE, Esq., Bow Park Brant'ord.

"DRESSMAKERS' MAGIC SCALE."

The most simple and perfect tailor system of cutting, taught in 3 or 4 days for 25; board for pupils from a distance, 50c. a day. Miss E. CHUBB, 17 King street west, two doors from St. Andrew's church.

Ontario Veterinary College,

40 Temperance St., Toronto.

PRINCIPAL, - PROF. SMITH, V.S.

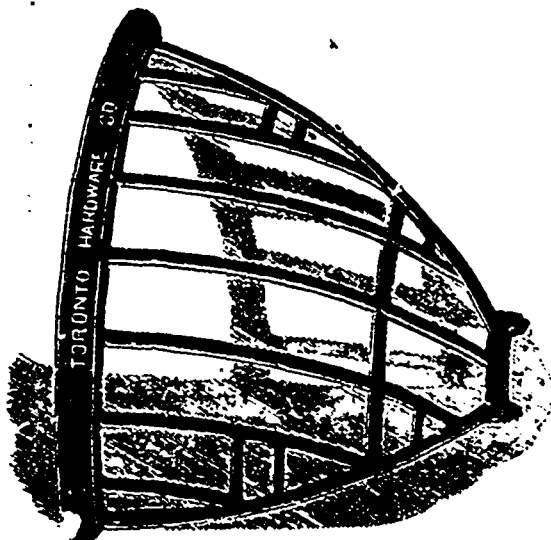
TELEGRAPHY!

Pupils to learn Telegraphy. Operators in demand. Fifty to seventy-five dollars per month, when competent. Address with stamp, Dominion Telegraph Institute, 32 King St. East, Toronto.

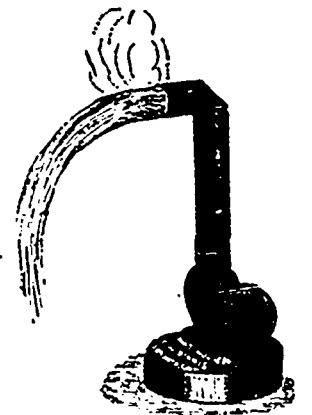
JAMES THORNE, Manager.

TORONTO HARDWARE MAN'G. CO.

MANUFACTURERS OF ALL KINDS OF
STABLE FITTINGS,
 —ALSO—



THE CHAMPION IRON FENCE,
 ORNAMENTAL IRON WORK, &c.
 SEND FOR OUR CATALOGUE.
 Toronto Hardware Mfg. Co., 960 Queen St., W. Toronto



Improved Model Washer & Bleacher.

Satisfaction guaranteed or money refunded.

\$1000.00 REWARD FOR ITS SUPERIOR.

Washing made light and easy. The clothes have that pure whiteness which no other mode of washing can produce. No rubbing required, no friction to injure the fabric. A 10 year old girl can do the washing as well as an older person. Weighs less than six pounds. Can be carried in a small valise.

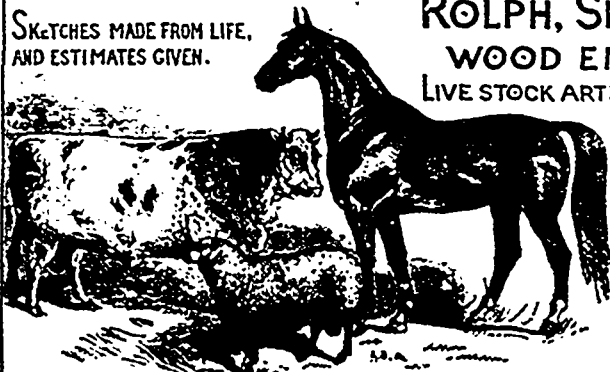
To place it in every household the price has been placed at \$3.00, and if not found satisfactory, money refunded in one month from date of purchase. See what the *Canada Presbyterian* says about it:—"The Model Washer and Bleacher which Mr. C. W. Dennis offers to the public has many and valuable advantages. It is a time and labor-saving machine, it is substantial and enduring and is very cheap. From trial in the household we can testify to its excellence."

Send for circulars. AGENTS WANTED.

(Mention this paper.)

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 Toronto Bargain House,
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AGRICULTURAL REVIEW.

TORONTO.

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Tanners' Supplies,

Hides, Leather, Wool

AGENT FOR

PARKS & SON, COTTON WARPS

TORONTO.



Notice to Contractors

Sealed Separate Tenders addressed to the undersigned and endorsed "Tender for hot-water heating apparatus, Harrie, Ont., will be received at this office until MONDAY, 20th instant.

Plans and specifications can be seen at this Department, Ottawa, and at the office of Messrs. Kennedy, Gaviller & Holland, Architects, Harrie, Ont., on and after THURSDAY, 2nd instant.

Persons tendering are notified that tenders will not be considered unless made on file printed forms supplied, and signed with their actual signatures.

Each tender must be accompanied by an accepted bank cheque, made payable to the order of the Honourable the Minister of Public Works, equal to five per cent. of the amount of the tender, which will be forfeited if the party declines to enter into a contract when called on to do so, or if he fails to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The department will not be bound to accept the lowest or any tender.

By order,

A. GOBRIL, Secretary.

Department of Public Works,
Ottawa, 2nd July, 1885.



INTERNATIONAL

AND

COLONIAL EXHIBITIONS.

ANTWERP IN 1885.

LONDON IN 1886.

It is the intention to have a Canadian representation at the INTERNATIONAL EXHIBITION at Antwerp, commencing in May, 1885, and also at the COLONIAL and INDIAN EXHIBITION in London in 1886.

The Government will defray the cost of freight in conveying Canadian Exhibits to Antwerp, and from Antwerp to London, and also of returning them to Canada in the event of their not being sold.

All Exhibits for Antwerp should be ready for shipment not later than the first week in March next.

These Exhibitions, it is believed, will afford favourable opportunity for making known the natural capabilities and manufacturing and industrial progress of the Dominion.

Circulars and forms containing more particular information may be obtained by letter (post free) addressed to the Department of Agriculture, Ottawa.

By order,

JOHN LOWE, Secy., Dept. of Agric.

Department of Agriculture,
Ottawa Dec. 19th, 1884.

A New Treatment

FOR THE

RAPID AND PERMANENT CURE OF

CATARRH

to be had only of

A. H. DIXON & SON

No 305 KING ST. WEST. TORONTO - CANADA.

Opinions of the Press.

Perhaps the most extraordinary success that has been achieved in modern science has been attained by the Dixon treatment for catarrh. Out of 2000 patients treated during the past six months, fully ninety per cent. have been cured of this stubborn malady. This is none the less startling when it is remembered that not five per cent. of the patients presenting themselves to the regular practitioner are benefited, while the patent medicines and other advertised cures never record a cure at all. Starting with the claim now generally believed by the most scientific men that the disease is due to the presence of living parasites in the tissues, Mr. Dixon at once adapted his cure to their extermination; this accomplished, the catarrh is practically cured, and the permanency is unquestioned, as cures effected by him six years ago, are cures still. No one else has ever attempted to cure catarrh in this manner, and no other treatment has ever cured catarrh. The application of the remedy is simple and can be done at home, and the present season of the year is the most favorable for a speedy and permanent cure, the majority of cases being cured at one treatment. Sufferers should correspond with Messrs. A. H. DIXON & SON, 305 King street west, Toronto, Canada, and enclose stamp for their treatise on catarrh.—*Montreal Star.*

OBSERVE—Our remedy is easily applied—it is used only once in twelve days, and its application does not interfere with business or ordinary duties. We give every case our special attention.

None Genuine Without Our Signature.

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HEAD OFFICES: TORONTO, CAN.

INCORPORATED 1851.

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For passage apply to SAM OSBORNE & CO., 40 Yonge street; G. W. TORRANCE, 45 Front street east, Toronto, or to David TORRANCE & CO., General Agents, Montreal.

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As all the steamers of this line are STRICTLY FIRST-CLASS, and without exception amongst the handsomest and fastest afloat passengers can take EXCURSION TICKETS with the certainty of having an equally fine ship when returning. The saving effected by this is considerable. No passengers berthed below the saloon deck or near the screw.

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All the popular sea bathing, fishing, and pleasure resorts of Canada are along this line.

Pullman cars leaving Montreal on Monday, Wednesday, and Friday run through to Halifax and on Thursday, Friday, and Saturday to St. John, N.B. without change.

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Excellent first-class Pullman, and smoking cars on all through trains.

First-class refreshment rooms at convenient distances.

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Will find it advantageous to use this route, as it is the quickest in point of time, and the rates are as low as by any other. Through freight is forwarded by fast special trains, and experience has proved the Intercolonial route to be the quickest for European freight to and from all points in Canada and the Western States.

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33 Rossin House Block, York St. Toronto.

D. POTTINGER, Chief Superintendent,
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C. I. DOUGLAS,

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Under the auspices of the
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OF ONTARIO,**
TO BE HELD AT
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HANDSOME PREMIUMS GIVEN.

Entries must be made with the Secretary at Toronto, on or before the undermentioned dates, viz.:

Horses, Cattle, Sheep, Swine, Poultry, Agricultural Implements, on or before August 15th.
Grain, Field Roots, and other Farm Products, Machinery and Manufactures generally, on or before August 22nd.

Horticultural Products, Ladies' Work, Fine Arts, etc., on or before August 30th.

Prize Lists and Blank-Forms for making the entries upon can be obtained of the Secretaries of all Agricultural and Horticultural Societies and Mechanical Institutes throughout the Province; from Geo. McIlbroom, of Western Fair, London; and from the Secretary,
HENRY WADE,
Agricultural Hall, Toronto.

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Real Estate Agency, Conveyancing, &c.

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Money to Loan; Commissions Solicited.

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FARM FOR SALE.

Within ten minutes' walk of the City Hall of one of the best Cities in Ontario. Splendid residence, barns, stables, &c.

This property will be sold cheap and on easy terms.

For particulars address
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FARM FOR SALE.

100 ACRES.

Stone Dwelling, Barns, Stables, Sheep Sheds.

Soil clay loam. Water good and abundant All in good order.

This farm is in one of the best counties in Ontario, near the City of Guelph.

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Toronto.

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Lot 32, 12th Con. of Dawn,
COUNTY OF LAMBTON,
Near Sarnia, and two lines of railway.

CHOICE WILD LAND

heavily timbered with hard wood. Timber can be made to pay for land. Price, \$3,000.

Would take some good farm stock in part payment, balance could remain on mortgage as long as purchaser would want.

Address,
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OF
VALUABLE

Farm Property.

Under and by virtue of power of sale contained in a certain mortgage, which will be produced at time of sale, and upon which default in payment has been made, there will be sold by PUBLIC AUCTION, at the

Daly House, in the Town of Ingersoll

in the County of Oxford, on

Saturday, 1st day of August, 1885

at the hour of 1 o'clock in the afternoon, the following valuable land and premises, viz.:—The south-half of Lot Number Twenty-two, in the First Concession of the Township of West Oxford, in the County of Oxford and Province of Ontario, containing one hundred and seven acres, more or less.

The above farm is a very valuable property, and considered by competent judges to be one of the best farms in the County of Oxford; and most favorably situated outside the corporation of the Town of Ingersoll, and about one mile from the P. O. in said town.

The whole of the land is cleared and free of stumps, and in a good state of cultivation. The soil is a clay loam, and the fences good.

There is an orchard of about one hundred young trees on the property, commencing to bear.

On the premises are erected a frame house, frame barn (40 x 60, with stone foundations), frame stables and driving-house.

Altogether the above property offers an investment seldom to be met with, being a most desirable farm in all respects.

Terms:—10 per cent. to be paid down at time of sale, sufficient within 30 days with interest at 7 per cent. to make up one-third of the purchase money; for balance, terms liberal, and will be made known at time of sale.

For further particulars apply to
JOHN LEYS,
Solicitor, Toronto.



Notice to Contractors

Sealed Tenders addressed to the undersigned, and endorsed "Tender for Rolled Iron Joists and Steel Plate Girders for the New Departmental Buildings, Wellington Street, Ottawa, Canada," will be received at this office until Saturday, the 25th July next, inclusively, for the Supply and Erection of Rolled Iron Joists and Steel Plate Girders for the New Departmental Buildings, Wellington Street, Ottawa, Canada.

Plans and specifications can be seen at the Department of Public Works, on and after Monday, the 6th day of July.

Tenders must be made on the printed forms supplied.

Each tender must be accompanied by an accepted bank cheque, made payable to the order of the Honorable the Minister of Public Works equal to five per cent. of the amount of the tender, which will be forfeited if the party declines to enter into a contract when called on to do so, or if he fails to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department will not be bound to accept the lowest or any tender.

By order,
A. GOBEIL,
Secretary,
Department of Public Works,
Ottawa, 2nd July, 1885.

ONTARIO PUMP CO.

(LIMITED)

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WIND MILLS, I X L FEED MILLS,

Hay Carriers, Horse Hay Forks,

Tanks, Double and Single Acting Pumps
(WOOD OR IRON.)



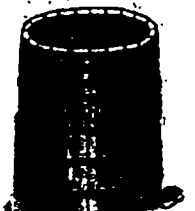
GEARED WIND MILLS,
For Driving Machinery,
Pumping Water, &c.
From 1 to 40 h. power.

We, the undersigned, are using one of your Geared Wind Mills, and take pleasure in stating that they are fully up to your representations, and meet our most sanguine expectations in every particular. Geo. Laidlaw, Victoria Road, Ont.; John E. Howard, Sutton P. O., Ont.; Thomas Ineson, Scarborough, Ont.; J. P. Cass, L'Orignal; J. R. Keyes, St. Catharines; O. Wilson (of Wilson & Young), Seaforth; Jno. How, Belleville; Peter Timmons, Enterprise; R. Ball, Millbrook; John T. Barley, Mitchell; O. T. Smith, Blinbrook; W. Jackson, Mono Mills.

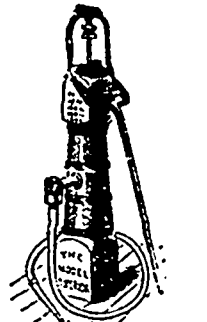


I X L FEED MILL,
The cheapest, most durable and perfect iron Feed Mill ever invented.

We, the undersigned, are using one of your I X L Feed Mills, and take pleasure in stating that they are all you claim for them. J. T. Barley, Mitchell, Ont.; O. T. Smith, Blinbrook; Peter Timmons, Enterprise; R. Ball, Millbrook; J. R. Keyes, St. Catharines; Geo. Laidlaw, Victoria Road; Thomas Ineson Scarborough.



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Capacity from 12 to 2,855 barrels.



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We manufacture three styles of Forks and Carriers.



HALLADAY'S STANDARD WIND MILLS.
26 sizes.

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DEAR SIR:—In regard to the 13-foot Geared Wind Mill, I will say it does good work. I use it for pumping, running a grain crusher, cutting box and root pulper. The cutting box used to take six horses to run it all day; but the wind mill does the work now, and does not get tired either. I expect to run a cider mill with it next fall, and purpose attaching my grindstone as soon as I can get a pulley. The mill is perfectly self-regulating. The No. 2 I X L Grinder works like a charm. We can grind ten bushels an hour easily. I might also add the Four-Wheel Carrier and Four-Tined Grapple Fork I got from you are giving the best of satisfaction. The Fork is far ahead of anything I have seen.

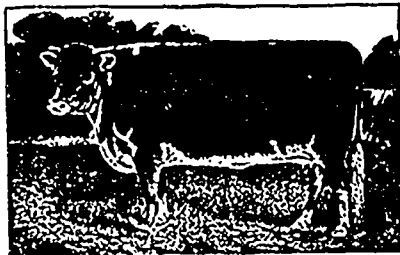
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PARTIES ON BUSINESS WILL BE MET AT THE DEPOT.

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*Sussex Cattle, Southdown Sheep,
Sussex Pigs, Game and
Dorking Chickens.*

A good selection of either now for sale
Enquire of

E. STANFORD,
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High Grade Jersey Cows

—FOR SALE.—

FROM THE CELEBRATED
OAKLANDS JERSEY STOCK FARM.

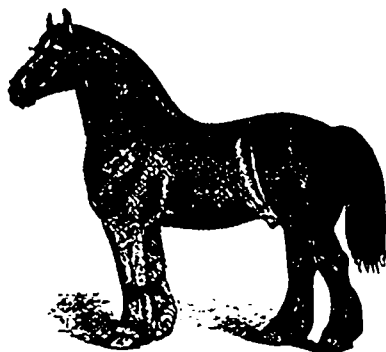
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HIGH GRADE JERSEY COWS,
Fresh in Milk, of good individual merit,
which we can offer for sale to those anxious
to improve their dairy stock.

PRICE \$100 EACH.

The Jersey is the great Cream and Butter Cow
Apply to

H. H. FULLER,
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English Shire Horses,

STALLIONS AND MARES,

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Tom" "St. Ives" All Islington Winners

Has always on hand Stallions and Mares
of the now most fashionable breed, suitable
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Correspondence solicited.

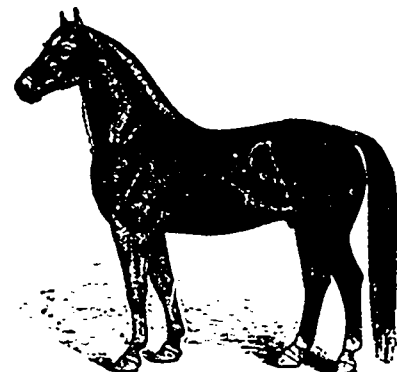
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JAMES FORSHAW,

Shire Horse Stud Farm,

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JERSEYVILLE STOCK FARM.

*Standard Bred Trotting Stock
Stallions and Young Stock
For Sale.*

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JERSEYVILLE,

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PEDIGREE SUSSEX CATTLE

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Cows, Heifers and Bulls

Particularly hardy and great
Flesh Producers.

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HORSES, STALLIONS & MARES.

During the last twenty years has won over 600
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Has always on hand, STALLIONS, MARES
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the best strains in England.

Mirfield is on the direct line between Liverpool
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SHIRE HORSE STUD FARM,

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N.B. Five minutes walk from the Station.

FRANK L. GASTON,

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—OF—

JERSEY CATTLE.

NORMAL, Illinois.

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JACK DONKEYS

FOR SALE.

13 to 15 hands. Very hardy and perfect in
every respect.

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SHIRE

Cart Horse Stallions

MR. GEORGE F. BOWDEN,

Auctioneer, of SOMERSAL, near Derby,
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will dispose of by private treaty the THREE
YEAR OLD ENTIRE

MAGNUM BONUM,

THE FOUR YEAR OLD

WANTED THE MOST.

ALSO.

MINERAL WATER,

Stallion Pony, age four years, 13 hands high

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THE CANADIAN BREEDER,

TORONTO.

Mr. BOWDEN having done business in the
Entire Horse line for years in Canada and else-
where, solicits patronage.

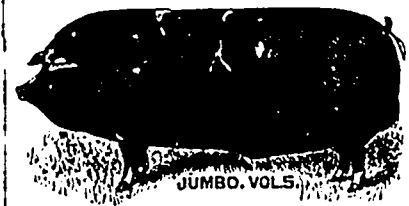
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OF
POLAND CHINA HOGS.

BENSON & WIKOFF, Proprietors.

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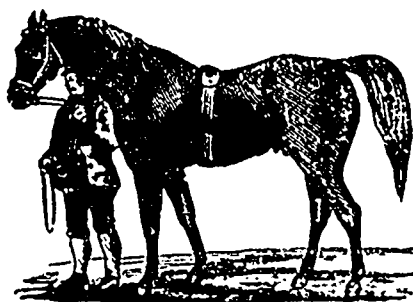
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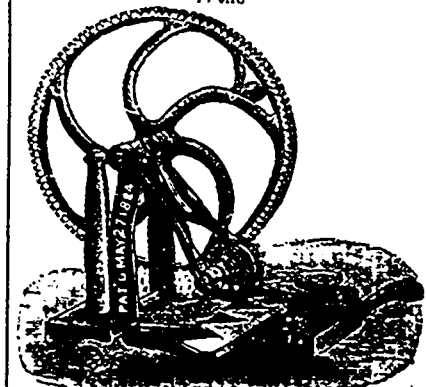
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