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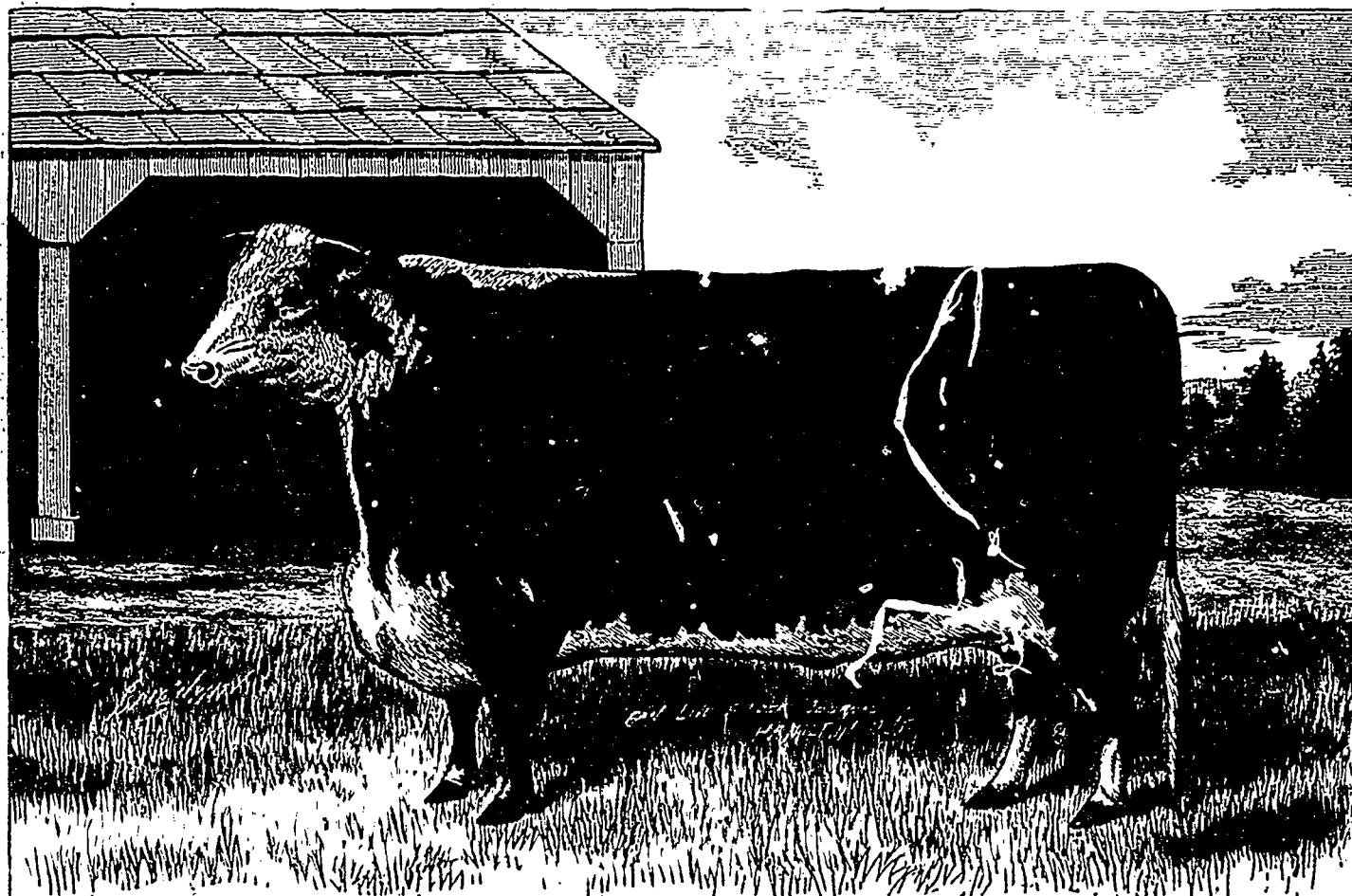
# CANADIAN LIVE-STOCK JOURNAL.

DEVOTED TO THE INTERESTS OF THE STOCK-RAISERS OF CANADA.

VOL. III.

HAMILTON, CANADA, JUNE, 1886.

No. 6



## HEREFORD-COW DOWNTON OLIVE,

*Imported by and the property of Mr. Rufus H. Pope, Eastview, Cookshire, Que.*

### Downton Olive.

Our engraving this month represents this beautiful specimen of the white faces, as she appeared when two years old. She is now four years old; was bred by Mr. Thos. Fenn, of Stonebrook House, Ludlow, and is owned by Mr. Rufus H. Pope, of Eastview, Cookshire, Quebec. She was imported by Mr. Pope in 1884, and was one of the lot in which the magnificently grand cow Mermaid 2d, and the beautiful Downton Parity figured so conspicuously. Downton Olive was sired by Downton Boy, and in addition to a splendid pedigree possesses in large measure those essentials of structure so necessary to a successful show-yard career, amongst which we may mention symmetry of form, size and aptness to take on flesh. She won the second prize at Hereford, England, in 1883, and was also a prize-winner at the Royal the same year, and at other English exhibitions. In 1885, the year following her importation, she was first in her class at Montreal and at Ottawa. She is a cow of great substance, and has proved useful in Mr. Pope's herd. This herd, to which frequent reference has hitherto been made in the JOURNAL, is constantly increasing in popularity, and deservedly so. Draughts are now

made upon it from Texas on the south and Nova Scotia on the east, and when the owners of western ranges want good bulls, they are fast finding out that a visit to Eastview is not likely to be a fruitless one.

### The Experimental Farm Buildings.

Before our readers shall glance over these pages the contract for the outbuildings at the Experimental Farm shall have been let, and the task of gathering material commenced. We would much rather have seen the work far under way by this time, but we believe the responsible parties are acting for the best. We are of course gratified to see that the course of action pursued in reference to the plan of the buildings has been exactly in the line of the suggestions we ventured to throw out some months ago, in everything except in point of time. A number of good practical farmers, such as John I. Hobson, of Mesboro; John McMillan, Constance; C. Lawrence, Collingwood, etc. assisted the architect in drawing up the plans, under the direction of Mr. W. H. Worden, a well-known barn-builder from Manchester, county of Ontario, a clear-headed man who has given barn-building his supreme attention for many years past, and

whose services have also been secured to supervise the work. We cannot at this time furnish our readers with full details of the plan, but we know enough to assure us that we may confidently state that the buildings when erected will be convenient, serviceable, and attractive in appearance, and well fitted to give useful ideas to the average farmer from any land who may visit them, and even to those who are a long way above the average.

### An Experimental Farm for the Dominion.

We notice that the Dominion Government is about establishing an agricultural college and experimental farm for the Dominion within a few miles of Ottawa. Wouldn't a warmer latitude be better? It is stated that the gold and silver medal farms of 1885, owned by Messrs. Thomas and William Graham, have been purchased for the purpose. If so, the Government is to be congratulated on the character of the farms secured, as we think we never passed over farms the general character of which pleased us better than did these in many respects, when making the awards last season.

## Canadian Live-Stock Journal.

PUBLISHED MONTHLY BY

THE STOCK JOURNAL COMPANY,

48 John Street South, Hamilton, Ont.

Terms, \$1.00 per Annum in Advance.

THOMAS SHAW, RIVERSIDE FARM, EDITOR.

**To Subscribers.**—Subscription price, \$1.00 per annum in advance. Single copies, 10 cents each; sample copies free. No names will be removed from our subscription list when in arrears and without we receive instructions to that effect. Those in arrears will be charged \$1.25.

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**To Advertisers.**—Advertisements of an appropriate nature will be inserted in the JOURNAL at the following rates. For a single insertion, 18c. per line, nonpareil (12 lines makes one inch), for three months, 15 cents per line each insertion; for six months, 13c. per line each insertion, for one year, 10c. per line each insertion. Cards in Breeders' Directory, not exceeding five lines \$1 per line per annum. Copy of advertisements should reach us not later than the 25th of each month (earlier, if possible). If later, it may be in time for insertion, but often too late for proper classification. Transient advertisements payable in advance.

**To Correspondents.**—All communications intended for publication in the JOURNAL should reach us by the 20th of each month—sooner, if possible. We do not hold ourselves responsible for the opinions of correspondents.

**Remittances** may be made in registered letter at our risk. The receipt of the JOURNAL will be sufficient evidence to subscribers that their remittances have been received.

All communications to be addressed STOCK JOURNAL CO., 48 John street south, Hamilton, Ont.

HAMILTON, CANADA, JUNE, 1886.

Please examine your address tag. If it reads, Dec., '85, or any month of '85, your subscription expired with that issue, and we will be obliged if readers in arrears will renew at once.

THE old theory that a beast intended for the shambles must have completed its growth of frame before it could be fattened with a profit, is long ago exploded. Thanks to our fat stock shows, in part at least, for this. The growing intelligence of the community has also hastened the change. The producer has carefully counted the cost, and has found that profits decrease after the three-year limit has been passed in a cattle beast, and the two-year limit in a sheep, if not before. And the taste of the consumer has pronounced decidedly in favor of a young, early matured animal. In sheep the change is even more striking than in the case of cattle. Not many years ago by it was thought indispensable to have wethers three years old to have them prime, now they are nearly all sold at one year. The directors of our exhibitions can do very much by way of arresting public attention, and leading it in these new channels, by the prizes which they offer. In the fat stock line they cannot be too chary about offering prizes for old beasts.

THE turning out season has more than come, and a large proportion of our flocks and herds are now luxuriating amid Canadian grasses. The owners should take heed lest they be too much forgotten amid the hurry and rush of work that quickens its pace as the season advances, until winter, locking the ground again, brings some relief. It may be that few farmers forget to give salt to their live-stock with some regularity when they are housed, but many of them do when they are out on the grass, and it is then that they have the greatest craving for it, judging by the eagerness which they evince to get it after having been deprived of it for a short time when pasturing. But it should not be given them at intervals of several days, or even weeks, as then they are apt to partake of it too freely; it is much better to give it in the

form of rock-salt, to which they may have access at any time, and which should be placed where it is protected from the rain. The free and regular use of salt seems as necessary to the well-being of the lower animals as to that of the human race.

BREEDING from animals that are very young cannot but lead to deterioration, although it may bring immediate profits. Prof. Brown, of the English Agricultural Department, has entered his vigorous protest in his work, "Animal Life on the Farm." He says, "Until animals have reached the adult period, they are not proper subjects to breed from. The completion of permanent dentition is a fair test of maturity. Say three years of age for cattle and eighteen months for swine." The laws of physiology are opposed to immature breeding, and no natural law can be violated without the exaction of a corresponding penalty. Where the flock or herd is to endure and at the same time to secure a high degree of excellence, they must not be bred too early. The most valuable cow in our own herd as a breeder, did not produce her first calf till coming four years old. She has bred regularly ever since, some seven or eight years, and is a young-looking cow to-day. It may require patience to wait three years for the first calf, but if the cow remain productive two or three years longer, and we think she will, it is surely a great matter.

THE stud, the flock and the herd may be placed upon a very creditable basis without paying very high prices for females upon which to ground it. It may at the same time be better to pay well rather than not buy where the purchaser can afford it. In the sire to be used, a good animal must be secured, whatever the price, or there will be no improvement. With a fair foundation of females, not an inferior one, and the stamp of male referred to, with suitable qualifications for the business, success is sure to follow. The former may be purchased with money, but the latter cannot. The qualifications must be secured at even greater outlay. They can only be got through the most careful observation and patient study; but when once in possession their value is great, as they enable him who possesses them to make sure progress from the first, rather than doing work in a tentative way, making some good hits along with a larger proportion of failures. In breeding it is well to give prominence to this rule along with others—in points where the female is weak the male should be strong, otherwise satisfactory results will not be secured. The work of breeding live-stock is too slow a one to admit of him who is engaged in it changing his plans three or four times in a lifetime.

EVERYBODY who has read the JOURNAL for any length of time will not for a moment be in doubt as to the attitude we have assumed in reference to the necessity of sustaining vigorously the Ontario Agricultural College. No country can in the present day hold its own in agricultural progress without paying a good deal of attention to the scientific side of agriculture. But this is not enough. Our farmers' sons who take a collegiate course, would be none the worse for a little more light on the endless subject, even though they may not wish to follow farming as a life-pursuit. It is surely assisting to strengthen the memory to be taught that soil mucky in its nature will not produce peas in perfection, as well as learning to conjugate a Latin verb. Nor does it seem less valuable to be able to give the names of the different breeds of cattle than to mention those of the seven wise men of Greece. We are not quarreling with our young men for study-

ing classics, but we do fault them for not acquiring a little more knowledge of the agriculture of to-day. But we are even more concerned for the children of the masses of our farmers. What do they get in our common schools that bears upon the work of the future? Practically nothing. It may be that agriculture is not taught in our common schools for the reason, amongst others, that we have no teachable primary books on the subject; but it is not taught. One may suppose that they get teaching on the subject in the best of all schools—the school of practice at home, morning and evening, and during holidays. Very true, but it is the teaching only that their parents can give, and they know usually about what their parents told them. And thus it is that farmers pursuing a subject like the story of the fable, practically without an end in the line of progression, live, move and breathe in a rut so deep that they cannot get out of it till better teaching lifts them out. Men who do not read may farm well in the line in which they have learned, and make money, but they cannot be progressive farmers without adding to their store of knowledge from the school of their own or some one else's experience, usually obtained from reading. It is well to give those who want it the advantages of a course at the Ontario Agricultural College, but it is better if we can reach out to the masses the hand of knowledge of their future life work that will lift them higher.

### A Second Hereford Register for America.

This has been more than hinted in the live-stock publications of the day, but it is a realization that we hope we shall never see, and that we trust will never be consummated. Rival herd books in any country we look upon as a misfortune, the extent of which is only measured by the numbers and the merits of the breed which they contain. They cloud the minds of an uneducated public, which is easily bewildered amid the clamors of the rivals as to the merits of their respective records, with the result—pretty general disgust, and they prejudice the minds of foreigners as to the utility of the work they are doing. We do not say, however, that they are an unmixed evil, as their promoters watch each other's movements with an eagle eye, yet we look upon them as a great evil.

We do hope that our American cousins will leave nothing in reason undone to prevent such a step. If it should ever be found necessary to revoke the obnoxious "one hundred dollar tax" in order to prevent it, would it not be better to do so, viewing things in the light of the future?

Of the two evils, which would be the worst, we ask—that of suffering some inconvenience from the operations of speculators in Herefords, or a great deal of inconvenience from the establishment of a rival Hereford record? Please answer, our American cousins, in the language of careful consideration. It may be said that it has not been shown that American Hereford breeders would suffer a great deal of inconvenience in such an event. Well, it has not by us, but evidently our American neighbors think so, judging by their own writings, as the *Breeders' Gazette* characterizes a proposal of this nature from an English source, as "treasonable plotting" against the American Hereford Record, so that the proposal is evidently a remedy looked upon as not a little nauseating, by the former.

It may be said, what is it to us the nature of the relations between England and the United States? In this matter it is something. We have some Herefords in Canada, and they came from England, and are still coming; and if we understand the nature of

the one hundred dollar registration measure a right, those which come to Canada hereafter will not be eligible for registration in the American herd book without paying the tax. Our American friends sometimes want to buy our Herefords, and we are glad to know they do. We will try and give them welcome whenever they come, but as a matter of course they will not want animals that can only be recorded by the payment of one hundred dollars. And therefore Canada is aggrieved as well as England.

But leaving this out of consideration altogether, can our American friends defend the action of the Hereford breeders on the ground of necessity? If so, why have they not done it? They have talked vaguely of the injury that was being done by "speculators," but if speculators start a herd book, what then? Speculators are best curbed by the good sense of the people, who may lose a little, but only a little, till they learn to defend themselves. The act was certainly most unneighborly; candid Americans will not deny that, and it was unjust, as Englishmen have shown that it has cast a stigma on the breeding of Herefords in all England.

We have watched the controversy with no little interest on both sides of the Atlantic, that has grown out of this, and we must say that on the whole, under the circumstances, Englishmen have conducted themselves with great moderation, considering their provocation to the contrary. The same cannot be said of our American friends at times, whose language gives some indications of ill-temper, which, though the effort is being made to smother it up, flames out here and there. To us there is no more certain indication of the weakness of the cause than this. When Luther lost temper in his great disputation with Zwingle, it was because of the weakness of his cause on that occasion; and so it is generally when disputants wax over warm. Right can always afford to be severely calm; wrong never can.

What a graceful thing it would be for American Hereford breeders when they meet again in convocation next autumn, just to say in reference to the obnoxious measure, what the dauntless Saxon would not say, "Revoka." It might be a hard thing for them to do so soon, but it would be a graceful act, and one that the good sense of the onlooking world would doubtless greet with clappings of approval.

### Our Scotch Letter.

STOCK GOSSIP.

In the forefront of this letter the transactions completed not long since by Messrs. Geary Bros., Bothwell, Ont., Canada, whereby they become the owners of two of the leading herds of Polled Aberdeen-Angus cattle in the north of Scotland, deserve to be recorded. The sales have been effected by private bargain, and are probably the most important that have ever taken place in Scotland. Scotland in a sense will be so much the poorer and Canada the gainer by events to which I will now allude.

From Mr. John Hannay, Gavenwood, they have bought the entire herd of Polled cattle, numbering in all 58 head, and including animals of great individual merit. Mr. Hannay has been one of the most enterprising breeders we have. His exhibits at the Highland and Agricultural Society's Show at Aberdeen last year, especially in the class for yearling heifers, created quite a sensation. It may be in the remembrance of some of your readers that the present herd at Gavenwood has been in existence but for a few years, and that Mr. Hannay's last herd also changed owners by private treaty. But while the herd which the Messrs. Geary have bought is in that sense of recent origin, it embraces a combination of blood and an amount of individual merit in the animals themselves that very few indeed of the older herds could lay claim to. A mere enumeration of the different families will bear out this statement. There are

two Prides of Aberdeen; 6 Vines of Tillyfour; 2 Lady Idas or Blackbird of Corskies; 2 Victorias of Balwyllo; 2 Corskies; 2 Patiences of Corskie; 3 Rothiemay Hawthornes; 2 Roses of Westertown; 5 Fyvie Flowers; 2 Rothiemay Georginas; 2 Delias of Cortachy; 2 Tillyfour Ruths, and a number of animals of Kinnochtry descent, such as Baronesses, Beauties, Princesses and Favorites and Ballindalloch Sybils and Montbleton Alexandras. The Kinnochtry and Cortachy strains have bred very successfully at Gavenwood, the former producing the first and third prize one-year-old heifers at the Highland Society show, to which I have already made reference.

The Messrs. Geary are also to be congratulated upon the purchase of the Rothiemay herd belonging to Mr. Taylor, of Glenbarry, and founded in the year 1846—a grand old race that have done much to improve the character of the cattle on this side of the water. They have been judiciously managed by Mr. Taylor's griever, Mr. Alexander Smith, and have been kept for their milking and breeding properties, and never pampered or overfed, so that they should be favorites with Canadian breeders. The herd numbers 34 head, and comprises 4 Crocuses, 3 females and 1 bull calf; 5 K's of Glenbarry, 3 females and 2 bulls; 2 Nosegays, 1 female and 1 bull; 3 Lady Fannies, all females; 10 Rothiemay Georginas, 9 females and 1 bull; 6 old Dandaleith cattle; 2 Ladys of Buchan, both females from Jane of Bogburn by Grey-breasted Jack (2), and 1 bull Statesman of Drumin out of Patience of Corskie II., and by Idris.

The Kate and Georgina strains are a very old sort, and have produced a number of notable winners. The Crocuses were bought originally from Mr. Hannay. They are favorites here and also in Canada, where a few of them have gone. The first prize Highland Society bull Lord Chancellor, which went to America was out of a Crocus cow and bred by Mr. Taylor. The Nosegays and Lady Fannies are two of the oldest Ballindalloch families, the former being famous for their superior milking qualities and the latter are generally very neat symmetrical cattle, in great repute among breeders. Taken all in all this consignment of the Messrs. Geary will be without doubt the finest that has ever entered Canada from this country. It is with regret that home breeders have seen the breaking up of two such first class herds, which, however, should certainly enhance the reputation of the breed in the Dominion.

When upon this subject, there is another item of news that deserves to be chronicled. I hear that the champion Polled bull Justice (1462), the property of Sir George Macpherson Grant, Bt., of Ballindalloch, has been shipped in the course of the last week for America. Calved in 1878, got by the fine old Erica bull Elcho (595), and out of Jilt (973). Justice is the finest Polled bull that has ever left this country. At the centenary show at Edinburgh, two years ago, he carried the championship against such opponents as Mr. Anderson's Prince Albert of Baads. He combines the blood of the two famous strains at Ballindalloch and the Ericas and Jilts, and if he arrives safely on the other side he is sure to make his mark in the showyard. He has been described as the "gentleman" of the breed, and is remarkable for his grand flesh, quality and style. The name of the purchaser has not been definitely stated, although I have heard Mr. Goodwin, Beloit, Kansas, mentioned in connection with the transaction. Whoever he may be, his courage in exporting this splendid specimen will, I hope, be rewarded. Young Viscount (736), another of the famous stock bulls belonging to Sir George Macpherson Grant, Bt., of Ballindalloch, has gone to the butcher in his thirteenth year. The day he was knocked out to Sir George at Mr. Hannay's sale in 1878, I remember well. The price was 225 gs., and was regarded as a big one; but the result has shown that the owner of the Ballindalloch herd, guided as he was by the judgment of a capable manager, knew what he was doing. He was out of one noted Erica family, and got by Hampton (492), and he has left at Ballindalloch a lot of grandly-ribbed females which have done not a little to raise the character of his fine herd.

I have just received from Mr. Wilken, Waterside of Forbes, a letter stating that Mr. Goodwin is the purchaser of Justice. Mr. Wilken, I believe, negotiated the sale.

Our spring sales of breeding stock have been dull affairs, and there has been generally a pretty heavy fall in value all round; but looking to the state of trade and the great reduction in the price of dead

meat, not heavier than most people looked for. The total number of Shorthorned and polled cattle sold by auction in the last two months was 847, which realized a gross total of £18,459 15s.; of these 496 being Shorthorns, which fetched £10,754 2s., and 351 Polled, which brought £7,705 13s. Analysing the various sales I further find that 267 Polled bulls made a total of £5,638 10s.; 84 Polled females, £1,767 3s.; 427 Shorthorn bulls, £9,509 6s. 6d., and 69 Shorthorn females, £1,244 15s. 6d.; and curiously enough, that the gross average price of the two breeds is almost identically the same—£21 13s., and a few pence. It must be remembered that most of the animals were one-year old bulls, but even then the price will compare unfavorably with the prices current a few years ago. There was one feature of the sales from which breeders may draw much encouragement, for it was not a little noteworthy, that while the depreciation in the value of second class sorts must have been to the exposer's simply ruinous, there was not much to complain of either in the demand or the money offered for the superior class of stocks. The high prices that prevailed a few years ago induced many to keep for bulls, animals that would formerly have been steered, and ought, in the interests of the breeders themselves, and the country at large, to have gone to the feeders' stalls. But a wholesome lesson should have been taught by the recent sales, to those who sought to palm off what you, on your side, would call "scrubs"; and it is to be hoped that these "scrubs" will get fewer every year. Your countrymen—the Messrs. Geary, have doubtless got an advantage in buying these fine Polled herds I have spoken of, when, from a breeder's point of view, trade is so bad. The prices they have paid I have not heard stated, but the cattle would, I imagine, have been purchased on very reasonable terms, when compared with the Polled sales of 1882 and '83. Such a heavy drain on the Polled cattle in this district may help to give a firmer tone to the trade.

By the way, there is to be a draught sale at Ballindalloch next autumn, which is expected to be the event of the season; and about the same time the herd of famous Shorthorns belonging to the representatives of the late Mr. James Bruce, Burnside, will come under the hammer in consequence of the lamented death of their owner.

QUIDAM.

Aberdeen, 1886.

### Amongst Our Friends.

"Your JOURNAL, in advocating the breeding of good cattle, is doing an amount of good which will only be properly appreciated in after years. The same rule applies to horses, and in fact to every animal on the farm."—M. O'Connor, Mount St. Patrick, Guelph.

"Our Dominion may well feel proud of the enterprise exhibited by the CANADIAN LIVE-STOCK JOURNAL, which is in my humble opinion second to none."—Harry Pattinson, Dover, Sec. Thames Farmers' Club.

"I like the JOURNAL very much, and would not be without it."—R. McLennan, Lancaster, Ont.

"The CANADIAN LIVE-STOCK JOURNAL is doing a good work, and is worthy of the hearty co-operation of every intelligent farmer in Canada."—Alfred E. Kaffer, Concord, Ont.

"Am exceedingly well pleased with the style and tone of your paper. It is all I could desire."—James McKay, Hope Cottage, Stellarton, N. S.

"Your article on underdraining is worth the subscription. There is no farmer in this neighborhood that can afford to do without the JOURNAL."—John Neslake, Woodville, Ont.

"Am well pleased with your JOURNAL, and hope its circulation may be greatly increased."—E. W. McCulloch, Grand Valley.

"I have been waiting and wearying for the February number of your excellent JOURNAL, and now the March number is to hand. Please forward the missing number, as I wish to get them all bound and placed amongst my standard works."—John Lennox, Caledonia Farm, Churchill, Ont.

"We are very much pleased with the JOURNAL."—J. & W. Cannon, Anson, Ont.

"I am both pleased and profited by reading the JOURNAL."—James Ferris, Lavender, Ont.

### The Duty of the State to Exhibitions.

From the *Breeders' Gazette*, of Chicago, we learn that Mr. H. Wade, Secretary of the Council of the Agricultural and Arts Association of Ontario, read a carefully prepared paper at the second annual convention of the International Association of Expositions, held at Indianapolis, Ind., Feb. 3rd and 4th, 1886, on exhibitions as an educating medium, in which he took the high ground that the true object of every exhibition should be educational in a mental, a material, a social and a moral sense, and deprecated the idea that fairs should be made a holiday, or mainly a source of pleasure. He argued that the State and municipal authorities, should make up any deficiencies that might result from the management of these exhibitions on the same ground that they should support public schools, and other educational institutions.

The *Gazette* comments favorably upon the position taken by Mr. Wade, and we think rightly. In this modern era no one will dispute that it is the duty of the state to support educational institutions in degree, but there may be a difference of opinion as to the extent of this support. The idea that underlies such support is this, that the benefits which accrue to the state exceed the outlay to secure them. Were it otherwise, the state would be playing a losing game whenever she opened her coffers in support of the cause of public education, and it would then be the duty of every patriotic citizen to cry out against the injudicious waste.

It is safe then to assume, that the state may wisely support any educational medium where it can be shown that the benefits accruing to the same are more and greater than the outlay in securing them. If then, exhibitions are an educating medium of this class, it is certainly the duty of the state to support them, and to support them sufficiently to render a sufficient number of them efficient. But how shall we know when we have a sufficient number? We answer by the same rule which tells a manufacturer that there is a surplus of his goods in the market, which is evidenced in the slackening of the demand for them. When the number of exhibitions becomes so great that with the aid of a reasonable revenue from the state there is still a deficiency, so that other questionable means have to be resorted to to raise a revenue, then it is time to beat a halt.

To show that exhibitions have given more back to the state than they have ever taken from it is no difficult task. But for these we are safe in assuming that the export trade in shipping stock to Great Britain and of breeding stock to the United States had never been. The battle of the "Scrubs" which by and by must end in their extermination had not yet commenced, and only some solitary droppings of private individual enterprise had been felt instead of the blessed showers of progressive impulse that are now falling on so many sections of the country.

Assuming that the average price of a shipping beast is \$75, a very moderate estimate, and that this is one third more than the same beast would have brought in the home market unimproved—a still more moderate estimate—and that it is through the educating medium of exhibitions to the half extent at least, that the improvement is due, then the case stands thus: In 1885 some 60,000 head of cattle were shipped across the sea, the advance of one half of \$25 on each one being due to exhibition influences, we have the gain of \$750,000 to the state in the line of cattle alone. Assuming that the influence on all the other departments of live-stock is the same—not an extravagant assumption—then we have to the debit of the state to exhibitions \$1,500,000 in a single year. But suppose that instead of one-half

the advance being due to exhibitions, we put the estimate at one tenth. We still have the splendid advance of \$300,000 in a single year in the item of live-stock alone, to say nothing of the advance in other lines. It will take a good many years for the state to pay out \$300,000 in support of exhibitions, so that we think the assumption is just that exhibitions in this country have far more than recuperated the state for the outlay, and that on this ground they should receive her support.

But should not exhibitions supported on the joint stock principle receive state aid, if it can be shown that they are productive of a balance sheet of good? They should not, and for the reason that they are private enterprises, and are therefore no more entitled to state support than an importer of cattle, whose work at the same time may be productive of great benefit to the country. We might fancy that it would be wise on the part of our governments to subsidize private enterprises of this kind, directly or indirectly, but once adopt this principle, and the flood-gates are thrown open to every form of demand, both reasonable and unreasonable from every man of enterprise in the land.

But it is only an educational work of unmixed good that deserves the support of the state. If a teacher of the young impart to the children of the school a knowledge of arithmetic, and at the same time publicly proclaims to them, that a belief in the reality of the Eternal One is an illusion, he forfeits his right to state aid, and if the trustees of the school support him in this work they forfeit the same, as the truth is eternal, immovable as the hills, that the state should not knowingly support error or encourage evil doers. This is contrary to the idea that underlies the basis of all civil governments.

If, then, exhibitions which receive state aid adopt any modes of seeking additional revenue that can be shown to be pernicious in their tendencies, state aid should be withdrawn, as the government then would be partakers of the evil. The question then comes up, what are those questionable modes adopted by many of the exhibitions of to-day? Without touching upon a host of these which may be looked upon as sitting on the border line of doubtful utility, we single out a few as to which there should be no question. One of these is the admission of games of chance, undoubtedly a species of gambling. A second is the attraction of the sale of spirituous liquors, and a third the horse race. This latter is the most difficult question to handle, owing to the narrow ledge between the line of utility and non-utility. This is clear, that running horses are not needed at our Canadian fairs. In our every-day life we do not run our horses, nor do we want to; but it is different with trotters. To trot well and fast is very desirable, and it would be unwise not to offer prizes for the best trotters, in harness or out. Exhibitions that practice these things should not receive state support.

The grand idea that exhibitions are intended to instruct, not to amuse, should never be lost sight of. While it is apparent that the state should always be prepared to instruct her citizens, and even to afford them opportunities of wholesome recreation, as in the opening of parks and art galleries, it would be a hopeless task to endeavor to show that it is the duty of the state to provide for them amusement. Athens attempted this, but it was in days when all the kindred spirits of Miltiades had been buried with him beside his hero-grave; Rome tried it, but in days just prior to the thundering of the angry Goths upon her gates; and Spain too felt it to be a duty, but it was in times when the glory of her prowess was departing, never to come again. And when the government of

Canada adopts the same practice, there will be "death in the pot," and evil portents will be strung all around her destinies.

The undue love of money is the root of all the many evils that creep in at our exhibitions. Make them self-sustaining seems to be the popular cry to-day. It ought to be, it seems to us, *render them useful*. Of what possible good can any number of self-sustaining exhibitions prove, if the evil overtops the good? It may not be easy in any case to establish this, but even where the good is not unmixed, and that knowingly to the directors, should they not consider. Suppose \$1,000 extra came in through means of attractions, and that one young man is started on the down grade to ruin as the result. Place the \$1,000 in one scale, and then the temporal destinies even, of a young man—bright, promising, talented—in another, with his morals contaminated, hopes blasted, and moral decay written upon his temples. Has the country gained or lost? Answer, ye men who seek revenue at any price, and see to it, that no man's ruin is laid to your charge. The state is undoubtedly not guiltless if she knowingly aids in any such work, or even winks at it.

### Morgan Horses.

BY JOHN DIMON.

(Seventh Paper.)

During the late war of the Rebellion in the United States, there was great demand for medium sized horses for the cavalry service, and not only the States but Canada as well was pretty well drained of this class, especially of geldings. Of all the mounted troops passing under the review at Washington, of the late lamented Grant—that greatest of modern generals, as well as great lover of fine horses, none were so pleasing to his practiced eyes as the Vermont cavalry, whose mount consisted principally of Morgans; and the Morgan producing States, viz., Vermont and New Hampshire, were during this war so completely drained of their stock, that in order to supply their customers, who, by this time had become quite numerous, they (some of them) brought light horses from the West, and from Maine and Canada, and after acclimating them among the mountains, were ready to sell to inexperienced buyers as Morgans. I don't accuse the breeders or farmers of practising this fraud, but charge it to the dealers or jockeys. There have been so many horses first and last sold for Morgans, that were but little if any akin to them, and yet were so lacking in the requisites of the true Morgans, that people have been sadly disappointed as to the expectations they had formed of their ability to perform all that has been claimed for them. A well-bred Morgan horse of the old New England stock has never yet to my knowledge deceived the purchaser, but of course they cannot be responsible for that class of horses that are sold for N. E. Morgans, whose veins perhaps contain not a single drop of the blood of old Justin Morgan. The above style of horse-jockey dicker has done more injury to the Morgan family of horses than any and all things else that has ever been said or done to their detriment. Of the nine stallions of all the trotting families of the world which have sired individual trotters whose winnings on the trotting turf amounted to \$10,000 and upwards, we find that three out of the nine were Morgans, viz., Vermont Black Hawk, Ethan Allen and Daniel Lambert. The Morgan stallion, Aristos has proved himself a very satisfactory sire, of handsome, speedy and good selling stock, a Mr. Hammel, of Ticonderoga, N. Y., having quite recently sold to a New York party, eight head of his stock for the snug little fortune of \$20,000.

Aristos is a black horse, sired by Daniel Lambert, and is the sire of one of the two thousand dollar black span now owned in Detroit, of which I made mention in a former article.

The Morgans were among the earlier trotters of the United States, and figured on the trotting turf long before it had any such race tracks as we now find at Narragansett or Charter Oak parks; or at Detroit or Lexington; and long before America's best walnut wood and the best manufactured steel had done so much towards producing light and suitable vehicles, such as we now have among us. Among the recorded trotting performances of from 30 to 45 years ago, may be found the following: About 45 years ago Black Hawk won a race by trotting five miles in sixteen minutes and in 1843 he won a race of two miles with ease, time 5:43. Single mile heats, in about 2:40. In 1853 his daughter, Black Hawk Maid, won a race of two mile heats in 5:23. Lady Sutton, by Morgan Eagle, won a two mile race in 5:17; Peppo, by Gifford Morgan, won a race, time 2:31½, and Pizarro, by Morgan Caesar, also a race in 2:35. I could mention numerous other instances of old-time fast trotting of Morgan horses. I admit that the time as compared with the fast time of the present day would not, to the casual observer, be considered as alarmingly fast, but when the casual observer takes into consideration the tracks and the trotting sulkies of those days as compared with those of the present time, to say nothing of toe weights, quarter boots, overdraw checks and the thousand and one other articles that have since entered into the paraphernalia of the trotting circuit equipments—be it remembered that all the above mentioned Morgans of "ye olden time" trotted free and square with nothing on but their regular harness and common shoes, and hitched before such vehicles as no driver of the present day would think of mounting to drive any horse in a fast time race; and over courses that would not be patronized at all now—I say that when the casual observer, or even the closest observer takes into consideration all these facts, he cannot but think those performances very creditable, and quite worthy of mention, even in the *fast* days of our country's history. In the year 1857, when quite a young man, I visited the city of Providence, R. I., to purchase goods for a large store, of which I then had charge, and while travelling on the streets my eye alighted on a beautiful moving, though rather awkward, glossy black mare. She at once struck me as a good one. I soon learned that she belonged to a horse dealer from Vermont, who had several for sale at the old Hoyle Hotel stables, and that she was a Morgan and sired by the Bundy horse and was from a well-bred Morgan mare, and a good one. I was not long in making her my own. Having been bred by a Mr. Fisher, I christened her "Katy Fisher." She was then four years old, had not been driven enough single to be handy, but soon became so and was among the best of the many I have since owned and handled. She was used as a general purpose mare and finally made a most excellent brood mare, and left some good stock in R. I. Her colts were all black and very like herself. This was more than 30 years ago.

Windsor, Ont.

#### A High Tribute.

"Every farmer from one end of the Dominion to the other ought to be a subscriber to your JOURNAL, for if he owns thoroughbred stock, it is worth five times the money to him, and if he owns none, it is worth ten times the subscription price to learn the advantages of keeping such stock."—F. Wiltshire, Kentville, N. S.

#### The Ayrshires of Sydenham Farm.

We have seen a drawing somewhere used to advertise the Wanzer sewing machine, which we thought exceedingly well done. It represented a vessel coming to the wharf, called the Wanzer, laden with a cargo of sewing machines, even to the water's edge, and every one of which was labelled the Wanzer. The wharf was already covered with the same, and on each you could distinctly read, the Wanzer. A dray wagon was there, in which machines were being loaded, and the waggon was labelled Wanzer; and one or two men walked landward, carrying large valises, and on each of them, with much distinctness, one could read the prime word, Wanzer. The grand idea seemed to be to impress the onlooker with the extent of the business, but more with the man whose tact and enterprise was pushing it in many lands. We have often thought since seeing this sketch, that it would more fitly represent the work of Ayrshire breeders, particularly in the days of the past, for Ayrshire cows in Canada to-day outnumber the other pure-bred dairy breeds by more than five to one, and if in coming days these numbers are reversed, we believe it will be more the fault of the breeders than of the breed they handle. A vessel called the Ayrshire, landing at Quebec, and laden with cattle of the Ayrshire breed, milk-waggons and cans all labelled Ayrshire, would fittingly represent the work that is being done by this handsome little breed in the dairies of Canada. And another ship moving seaward, filled brim-full of huge cheeses all labelled Ayrshire cheese, would not be overdrawn, as the extent to which Ayrsh res and their grades are used in our Canadian dairies is only fully known by the owners of these.

And yet, strange to say, of all the dairy breeds in Canada to day (we speak of pure-breds) the Ayrshires are, perhaps, the least sought for, notwithstanding their undoubted merit and their pre-eminent adaptability to cheese-making. When brought under the hammer they do not bring high prices; and yet we have our doubts as to whether any breed in existence will give a more satisfactory return in the dairy for the amount of food consumed.

Why, then, are the Ayrshires, with their pretty little bodies and their great milk capacity, not keeping abreast in the race? It may be this is less the fault of the breed than of those handling them. In the battle of the breeds the latter are not fighting, and when men will not defend their heritage they must not repine if it fall a prey to the aggressor.

But why, if they have merit, do they not take care of themselves? Because the mere possession of merit is one thing, and the recognition of it another. The two by no means go together. In this clamorous age of self-assertion, he whose claim is most lustily put forth is most likely to be heard, and will first gain the ear of the multitude. While it may be true that merit in the long run will be recognized, it oftentimes takes many passing years to attain this result. In Homer's case it took several centuries, and in that of Milton it was not till he had crumbled into dust that his splendid capabilities were fully known. Modesty in degree is commendable, but it is possible for men so to enshroud themselves in it, that all their lives it may be said of them as of the old Egyptians, they are engaged in hewing out their own sepulchres.

Our argument finds ample illustration in the putting of agricultural implements upon the market. Imagine the maker of these, however good in themselves, sending out agents so encased in modesty that they would say nothing in favor of their implements, only that they had merit, and that they would rely upon the wisdom of a discerning public to discover

this. Why, they might as well write insolvent upon their shops at once, for if they did not it might be read there anyway in portentous characters by men of worldly tact. The more aggressive agents of some other firm would at once occupy the ground, and so fortify their position that it would be the work of long years to dislodge them. If one is breeding pure-bred Ayrshires it will afford him but dim consolation to think that their great merits will be recognized a hundred years hence. The great matter to him is to have these recognized now.

The Ayrshires of Sydenham Farm are undoubtedly one of the finest herds of the breed in Ontario, although it has a number of good ones. And what is very worthy of note in its history is, that notwithstanding its successive triumphs in the show-ring, Mr. Thomas Guy, its persevering owner, has never imported a single animal himself, nor has he of late years lost a prize which did not go in most instances to animals either bred by himself or descended from stock of his breeding.

The steps which have led to this singular success, unique in the history of colonial Ayrshires, are but the old story of all abiding success in stock-keeping. Mr. Guy at the outset secured good models, and has all along given much attention to the selection of the right class of sires. He has had an ideal in view and has kept it steadily before him, and although some years elapsed before he realized his object, his success has been not only complete but abiding.

Mr. Guy laid the foundation of his Ayrshire herd in 1863, purchasing two heifer calves from Mr. Geo. Morton, who lived near Kingston. One of these, Lady Morton, made her two pounds of butter per day on grass; the other, Gurta, a second-prize calf at the Provincial, produced a goodly number of calves and was finally sold to go to Montreal. In 1884 a second investment was made at the Montreal exhibition, when a heifer calf, Effie, a second-prize-winner, which in Mr. Guy's hands proved a first prize-winner for Ontario, was purchased along with a bull calf from Messrs. J. P. & T. A. Dawes, of Lachine. The latter was at length sold to a Mr. Stoddard in Wisconsin, since followed by a goodly number of the same breed from the Sydenham herd.

With Mr. Guy, as with all presently successful breeders, the choice of a bull has always been a great matter; and here as elsewhere it has proved the key-stone to success. Bismarck, of a noble ancestry, was early secured from the herd of Dr. Bridges, of Ogdensburg, N.Y., and after five years of most useful service was sold to a Mr. Blanchard, in Nova Scotia, and there won a number of Provincial first prizes, as here. Next came Indian Chief from the herd of Mr. James Lawrie, of Malvern, and out of the imported cow Kitty Muir [454]. He stood first at the Provincial for four successive years, or whenever shown by Mr. Guy. He was followed by Royal Charlie, bred at Sydenham and sold to Manitoba when four years old. Sir William Wallace [124], bought when a calf in 1879, came next. He was bred by J. Jardine & Son, from the imported cow Heatherbell, and the sire Mars I., of Provincial prize-winning fame. Sattellite, a calf from this bull and the dam Snowflake, took his place, and still stands at the head of the herd. In Ontario show-rings he has been first every year, carrying the Provincial silver medal at Guelph when one year old, and again at London last year. He is a bull of fairly fine bone, is exceptionally long in body, plump and long in quarter, and very neat for so large a bull. Stoncalsey IV., sired by imported Stoncalsey, of Experimental Farm fame, and from the prize-winning dam Juno 2d, is also used as a stock bull.

To go over the many good cows and calves in the herd in detail would make a long story. We shall simply speak of Oshawa Lass, now seven years old, a cow the fame of which as a prize-winning milker at our show-rings, rivals that of the renowned Gurta 4th, bred at Sydenham, a cut of which appeared in the January number of the JOURNAL, and which is now in the herd of Messrs. Coldren & Lee, Iowa.

If there is one idea that we would like to impress upon our readers in reference to stock-keeping more than another, it is this, that when breeders concern the front and distinguish themselves highly in any line, it is not the result of a harvest reaped in the fields of luck, but that of rational effort, and unceasing painstaking; nor is the success of Mr. Guy with his Ayrshires any exception. In addition to a most careful selection of sires, his cattle are the objects of a most careful supervision. While being kept well, they are not forced. Although this answers well in beef-production, it is not conducive to the developing of milking qualities, but rather the reverse.

Mr. Guy is now fast reaping the reward he has earned so well. When he started his Ayrshire herd, his strong antagonists for years were Jardine & Son, Hamilton. Steadily gaining ground upon this firm, when they retired from showing, he was left in possession of the field, a position which he has maintained up to the present, not only in Ontario, but also in the lower Provinces, every year at the Toronto Industrial carrying the herd prize, and a large number of other trophies. At Toronto in 1882 his famous cow Gurta was first as best milker any breed, quantity and quality, Jerseys competing. In 1884 he also won first in competition with all breeds, and at London last fall second for best milker, any breed, quality and quantity considered; and if beaten of late in Ontario show-rings, it has generally been by stock of his own breeding, as mentioned heretofore.

Many of the good Ayrshires now in Ontario came originally from this herd. A show herd was sold to Messrs. Coldren & Lee, Iowa. Thirteen head were sold in one lot in 1882 to go to Nova Scotia. In 1885 he supplied the Government farm in New Brunswick with a stock bull, and has, so far as we know, in every instance supplied animals that have given much satisfaction.

Sydenham Farm is but three miles from Oshawa, and but two miles from the station on the main line of the G. T. R. It consists of 200 acres lying prettily on a promontory formed by Lake Ontario and Sydenham harbor. On the southerly shore the voices from the waters talk strangely to the listener, for they seem to come from the interminable shores of the far away, and landward the church spires of favored Oshawa glisten brightly as they greet the rays of the rising sun. As to whether the farm or the Ayrshires which it feeds is making the most marked improvement, we cannot tell; but long may they both continue to flourish.

For the CANADIAN LIVE-STOCK JOURNAL.

### The Beef Breeds of Cattle.

BY R. C. AULD, DEXTER, MICH.

The series of papers written on this subject, to appear in successive issues of the JOURNAL, were originally prepared for a western contemporary, but have been specially revised by the author for the JOURNAL. They will no doubt prove interesting to many of our readers. We deem them worthy of a place in the permanent literature of the bovine races.—ED.

#### SHORTHORNS.

First to come under consideration when treating of the beef breeds of cattle are the Shorthorns; not, indeed,

that they were the first to be improved, as the Longhorns in fact preceded them, from following the methods of improving which, by Bakewell, the early breeders of Shorthorns profited; but because they almost of a natural necessity became a favorite race. Around the subject of their origin and history some of the hottest disputes and controversies have raged. In the earlier works they were described as the Dutch breed—"the breed being improved by frequent selections from Holland;" but since modern writers have investigated the point, little, if any, trace has been found of any of these alleged importations at the ports of Hull or other places. And since the investigating spirit of this century has been probing the matter with the aid of science, quite a new light has burst upon it.

The men who have the grand credit in a great degree of unraveling the mystery are the late Rev. John Storer, author of "Wild White Cattle of Great Britain;" Rev. George Gilbert, Shorthorn sage and seer, of the *Agricultural Gazette* and *Live-Stock Journal* of London; Rev. Holt Beever, author of "Leading Shorthorn Tribes," and others. These men have devoted all their lives and energies to discovering and putting the links of the past together, aided by science and the records of other years. Their views may be thus summarized: In the earliest times there roamed over the greater part of Wild England the wild cattle—*Bos Urus*. These cattle varied as to color, points of ears, muzzle, tail, hoofs, etc., being either red or black. They were also, numerously, poiled. These cattle became "enclosed" in the Forests or Parks of the Lords of each district, or in the Abbeys of monastic houses. At a later date, from these various enclosed races the "Monkish" and "Manor" herds were selected, partaking of the "wild white" characteristics—deep milkers, hardy and fleshy.

It is supposed that it was from this pure fountain that sprang, by natural overflow into the country herds of last century the cattle to which improvement could be traced. At any rate that improvement began to appear along the valley of the Tees, hence the cattle were named *Teeswater*, a name that long stuck to them abroad, as *Dutch* or *Holstein*, and also *Holderness* had at home. These Teeswaters were still large and not very gainly; big, bony, but not very fleshy; roughish, with plenty of hair; were large consumers and had considerable offal. They had good size, and this seems to have been thought of importance. Certain it is they spread and became distributed into many parts of the kingdom. Next some "great" breeders took hold of them, and worked long at them. They reduced the size, lessened the bone, lightened the offals, improved the symmetry, increased the fattening properties, shortened the horn—made it, indeed, a more acceptable breed than most others, even of that day. They fashioned it into the modern fashionable animal, and now it came to be called the Durham, or Shorthorned, and lastly, what the immortal John Thornton is careful to reiterate, the *Shorthorn*—not Short-horned.

As it exists to-day, it is a parti-colored race. It varies in color from dark red to pure white, being also found in all combinations of these. It may be all a deep red, notably in Lincolnshire, a famous cattle district, from the superior quality of whose cattle the American preference for this color may have originated. It may be all white, which color is regarded, indeed, as the original color—in many places this may be regarded as evidence of its having been derived from the "wild cattle" of the Parks. White,

however, early came to be at a discount and abhorred. This arose from the fact that white cattle were considered delicate and more liable to disease than black or those of any deep color. This is, perhaps, a mistake. Some kinds of white may induce such a temperament; but certainly the qualities of the old white cattle for milk were inferior to none. It is a fact that the white Charolaise cattle of France are hardy enough, as well as good in all other points. Fashion, however, is a stubborn thing, and white was a *dete noir*, if I may use such an expression, as are the black nose and horn and hoof-tips to-day.

Notwithstanding all this, some of the best Shorthorns that have appeared were white and grand getters, e. g., Lord Irwin in the north of Scotland. The color may be red with white, or it may be a blend, or a mixture of these two, constituting the roan, which may be dark or light, rich red or white, as the case may be. Roan is the Royal color. It will be seen that the Shorthorn breeders are less bound by restriction in color than breeders of any other variety, and this was one great aid in their favor in improving the breed. If they had restricted themselves to all one color they might not have done what they have, and they might have bred themselves out. Roan is the best color—the favorite color in Britain. Breeders ought to adhere to that; or, at any rate, to one standard, as the Hereford, Devon, Sussex and Aberdeen men do. There are, in fact, as it were, three or four different breed varieties in the Shorthorn category, if color had been made the standard of breed. The Shorthorn breeders cannot lay great claim to breeding to a certain type when they have such varied hues. The breeders took all these colors as they came, endeavoring to intensify the propensity to fatten early, with the production of milk and meat. They perfected as near as it was possible their gaudy symmetry. They made it, what they boast of, a generally useful or general purpose or utility breed. That is, they have made a pliable material, that could be formed at will of the breeder, if they desired, into a beef or milk animal, while being derived from such a "cosmopolitan," i. e., every original breed source, it came next and lastly to be useful for crossing and mingling with other breeds—best with those from which its varieties had derived some of their own special composition. It accommodates itself remarkably to all circumstances too; and, when properly treated, is as hardy as any. Witness the Scotch Shorthorns—as milkers the cows give large yields, if it is not of the richest quality; as beefers the steers grow sufficient beef, if it is not quoted high in the markets; it is a well-known fact that improved Shorthorns rank third in the market quotations. As we have said, to a certain degree they have been useful for crossing; but this usefulness or adaptability was the very one that was the cause of the worst charge that may be laid at their door. Where they were introduced, they obliterated many of the fine old native breeds of Britain. Look at Ireland. Why, the Kerry alone survive! and how miserably are the Irish crosses regarded in Scotland! Look at Fife—the old Falkland breed, has been obliterated by perpetual crossing with the Shorthorn, which has left a "no back-bone," quite inferior race. Then in other places it was the same—left the meanest of bovine kinds. It, however, became a cosmopolitan breed.

Its varieties of stamp and qualities are characteristic. The numerous sources it has drawn its blood from have made it so. It has been very useful in the first cross whenever scrubs held carnival. It has had a useful career and has yet a useful future before it. It has been a valuable friend and is worthy all the

care and attention that can be still bestowed on its farther improvement and reinvigoration. As we have said, "improvement" touched first the Longhorn, then the Shorthorn, then the Aberdeen and Hereford. But though improvement came to the Longhorn first, that does not mean that that breed was the improvement of the Shorthorn, coming next, due; or that in like manner the improvement of the Aberdeen or Hereford was due to the Shorthorn. By no means. Each improvement was independent of the other, though one may have preceded the other. The improvement of each had no connection with the improvement of the other. The fact of *priority* had much to do with locality, with better farming, and the improvement of the country. No one will but admit that the Shorthorn of to-day is quite a different beast from what it was in the beginning. It has improved with improved aids and methods of feeding. The improvement of Aberdeens and Herefords proceeded similarly. Good farmers or feeders took the best they could procure satisfying their accurate eye, gave them and their descendants continued generous treatment. By this means they made improved qualities hereditary; and this went on for generations. Hereditariness made these good qualities more accumulated and accumulative in an increased degree as time passed over a more and more improved country. But it would indeed seem that the Aberdeens and Herefords have, in the time and talents that have been given to them, improved more even than the Shorthorns.

In considering the Shorthorn, so much is known of the history, qualities—in fact, all connected with it—that I have avoided, as much as possible, the old historic highways, and dealt with the universal intruder in a very summary and general sort of fashion, and from a thoroughly modern standpoint.

(To be continued.)

### Feeding Stock.

EDITOR CANADIAN LIVE-STOCK JOURNAL.

SIR,—In looking over the JOURNAL from time to time, I (as an amateur) am often surprised at the wonderful success that appears to follow the persistent efforts of some men in particular spheres; for instance, such as butter-making, and also in fattening stock. It certainly is a large field open to great development, and as I have tried in some small measure to do a little in the way of fattening stock for the last three or four years, I find that much can be done by persistent efforts. Having a small herd of Durhams I thought I must try my hand, and I believe there is a great deal of truth in your remark, that it is a great mistake to sell by the lump. If I am not trespassing too much on your good nature, I will give you my experience with one animal last winter.

I have weighed him monthly for six months.

From Nov. 7th to Dec. 5th,	28 days,	he gained	77 lbs.
" Dec. 5th to Jan. 9th,	34 days,	"	38 lbs.
" Jan. 9th to Feb. 6th,	28 days,	"	45 lbs.
" Feb. 6th to Mar. 8th,	30 days,	"	62 lbs.
" Mar. 8th to April 19th,	33 days,	"	92 lbs.

Now by the figures, the supposition will naturally be, what was wrong the second month? I answer, nothing, as he never for once refused his food to my knowledge; but the difference was in the feed, as I have not followed the same course two months alike, and I feel satisfied that the same beast can be brought to three pounds per day without injury.

If you think the above worth inserting in the JOURNAL, I may give you some more jottings by and by.

C. W. HAMMOND.

Rugby Lodge, Wingfield }  
County Peel, Ont. }

Would Mr. Hammond please go a step further and give us the kinds of feed that produced the best and the poorest results? Any experiments of this nature are valuable and interesting, and will find a welcome in the pages of the JOURNAL.—ED.

For the CANADIAN LIVE-STOCK JOURNAL.

### The Cotswold.

(Held over from May.)

This breed has become so numerous in America and has been bred so largely without the importation of fresh blood, that it may almost be adopted as a native breed. They lose none of their primitive excellence under their American nativity. They are said to have been introduced into England and Spain in the twelfth century, by Eleanor, Queen of Henry II. of England. Although this is supported by mere tradition, yet it is quite probable that they originated in Spain, as there has long existed, and is now, a breed of sheep resembling the original Cotswold, inhabiting some parts of Spain.

That the wool of the Cotswold was a source of national wealth, is evident, as it was strictly guarded by law. They were, in their original state, very coarse, with a thick, heavy fleece, well adapted to their homes on the exposed slopes of the Cotswold hills. So valuable and serviceable a breed could not long remain without improvement. The nutritious herbage produced by the limestone soil covering these hills favored this improvement, and, as the pastures became enclosed, and advancement made in agriculture, they improved with it. The Leicester, when in its height of popularity, was used to improve the Cotswolds. This cross gave to the breed a better quality, a smoothness of frame, and improved their flesh forming qualities, while it did not diminish their hardiness of constitution. The Cotswold of to-day will thrive apace on all sorts of soil, and is capable of enduring great hardships and exposure. They produce a large carcass of excellent mutton and a heavy fleece of wool adapted to the manufacture of goods of wide consumption. In addition to this, they mature at an early age. It is not unusual to have lambs to kick the beam at 210 lbs. when 12 months old. The weight of a fleece should average eight lbs. for a flock of all kinds. Many ewes will yield from 11 to 12 lbs. apiece, while rams will occasionally clip 18 lbs. The wool sometimes reaches a length of nine inches or more, and although somewhat coarse, is soft and mellow. This breed is not surpassed by any other for crossing. By a judicious admixture of its blood with that of other species, some of our permanent Cotswolds have been produced—the Shropshires and the Oxford Downs in England, and a Cotswold-Merino in Germany. It is also extensively used by sheep-raisers both on this and on the other side of the Atlantic, in the production of market lambs. Their hardiness renders them peculiarly adapted to almost any locality, and they yield a wool, whether in its pure or graded state, admirably designed to the uses of the woollen manufacturer. The Cotswold may appropriately claim to be the most useful sheep we have hitherto bred, or are indeed likely to breed in the future.

Kossuth, Ont.

A. E. MEYER.

For the CANADIAN LIVE-STOCK JOURNAL.

### Quality of Flesh Governed by the Quality of the Food—Early Maturity.

The effect of food upon the growth and development of our domestic animals has been quite too little considered by many even of our most competent breeders. Take, for instance, the intelligent breeders of Shorthorns. Page after page; yea, volume after volume has justly been written in praise of this breed, and along with other excellences it has been said that they furnish the most perfect bovine type of human food. But we are under the impression that

too great a reliance has been placed upon the constitution and blood of the animal, and too little upon the process by which this has been produced. Many have the idea that the animal has the power to so change the elements of its food as to produce a flesh-flavor which was not present in the food. The flavor of the animal's flesh depends entirely upon the food it receives, for it transmits the flavor of the food to its flesh. The animal creates nothing—simply elaborates and appropriates what it finds in its food. It, therefore, has no power to extract a flavor from food which it does not contain.

The following are a few demonstrations of the effects of food: The Cheviot sheep of the Scottish Highlands and Northumberland hills feeding upon the aromatic herbage of their elevated regions have a peculiar flavor of flesh which renders their mutton desirable; and the small sheep upon the Cambrian hills in Wales are noted for their richly-flavored flesh, and their mutton brings higher prices than that of the sheep of the Lowlands. But if pastured upon the Lowlands for a few years they would lose that flavor.

The Swiss cow, feeding upon her fragrant native herbage, upon the elevated plains of the Alps, produces richer milk than the same cow when fed in the sheltered valleys beneath.

All intelligent dairymen know that the quality of their milk is dependent upon the food provided for their cows. They do not expect to produce rich milk from straw, whatever may be the strain of blood in their cows. The Jersey—a gem in her picturesque little ugliness—is not expected to produce high-flavored milk upon leeks and garlic; but you might as well attempt to breed a cow that would give delicious flavored milk upon leeks, cabbages and turnips, as upon the most nourishing June grasses, as to expect to succeed in breeding animals the flavor of whose flesh will be independent of the quality of their food.

It is true, nevertheless, that an animal of fixed characteristics will utilize such constituents in its food as are requisite for the renewal of all its peculiarities; but the animal which has produced flesh remarkable for its exquisite flavor under circumstances of appropriate food and conditions, cannot continue to do so for any period of time under changed food and conditions.

These facts have been mentioned to show the absurdity of endeavoring to breed an animal that shall be independent of the quality of its food. Hence it will be seen, that the animal is always dependent upon its food for its quality of flesh. Although some animals may, from their constitution, possess greater power of utilizing food elements, and of selecting or rejecting different constituents than others of the same species, yet they cannot elaborate or utilize what is not there.

#### EARLY MATURITY.

As we have already found that the animal must depend originally upon its food for growth and quality, the next important consideration is, how this aliment should be given—whether a scanty diet should be provided; thus producing a slow growth, or the attainment of maturity, in a short time, under the most judicious and skilful feeding. In order to arrive at a safe conclusion concerning this question, it is necessary to examine some of the circumstances relating to growth and maturity. While the animal is un-matured its appetite, digestive and assimilative functions are most active; and the activity of these functions gradually decrease after maturity. When an animal reaches the period of perfect development, its natural habit is to consume and digest only the quantity that is essential to supply the waste of the tissues; and



consequently its weight remains nearly stationary. Another point that must be observed is, that the percentage of waste in the system of an unmatured animal is much less than that of a matured animal. The food necessary to supply the waste of the system accumulates to a large item at maturity. Hence it is clear that the interest of the feeders of cattle intended for food, requires that the shortest possible time should be given to the growth of an animal.

It is evident that in unskilful feeding, the cost of merely supplying the waste of the system during four years' feeding of steers will be almost as great as to produce animals of equal weight at two to two and one half years; or, in other words, young animals under the care of a judicious and skilful feeder, will produce twice as much weight at two as at four years, on the same food. But some will say, "Your steer cannot be matured at two years." It is quite true that the marks of maturity are that the permanent teeth are complete, the animal fully grown, and all its physical qualities perfect. Cattle receive all their permanent teeth at four to five years. This period of dentition occurs in a state of nature, when the animal seeks its own scanty forage, or under the management of a slipshod and parsimonious feeder. But our improved breeds, after years of judicious feeding, mature in from one to two and one-half years earlier. A study of the realities pertaining to early maturity shows that the animal is as perfectly developed in all the parts of its anatomy as if it had been produced under the old style of feeding and management, at the expiration of four instead of two years. This refutes the objection that a fixed period of time is requisite to perfect the growth and construction of all things—and that whatever is produced rapidly must be lacking in completeness and perfection. Objectors have frequently regarded this as a demonstration; but it is simply an assumption. All the processes of digestion and assimilation are chemical processes. Decay is a chemical process; but will any one say that the slow combustion of wood by decay in the open air is a more perfect combustion than its reduction to ashes by fire.

Animals in their natural state gather their coarse, fibrous food by long and wearisome exertion; and the small percentage of nutriment is assimilated into the tissues of their body. But under the best system of growing animals the food is provided in a more assimilable state, and in as large quantities as the digestive powers of the animal will permit, which can all be utilized in a much less time. Does it appear reasonable, then, as a matter of theory, to imagine that its digestion and assimilation will not be so thorough? Our present varieties of apples are supposed to have originated from the wild crab, and each of these improved varieties ripen earlier than the original stock. Have they degenerated? The illustration may be applied to every department of vegetable and animal growth. It is clear, therefore, that the quality of food governs the quality of the flesh; and that the greatest profit is realized from food when fed to immature animals, thereby showing the great importance of early development as an element in raising cattle for their flesh.

A. E. MEYER.

Kossuth, Ont.

### Mr. Russell's System of Feeding.

The world with all its progress has as yet discovered no way that will at all compare with the testing of the merits of a tree by the fruits which it produces. In but few places of the Province have we found a herd that will equal in merit that of Mr. Thomas Russell, of Exeter, either in the individual excellence of

the animals or in their very presentable condition at all seasons of the year. Judging of Mr. Russell's methods by the above standard his system of feeding must possess no small degree of merit, and it affords us sincere pleasure to be able to present it to our readers, that those of them who have not as yet attained in this matter may go and do likewise.

The following is the daily winter ration for fifteen head: About four bushels of chaff or chaffed straw (clean wheat or oat), no hay, are put into a box; one wooden pail of bran is added, with two pails of meal, one part ground peas and three parts bruised oats. Four bushels of pulped turnips are added, and a small handful of salt. The whole is dampened with one and a half pails of water, and two hours after one half of the mixture is fed, the second half being fed four hours later than the first. Two of these mixtures are used during the day, the first at 9 a. m. and the second at 5 p. m., and is fed in four feeds, viz., at 5.30 a. m.; 11 a. m.; 4 p. m. and 8 p. m., the last half of the second mixture always being fed the following morning. A small quantity of uncut hay is put into the racks with each feed, save in the case of the grades, when oat straw is used instead of hay. They are let out to water twice a day, 9 a. m. and 3.30 p. m., and are left out for an hour and a half in the forenoon, when the weather is fine. This ration is fed from November until some time in May. A less quantity is fed during the summer, and only morning and evening, with the further difference that green feed is cut instead of straw, and the cows suckling calves get an addition of bran. In the first part of the turning out season they are housed at night, but not when the weather gets really warm.

We consider the above one of the most economical systems of feeding that we have met with, and it is certainly one of the most efficient, or the renowned Bow Park herd of Shorthorns would not have been pressed so closely last season for the Provincial sweepstakes prize. The unfailing regularity with which Mr. Russell feeds his cattle is also a strong element in producing the marked success which has attended his efforts of late in producing so superior a stamp of cattle.

### A Strange Kind of Morality.

Mr. Edward L. Anderson, of Cincinnati, Ohio, in a work written on "Vice in the Horse," and other papers on "Horses and Riding" makes some statements which, if true, are not creditable to the standard of morality in vogue amongst horse-dealers. He says: "It is a foolish hope that by going to a respectable dealer, one may be certain of getting a good horse for a good price. If a dealer can sell an inferior horse for a long price he will do so; and there is no dealer who does not occasionally find that he has worthless horses on his hands. I have bought experience of dealers in purchasing horses in England, America, France and some other countries, and I have never found a man who had horses to sell, feel bound to protect the interests of the buyer. If a man trades in horses for a livelihood, he would bring himself into a state of bankruptcy if he exposed or admitted the defect of his horses."

If what Mr. Anderson has said is true, there is good reason for that feeling which is abroad amongst men to fight shy of a man who makes his living by dealing in horses. If it is not true, horse-dealers should to a man contradict it with becoming indignation, and not allow a libel on the business of dealing in horses to be sown broadcast over the land.

Why should one not get a "good horse" if he is

willing to pay a "good price"? A dealer who, under the circumstances, will not furnish a good horse is not "respectable," whatever epithet men may please to bestow upon him. The dealer who sells "an inferior horse for a long price" is dishonest, and has but little respect for himself. Why should a man who trades in horses for a livelihood bring himself into a state of bankruptcy by "admitting the defect of his horses?" It is about equivalent to saying that square dealing will hurry on bankruptcy, while the villain who takes every advantage of his neighbor's ignorance that he can, will be likely to succeed, or in other words that He who framed the declarations of the decalogue did not fully understand the nature of the work in hand. Honesty and fair dealing are usually linked with stable prosperity, but according to Mr. E. L. Anderson, this does not apply to horse cheats. Does Mr. Anderson not know that *honest bankruptcy* is infinitely to be preferred to *successful roguery*, even though of the negative kind?

Why should the seller not feel "bound to protect the interests of the buyer" in any line of business—we mean in the sense of representing the article exposed as being only what it is? Of course if a buyer persist in purchasing to his own loss after the seller has fairly put the case, the latter is free. An inexorable law runs throughout all the universe binding men to do as they wish to be done by, and if any exception has been made in favor of horse-dealers, then we must acknowledge our supreme ignorance.

If Mr. Anderson has truly put the case for horse-dealers, so much the worse for them. It is that men have faith in each other that the wheels of business continue to revolve. The total loss of this would clog the commerce of the world, and if horse-dealers are going to carry on their business on these principles, we can but say so much the worse for the business. An awful curse hangs over the head of him who gets riches and not by right, and there is no exemption so far as we are aware for any privileged class. It is bad enough when horse-dealers give countenance to the practices recommended by Mr. Anderson, but when these are given out to the world as the principles on which success is based, it is simply outrageous. Under the circumstances we cannot keep silence, and we do hope that in anything future which may appear from the pen of Mr. Anderson on the subject of the horse, for he appears to understand it well, that he will never again say a word in favor of nefarious practices in dealing in horses either of a positive or negative character.

### The Outlook.

With very commendable promptitude the circular from the Bureau of Industries, bringing with it the report of the crop prospects for 1886 up to the date of 15th May, is to hand. This report has already felt the pulse of the coming winter wheat crop and pronounced upon it. It states that we cannot look for more than four-fifths of the crop of the past two years, and we here add that our conviction is, that considerably less than this proportion will be realized. The fall wheat crop has been roughly handled during the past winter. Some has been smothered, some frozen; some was thrown out, and nothing but the generally favorable condition in which it went into winter quarters has saved it from wholesale destruction. The Lake Huron counties report favorably. Of the Lake Erie counties, Welland alone promises a full crop; Lincoln and Northumberland only of the Lake Ontario counties give a favorable report, and Perth only of those that are inland. The St. Lawrence and Ottawa groups (where not much is grown) speak

hopefully, while in all the other counties the prospect is not cheering.

The reports on clover are favorable, except in old meadows, where it is mostly killed. Frost, ice and heaving are assigned as the causes, but we cannot help thinking that the midge has had a hand in the work. Its ravages, no doubt, tend to prevent strong, full development of the plants, which, owing to their enfeebled condition, fall an easy prey to the attacks of an elemental foe, in whatever form it may come.

The spring in most parts is much earlier than was that of last year and the reports on spring crops are very cheering.

The reports on live-stock are very favorable. Young pigs and spring lambs are abundant, and all the grammivorous kinds have been turned out fully three weeks earlier than usual.

The average monthly wage for laborers for 1886 is \$16.25 with board, and \$24.02 without board; as against \$16.45 and \$24.75 for the year 1885.

### The Toronto Industrial Fair.

The manager and directors of the Toronto Industrial Exhibition have for some weeks past been quietly but energetically preparing for the holding of their next great Fair at Toronto, from the 6th to the 18th of September.

The prize list has been carefully revised and has been issued. It is made additionally interesting this year by containing cuts of the various breeds of live-stock for which prizes are offered, and also by views of the city of Toronto and its principal buildings, etc. Twenty-five thousand dollars have been set apart for prizes, and of this amount about \$15,000 is apportioned to the live-stock, agricultural and dairy departments. A number of special prizes are offered by outside well-wishers of the Exhibition, among which is a sweepstake of \$50 by the Clydesdale Horse Breeders' Association, for the best Clydesdale stallion of any age, registered in the Canadian Stud Book. Also two special prizes of \$50 each for butter and cheese, by the Higgins Eureka Salt Company. The Fine Art Department, which has been omitted from the last two exhibitions, will this year be managed by the Ontario Society of Artists, who promise to provide the finest display of pictures ever seen in Canada.

The directors of the Association are determined that their next exhibition shall not be one bit behind their previous exhibitions, and that it shall be as much ahead of all former ones as their well known energy and indomitable pluck can make it. It is safe to say that of all the attractions which Toronto offers to visitors this year the great Industrial Fair in September will be the best and most important. Any of our readers who may desire a copy of the prize list can readily secure one by dropping a post-card to Mr. H. J. Hill, the manager and secretary, Toronto.

### Veterinary.

#### Diseases and Accidents Incidental to Parturition.

BY F. C. GRENSIDE, V. S.

#### EVERSION OR EXPULSION OF THE PASSAGE TO THE WOMB (VAGINA).

In speaking of "eversion" of the womb it was stated that the vagina was usually expelled in conjunction with that accident of the organ, rendering the expelled mass larger, but otherwise not materially increasing the gravity of the lesion. It also occurs in an uncomplicated form, and often proves a trouble-

some, and somewhat intractable condition to deal with.

Non-pregnant cows occasionally manifest the trouble; but it is often noticed during a month or two prior to giving birth, and still more frequently within a few days after birth.

#### CAUSES.

There do not appear to be any cases of this accident recorded as having occurred in domesticated animals prior to their first conception; but it may be possible that the walls of the vagina might become the seat of inflammation, and the swelling thereby produced lead to straining and expulsion of the organ even before the generative system has been brought into active use. The walls that form the canal under consideration are attached to the bones surrounding them by a form of tissue, the office of which is simply to keep this organ in its proper situation. Now, during birth these walls may get folded, in places, in some instances, particularly if birth has been difficult, which subjects the connective tissue to strain, and possibly to laceration, thus rendering the medium of attachment lax, and the organ it controls liable to displacement. If this tendency exists, the irritability and paining that follows birth, often results in this organ's displacement, which may or may not be followed by the womb. As the time for birth draws near, and the size of the fetus is large; when the pregnant animal lies down the womb and its contents are pressed backward into the cavity which the vagina occupies; and if there is any tendency to displacement there is liability of expulsion occurring. This tendency is much increased if the animal lies low behind, causing the heavily laden organ to gravitate backwards and force the vagina before it. To sum up the causes of this accident, we may say that anything that tends to abrade, irritate, or strain this organ, will tend to cause its expulsion.

#### SYMPTOMS.

The signs of this accident are chiefly local, but in aggravated cases there may be evidence of fever, and there is generally straining. The local symptoms are the presence of a tumor in the opening into the passage, which varies in size from the volume of an apple to that of a large melon, and when large, hangs as a pendulous mass, smooth on the surface, except where abrasions are present. It is more or less deepened in color from a light red to purple or purplish black, coated with a sticky secretion that is in some bad cases offensive in odor. Mistakes are sometimes made by confusing "eversion of the womb" with that of the vagina, but there are some distinguishing features which, if understood, will prevent error. In the cow and sheep there are naturally elevated patches (cotyledons) on the lining of the womb that are not present in the vagina, and in all subjects, when the vagina is hanging out, there is a well-marked channel on the lower surface, which is not appreciable in expelled womb. When the expelled mass is not large it usually returns, so that it is not visible when an animal is standing; but if it assumes formidable proportions, it will not return without manual aid, but may lead to expulsion of the womb, particularly in a case that follows birth; or else result in mortification. The acts of passing urine and voiding forces often cause the reappearance of the tumor between the lips of the vulva. It has a decided tendency to assume a chronic form, and to become displaced when any of the before mentioned causes are in active operation.

#### TREATMENT.

In cases that occur prior to birth there is often much difficulty in bringing about reposition, that will

be lasting, until delivery has taken place, then restoration to the normal situation and condition of the organ frequently follows spontaneously. If proper measures are not adopted for repelling the extruded organ, or controlling its inclination to increase in size and seriousness, it may lead to abortion, premature birth, to complications in delivery, or to persistence after birth has occurred, thus assuming a form to be dreaded as compromising the value of an animal.

If the expelled organ is inflamed as indicated by deepened color, syringing with moderately warm water after reposition is accomplished, followed by forcing in a two per cent. solution of carbolic acid will tend to allay irritation. This is in case of recurring "eversion," when inflammation has to some extent subsided, smearing with an anodyne-astringent ointment, made as follows, will be beneficial in allaying irritation and reducing thickening: Take a drachm each of powdered opium and tannic acid, and thoroughly mix with an ounce of vaseline; apply whenever the tumor makes its appearance. This treatment is suitable in cases in which the volume of the tumor is limited in size, but in cases more serious from increased volume, or when the whole or the greater portion of the organ has passed outside the canal, more active intervention is called for, and we sometimes find that it is nearly as difficult to effect the return of the organ as if it were the womb; and the means suggested for that operation are equally suitable in this case, as are also the measures for retention. The necessity for raising a subject behind cannot be too much dwelt upon, and we have found the use of stitches in the vulva easier of application and more reliable than the truss.

In some instances retention baffles all efforts, and properly executed excision of the protruding mass is the only means of averting a fatal termination. This operation has frequently been practiced with success, but we have no evidence that such animals have successfully reproduced afterwards, although there is not much reason why they should not conceive, but birth would hardly seem possible.

#### INFLAMMATION OF THE LINING OF THE PASSAGE TO THE WOMB (VAGINITIS).

This condition usually occurs in conjunction with inflammation of the womb, and the latter being of a more serious character, the importance of the former is lost sight of. But we sometimes have to deal with an uncomplicated inflammation of this organ, and which is due in rarer cases out of ten to difficult or protracted labor, that has caused bruising and abrasion or laceration.

#### SYMPTOMS.

In severe cases there is general disturbance, shown by heightened temperature, impaired appetite, and reduced excretions. The lips of passage are generally swollen, and, if separated, expose the lining in a discolored condition, with evidently elevated local temperature. There will be a discharge of a sticky character, which becomes thicker as time goes on, and is sometimes streaked with blood and may have a foetid odor. In bad cases patches lose their vitality and separate, leaving ulcers behind them. Subjects of this trouble often are inclined to rub the inflamed part against some solid body.

#### TREATMENT.

Most cases soon recover, if the diet, surroundings and general health of the subject are good; but syringing with tepid water and a two per cent. solution of carbolic acid, to which may be added half an ounce of green vitriol to the pint of water, are valuable auxiliaries, and which tend to ward off a chronic excretion and discharge termed

## LEUCORRHOEA, OR THE WHITES.

This unfavorable sequel may call for the administration of tonic agents, as drachm doses of sulphate of iron and gentian given three times a day in crushed grain, for horses and cattle, in addition to injecting the canal with cold water and a solution of two drachms of tannic acid to the pint of water may be used afterwards.

*The Farm.*

THE power of the will is almost omnipotent when applied to any labor that we engage in. If a man's heart is not in his work, he will not usually get on. The act of working will not only afford him no pleasure, which it always should under ordinary circumstances, but it will become positively irksome to him. Working men, whose only object is to get in the day and secure the wage, will never excel as workmen, nor will farmers who take no pride in their work. The number of farmers who simply work at farming is very large. In the true sense of the term they do not farm. So, too, we find stockmen who work at keeping stock, but in the proper sense they are not kept. Now the remedy for all this we believe is pretty much in the power of the will. If the heart is thrown into the work, whatever be its nature, it must progress, and more or less of a liking is contracted for it. The simple fiat of volition, a power that rests with every man, is able to uproot all the foul weeds in Canada, turn our farms into gardens, and fill our stanchions with stock that would be the envy of many lands.

*The Great Drain.*

Farmers usually bear the reputation of being a very economical class, and we think this reputation is on the whole well deserved. Were it otherwise, they would not be able to live amid the comforts which usually surround them, nor would they be able to accumulate at all.

A large proportion of those who are classed as farm laborers lay by nothing whatever, and for the simple reason that they do not use half the economy of those whom they serve.

Economy is a splendid possession providing it is not allowed to sink into the slum of parsimony. And we rejoice to see that it is practiced by the tillers of the soil to an extent quite unknown amongst most other classes. Yet this economy, like the cistern with a defective bottom, has its weak point, which in very many instances, allows a large outlay to leak away almost as it were unnoticed. We refer to the treatment that is so often given to farm machinery and implements.

The report of the Bureau of Industries for 1885 gives the amount invested in implements as \$48,569,725, while the sum invested in live stock is but \$100,690,740, and that the entire value of the produce of the farm other than live-stock is, according to a moderate calculation of our own, based on the figures of yield furnished by Mr. Blue, but \$94,155,541. In other words, the sum invested in farm machinery is more than half the amount realized in one year as the entire produce of the farm, exclusive of the returns from live-stock. If these figures are correct, they afford abundant material for reflection. The statement is nothing less than startling, and should lead every one of us most carefully to re-examine the bearings. To believe that we must keep \$48,569,725 invested to reap produce to the extent of \$94,155,541, or, in other words, that fifty cents must be kept constantly invested that one dollar may be secured, allowing nothing for the labor, should lead to the most

rigid examination of present practices, as the above is a burden that must make the country groan which bears it. Fifty millions of money exposed to the tender mercies of farm hands, very many of whom show a carelessness as guilty as it is cruel, or to the corroding influences of the elements, as is often the case, is a hazardous investment. Money placed in this bank, unless watched over with a most zealous vigilance, not only brings in no interest, but, like the snow in springtime, the principal soon melts away, and has to be renewed.

While we concede that it does not follow that \$50,000,000 are certainly paid out every year for farm implements, as some of those will last for several years, yet it is probable that the annual outlay is not far from this sum, as the returns as stated above do not represent the original cash value, but simply the present value, which in all probability is less than half the original value, as implements at the best rapidly deteriorate in worth, at least they sell at second-hand at a discount that is ruinous.

We do not advocate running the farm with machinery of an inferior class; nay, the very reverse. The farm should be well supplied with sufficient machinery, and the very best of its kind. Take the item of forks. In a single year it will pay a farmer well who has a cumbersome class of these to knock them off the handle, sell the prongs as old iron, and purchase good ones to carry on his work. It is not usual in the first outlay that the mistake is made. The leaks are further from the fountain-head. One of them, and perhaps the greatest, is *needless exposure*. Oftentimes implements are exposed, not so much from lack of desire to house them as from lack of room. At the close of autumn, the usual time for putting them in, every corner is filled with produce; the owner concludes that bye-and-bye, when he gets more leisure, he will collect them; but leisure time does not come in the fall of the year. The farmer who looks for leisure in the autumn indulges in a delusive dream. Winter rushes on apace and covers them with snow; they are frozen to the earth, and the very disagreeableness of the task of putting them in has an influence that is most repelling.

But would it not pay well to construct a shelter for them in such a case? It need not be a costly one. In the absence of ability to build a better, a low shed will answer, with a slab roof, and facing the direction which snowstorms are least likely to come. It would be better even to pay six per cent for money to put up such a structure than to lose four times that amount as the result of exposure. The only safe plan is to have one place for every implement and to put it there when done using it, even though it should be done after the shades of evening have gathered in. Rust and rain take several millions away from our farmers in the line of implements alone every year, and simply because they are *allowed* to do it.

A second leakage arises from the *rough usage* they get. The farmer is sometimes to blame, but oftener the hired help. The man who does not prepare his field for the reaper must not complain if it is broken or injured in cutting the same. And the one who leaves a farm road unmended and out of repair, should not murmur if his lumber wagon wears out in half the usual time. We have known instances where a reaper has been run for several years with less than ten dollars being laid out for repairs, and other instances where more than this sum has been paid by a neighbor for breakages the first season, and on farms very similar in their natural surface features.

The great drain here, however, arises from the barbarous method in which a majority of farm servants

handle the implements of the farm, especially in the absence of the employer. Their conduct in this respect reminds one of the actions of wild beasts rather than of human beings endowed with intelligence, volition, and conscience. If the latter really is possessed, which we suppose we must concede, it has long since been inert; nor will this cancerous sore ever be healed in connection with farm labor until employers make it a part of the agreement when they hire, that the laborer shall bear a part of the expense of breakages. The financial argument is the only potent one with men upon whom moral argument would be thrown away. There are, however, some noble exceptions. Some men use implements with the same care that they would use their own. They are most likely influenced by a power far more potent than that of any earthly master's eye, but these are a long way in the minority. And these should be rewarded. They should not be screwed down to the last farthing by way of wage allowed when the engagement is renewed, but a large discrimination should be made between these and the vandalic class whose depredations in some instances must be borne at certain seasons of the year, things being as they are.

The first outlay for machinery and implements should be carefully considered. The country is filled with agents, and it seems that now, in these days of stern competition, manufacturers cannot do without them. Yet we have thought in certain instances a farmer should not be compelled by any law of trade to pay an agent's fee. If he go to the manufactory and order his machine himself, and pay the same without making any trouble for anybody, he should get the implement for the usual selling price *less the agent's fee*. The manufacturer may object that the agent would complain. Let him complain. After all have gone out of the business who will not work on the terms indicated above, there will be an abundance of those middlemen left. While a certain number of agents is a necessity, a superabundance of them is a national burden. And for this superabundance the farmers are compelled to pay. Try this plan, ye farmers. If one manufacturer will not deal with you as we have suggested, another will; then go to that other, providing it will not inconvenience you unduly.

The first cost of farm implements in the past has been enormously high, but this is a matter that will soon adjust itself in these days of severest competition. Although the manufacturers have no right to be allowed to fatten on the hard earnings of the farmers, they should be well paid for their labor, as the energy they have displayed have brought refreshment to many a weary farmer at nightfall, whose burdens but for the assistance brought by the labor-saving machines of the manufacturer, would have been too much for him.

The grand idea is to get no implement not absolutely required, to get them as reasonably as possible; to purchase only the best; to so prepare the land for their use that the probable wear and tear are reduced to a minimum; house them carefully when not in use; keep them in a good state of repair, and exact a portion of the outlay for repairing every breakage brought about by the carelessness of a farm hand. We feel quite sure that attention to the above directions would cut down the outlay of expenditure for farm implements by *one-half*, and would add many days to the average farmer's life in the load of vexatious worry that it would prevent or remove.

"The JOURNAL suits me very well, and would recommend it to all of the farming public as a very instructive periodical."—Hiram Armstrong, Peterboro.

### First Prize Essay.

ON THE BEST METHOD OF UNDERDRAINING THE DIFFERENT SOILS OF ONTARIO, THE COST AND THE PRACTICAL BENEFITS RESULTING THEREFROM.

(By the Editor.)

(Continued from May Journal.)

*Silt* is the deposit of soil held in solution by running water. It is sure to be deposited in slack water, which may be caused by a break in the fall or by unevenness in the grade of the drain, amongst others, a strong argument in favor of a drain of perfectly even grade from the outlet to the head, where it can be obtained—and where it cannot, the sections which have not a common grade should have one that is uniform throughout each section. Silt may be caught in a basin beneath the drain, which may consist of a single large tile set on end, into which the water flows, deposits the sediment, and then flows on. For large drains, or where the waters of several drains are collected, the basin may consist of a chamber built of stones, or better still, bricks; it should be covered with a flat stone "well packed around the sides with clay, and the place marked that it may be occasionally cleaned out." The drainers of Ontario do not, we fear, give the attention to the item of silt which its importance demands, and hence the tendency to use tiles so large. Although silt basins have till recently been thought indispensable in an efficient system of drainage, the recent improvements made by the New Jersey tile-makers in the construction of junction tiles, etc., have almost entirely obviated the necessity for their use. The curved tiles, made by this firm of various degrees of curvation, greatly assist in abruptly changing the direction of drains. The use of these tiles has not extended to our Province, so far as we are aware, nor have they been manufactured here; why, we cannot say, as clay in the hands of the potter is very plastic.

*Obstructions* other than silt should be guarded against. Roots of trees often obstruct drains, especially willows. Deep-rooting trees and under-drains cannot peacefully occupy the same ground. Mr. Wm. Rennie directed our attention to a piece of spring wheat growing on his "Seed Farm" considerably injured in consequence of the stoppage of the flow in a three foot drain, as he supposes by the fibres of a mangold, which had penetrated the joints and had then become washed downward by an accelerated flow of the water in the drain, thus forming an effectual dam. This points in the direction of deeper drainage. For some time after the construction of the drains occasional *flushing* will be advantageous. This is done by simply preventing the flow for a little and then suddenly removing what has kept it in check.

The *details* of procedure in construction are far from unimportant. When the ground is mapped and the land staked, the *tiles* should be laid down, as material in constructing a fence, and here the fruits of forethought will be sweet, if anywhere. It is cheering to witness intense energy in action, but not to the extent of two stalwart brother farmers humiliating themselves by heaping passionate abuse the one on the other as they snatch for tile in a yard, while the benignant face of an eastern sun is creating the smiles of the morning. The county of Oxford can tell the humiliating details which we have left untold, but the grave of oblivious silence is their fitting resting-place. A Von Moltke is quite as useful in planning a campaign of drainage as in planning a Franco-Prussian war.

The *tools* should be on hand. Those of elaborate construction have been manufactured, but great difficulty has been found in getting men to use them,

which after all is the true test of the value of a tool. In Canadian practice the chief tools used in digging are the ordinary spade or shovel, a ditching spade, longer and narrower, of polished steel, a second ditching spade longer and narrower and stronger than the first, a snipe-bill scoop, a finishing spade, and a pick, are the principal tools used in cutting the ditches. The ditching spade may be twenty inches long, six inches wide at the top and four inches at the bottom, and in ground not too hard can be sunk the whole depth by the operator using an iron shank screwed upon the sole of his boot. The digger always works backwards, clearing out the earth with the scoop every two or three feet. These implements, till recently brought from England, are now kept by advanced hardware-men. The best implement, however, that we have yet heard of, may be had of Mr. Wm. Rennie, of Toronto, at a cost of \$275. It is his recently invented "Elevator Ditching Machine," which is guaranteed to cut from one hundred to two hundred rods of three feet ditch in a day in ordinary subsoil, of which we shall say more further on. It is therefore extremely probable that this labor-saving invention will soon leave the ditching-spade in its place in the tool-house, keeping company with the scythe and the cradle swung by a dying generation.

In *cutting* the drains the plough is frequently used; four furrows usually are ploughed and the earth shoveled back. A subsoil plough is sometimes used with a strong horse walking in the furrow, then draining spades No. 1 and 2 come into use till the required depth is reached. Sometimes the sides may be so loose that the earth excavated must be thrown well back and then supported by boards, braced by strips of wood.

*Grading* the bottoms requires great care, otherwise, if the grade is uneven, silt will accumulate in the depressions, underlying water will so soften the ground as in some instances to displace the soil, and even decompose the tile itself. The scientific method is to use a measuring staff with arm at intervals, to get the exact depth at these places, boning rods for sighting planted where the measuring rod stood, and the line and plummet. In grading these spaces three men are required, one to sight, one to hold the plum-rod, and one to do the grading with the finishing spade, and scoop or pick, as the case may be. The method discovered and practiced by Mr. F. Malcolm, of Innerkip, and since it has been made known, adopted by many others, is simpler, quite as effective for ordinary purposes, and therefore more scientific. We quote his own words: It simply amounts to this! "The erection of a line five feet above where the bottom is intended to be, so that the eye may be used in making it horizontally straight. Drive stakes in pairs, one each side of the drain, and nail a strip of board between them, the upper edge to be straight and five feet from the intended bottom. If the drain is to be three feet and a half deep, the upper edge of this board will be one and a half feet from the surface of the ground. The distance between those sights will depend on the length of the drain, that is on a straight line. The finisher of the drain should always have some two of the sights before him, and with a rod similar to the half of a carpenter's ten foot pole, try the bottom by setting it on end at every two or three feet, and sighting over the top, which (when the proper depth is reached) should always correspond with some two of these horizontal sights. The trouble of erecting these sights may be largely dispensed with by simply driving board stakes (the upper end being a few inches wide) at such points as will not interfere with the digging beyond the point to be dug at either

end of the drain. But the upper end must always correspond with the line five feet above the intended bottom. I say five feet, but any height may be used that is most convenient to the digger. If his sights are six feet above the bottom, then his rod must be six feet long in order to correspond." The prime importance grading occupies in cutting drains will justify the length of the quotation.

Canadian practice oftener grades by means of the water in the ditches at the time of digging, but this is objectionable when it can be avoided, owing to the softening of the foundation by the action of the water. It is common practice to place the foot on each side as it is laid to ensure the firmness of position, when the bottom of the drain has been thus softened it is difficult to make even joints.

The *width* of the ditch should be considered, which will vary with the depth and the nature of the soil. The wise rule is to avoid all unnecessary handling of earth. Ditches four feet deep do not require a width of more than twenty inches at the top, when three feet deep, fifteen to eighteen inches will suffice.

*Brooks* carrying the water from springs should be "jumped" until the tiles are ready to receive the water, lest it undermine the banks of the newly cut drains and keep the bottom too soft for efficient work. If need be the water may be conveyed temporarily in a different channel for a time, where this does not entail too much labor and where the nature of the ground admits it.

Tiles may be placed in *position* by an instrument made for the purpose, but Canadian practice usually places them in front of the operator standing in the drain and making the joints as close as possible where necessary, by means of the tile-pick. A close joint is very desirable, especially when collars are not used. The difficulty is not in securing the means of ingress for the water, but in having the joints sufficiently close to keep out silt. Round tiles may be laid on any side which lessens the labor of jointing, the large ones being kept in position by lumps of earth and stones between them and the sides of the ditch, while great care is necessary in laying the tiles properly, it may be in a decreasing ratio, as the workman ascends the drain. In ditches when there is running water the laying of the tiles should follow close upon the grading.

Practice differs as to whether the drain should be laid open from end to end and the tile-placing commence at the beginning or the terminus of the drain, or whether it should be done by commencing at the lower end, working upwards and finishing piece by piece. The condition of the soil and the extent of the fall should decide the course of action here. When the soil is wet and soft and the fall is slight, the former course should be adopted, as it is not wise to allow such muddy water to run through the tubes, but when there is little or no water it is preferable to commence at the outlet and work upwards, in which case but little is hazarded from the fall of heavy rains.

In *filling* the trench, some first chip down the sides of the drain, trampling the earth thus dislodged with the feet firmly around and above the tiles. Where this is not done the firmest of the earth, free from stones, should be thrown in, gently at first, and when filled to the depth of fifteen to eighteen inches, trampled by the feet of the workman, and some say that it will be labor well spent to ram down the earth occasionally with a maul for the purpose, with a view to hinder the too free filtration of water from the surface, which carries silt with it. Surface water should reach the drains laterally or, better still, from beneath, which is usually the case.

Our countrymen, however, do not usually take this

trouble; after the first few inches are trampled above the tiles, the end of the plough is called in, or some form of scraper, made of stout wide planks of suitable length placed on the edge, and so fastened together with rods, that the ends nearly converge at the rear. A chain fastened to the two diverging ends forms the draught medium. This style of instrument has been used by Mr. A. Hood, of Markham. It is his invention, and its use very greatly facilitates the filling of the drains.

(To be continued.)

FOR THE CANADIAN LIVE-STOCK JOURNAL.

### Farming as an Occupation.

BY D. NICOL, CATARAQUI.

Agriculture is the means by which, now, over twelve hundred millions of human beings derive their livelihood. It was the first occupation of man, and ever since Adam was placed in Eden to till the ground, it has been the employment of the majority of the human race. There is more capital employed in agriculture than in all other industries. The agricultural interest forms the very basis of a nation's greatness; just as it prospers, so do merchants, manufacturers, trade and commerce flourish.

If agricultural industry were to cease for a single year, the country, with all its wealth and independence would become paralyzed, and be involved in distress. It is the great interest which overshadows every other. If it prosper not, all other occupations must languish and decline; everything ultimately resolves itself into the productions of the earth. Hence of all occupations farming is the most important.

There are, however, in every country, various classes of farmers. Among the pioneers of North America there were but comparatively few practical farmers. Their first business was to clear off the forests. Physical force was of more importance than intellectual culture. Muscle was then at a premium, brains at a discount. The virgin soil, which was rich with the accumulated plant food of centuries, afforded an easy means of obtaining abundant crops, with few failures; and so they continued to sow and reap the same fields, year after year, without any thought of the land becoming exhausted, not realizing the fact that land would not always continue to produce unless there was returned to it something of an equivalent for what is taken from it. And so in many instances this retrograde movement has gone on from one generation to another until the land has become utterly unproductive; and as a natural consequence, agriculture has to some extent been degraded; and notwithstanding all that is being done for its promotion, many still plod on in ignorance, in the same old tracks their father's trod, blaming the unfavorableness of the elements for their want of success. Their homes are unattractive and cheerless; everything about the homestead in slovenly order; the stock degenerate and in miserable condition. It is easily understood why this unprogressive, exhaustive system would dwarf the intellect and banish self respect. The children of this class of farmers are taught to look upon farming as a drudgery, and acquire an utter repugnance to the pursuit. Farm life has no charms for them, and it is scarcely to be wondered at if they seek to engage in other pursuits; but few of them will serve an apprenticeship to a trade. Lacking knowledge, and having acquired unthrifty habits, they are unfit for mercantile business; hence we see many of them engaged in effeminate pursuits, such as peddling maps, patent medicines and patent humbugs, saloon-keeping, and gambling.

But there is a very much larger class who are farmers in a higher and truer sense; they are the bone

and sinew of the country, which produce not only improved stock, grains and fruits, but they produce and rear the men of force and sterling integrity, with stalwart, healthy bodies and robust intellects, the true patriots, the men of true moral power; and he must have a false estimate of the dignity and importance of the farmer's calling, who does not look upon it as being the most useful and ennobling.

Look where we may throughout the history of the world, we will ever find that as a people emerged from the darkness of barbarism and approached the light of civilization and refinement, husbandry assumed importance, and the intelligent husbandman rises in public estimation until he stands acknowledged as the chief cornerstone of his nation's existence and prosperity.

From many years' personal experience in Canada, I know that the farmer's life is not free from anxiety and care, and that his crops are often injured, and sometimes destroyed by the elements over which he has no control, and that insects and blight often blast his bright prospects, just when they seem to be on the point of realization. He is often necessarily exposed to the inclemencies of the weather and climate, and I know that he who begins responsible life without other means than his own strong arms, cannot reasonably hope to attain a position of comfort and independence until he has struggled through years of persistent industry and frugality. Yet I think had I to begin life again, with the privilege of choosing my own means of obtaining a livelihood, I would choose that of farming.

I would not be understood as speaking in disparagement of other callings or professions; all cannot be farmers; many minds are not adapted to it, and many men can do better at almost anything else than farming. I have nothing to say against the mechanical arts; they are particularly necessary to the farmer in his occupation as well as to the comfort and convenience of all.

There is, however, in the human heart, a strong affection for the love of nature and rural pursuits, which makes farming a pleasant occupation. The studies of the farm, more than many others, are pleasing and attractive, and when followed as a science, farming presents a vast field for the display of intellectual improvement and philosophical investigation; almost everything relating to the occupation involves the principles of science. Connected with it are the occult processes of nature that proclaim the wisdom and presence of the Creator of the universe. Compared with some businesses, the farmer has but few risks; he is not troubled with the feverish anxiety and sleepless nights which often rack the brain of the speculator, nor has he the harassing cares of the merchant, or the professional man, nor the perils and dangers of the sea-faring man; there is less temptation to dishonesty and fraud than in any other occupation; and there is no calling in life which is calculated to give a man a higher appreciation of morality, truth and justice.

The multiplication of labor-saving machines and the discovery and application of natural forces to perform work, has, in a great measure emancipated it from the drudgery of toil. The farmer has more leisure time than many engaged in other pursuits. Eight months of the year he is required to be actively engaged in his industry, but during the four winter months he is comparatively at leisure; and if his farm buildings have been judiciously arranged with a view to convenience and comfort, he need suffer but little from even the occasionally extremely severe Canadian winters. He can enjoy most of the cheap

luxuries of life to an extent which no other man at so little expense, for most of the articles which pertain to good living can be produced on the farm with comparatively little trouble. The cultivation of all the different kinds of fruit, the breeding and improving of all the different kinds of live-stock, brings to almost all who intelligently pursue it, true and lasting pleasure. Man has something more to live for than merely to accumulate money; he is to enjoy the fruits of his labor. This fleeting life is his opportunity, and his resources are very great. Nature, with a beauty that dwarfs all art, and which no earthly power can obscure or appropriate, is as much the humble farmer's as the monarch's. There is no profession or calling more ennobling or dignified than that in which the father of our race was engaged, viz., that of beautifying and rendering fruitful the earth; no occupation is more conducive to true happiness than that in which man makes an intelligent use of the resources of nature. Napoleon Bonaparte, on the day he abdicated the throne of France, said to a page, "It is only in a situation like your father's, with his few acres of land and contentment, that there is true happiness."

There is no occupation like agriculture, which by pure air and exercise under the canopy of the sky, so much contributes to the healthfulness and energy of the human constitution. It is an independent occupation. Being less dependent on the patronage of others, the farmer is more independent than those engaged in any other pursuit. "He sits under his own vine and fig tree, none daring to make him afraid." Nobody expects him to cringe or curry favor in order to sell his products; the merchant does not call in question his politics or religious opinions; he may be a communist or a Mormon, yet grain and beef sell for just what they are worth, not a particle less or more than that of his neighbor's, whose opinion on all points are faultlessly orthodox and popular, provided it is of a good quality; hence it is easier and more natural in his calling than in many others for a man to work for a living, and at the same time to aspire to success and consideration without sacrificing self-respect, compromising integrity, or ceasing in any way to be essentially a gentleman.

(To be continued.)

FOR THE CANADIAN LIVE-STOCK JOURNAL.

### Permanent Pasture.

As grass is the most important item of animal food it is very desirable to produce it in increased quantity. It has been suggested by some of the most prominent and practical agricultural men of the present day, that grasses grow more luxuriantly and more abundantly, by sowing a mixture of them. Having made some observations and practical experiments on the above subject, it affords me pleasure to endorse the opinions of those men in this paper, and to give my experience in the matter as you, Mr. Editor, request.

Some four years ago, while attending the Dairy-men's convention at Brockville, Prof. Brown gave a practical discourse on the above subject, and so impressed my mind with the benefits accruing from permanent pastures, that I determined to try the experiment, and accordingly adopted his formula, viz., Timothy, seven pounds; Orchard, four; Meadow Fescue, two; Red Top, four; Kentucky Blue, two; Italian Rye, two; Perennial Rye, two; Creeping Bent, one; Fan Oat, two; Lucerne Clover, four; Red, one; Yellow, one; Alsike, one; White Dutch, three; making a mixture of 26 lbs. of grasses and ten of clovers, or 36 lbs. of seed in all per acre. This mixture I sowed at two casts, the Timothy and clovers being sowed with a machine, and the other grasses by

hand, as they are very light and bulky and difficult to sow.

The land selected was a low field of sandy loam with a cold springing bottom, running up into a clay knoll, containing twenty acres, one half of which was fallow and the other part old land, which, being two miles from the barn never had any manure. The land on the old part of the field was ploughed twice during the previous fall and cultivated, harrowed and rolled in the spring. The fallow was simply ploughed once and thoroughly harrowed and put up into twelve feet ridges. The first year the grasses came up good and grew strong, so much so that I was obliged to pasture it in the fall to prevent smothering. Would prefer mowing if the land would permit. No grain was sown with the grass seed. The following year a record was kept, the grass being pastured by beefing cattle consisting of large steers, heifers and cows.

Prof. Brown, at the convention above referred to made a statement to the effect that two head of cattle could be kept per acre on permanent pasture, which I consider was fully verified in my experience. As a pasturing season is at most five months I received ten months' feed per acre for one beast and I think had my land been in good condition and free from rubbish I would have had twelve months' feed rather than ten.

The following year I turned twenty milking cattle on it in the spring and kept them on this pasture alone till the 11th of July, when I cut about ten tons of first-class hay off of the one half of the field, viz., the old land, the fallow being too rough to cut with a machine. I afterwards kept a record of the pasture and obtained 1830 days' feed after cutting the hay, or a little over three months' feed per acre, thus receiving five months' feed and half a ton of hay per acre, beating the record of the previous year and leaving a much better bottom for another year.

One peculiar feature of the pasture in this field is that on the fallow the clovers have nearly choked out the grasses and vice versa on the old land.

I am also satisfied that whilst receiving more nature per acre than with Timothy and Clover I also received richer feed. The difference in the beefing cattle on it, and on the other grasses, viz., Timothy and Clover, was quite apparent; also the milk produced was richer and of a peculiar flavor, having, directly on milking, a greasy appearance similar to a small quantity of oil on the top of water; also the butter had a peculiar flavor, differing from other butter, and a richer yellow color. I also tested some of the hay, as a butter producer, and with the same result, as the butter had the same aroma and a richer yellow color. Being so well pleased with the results, I have since put down one field of 23 acres, also two one acre plots of different soils to test its growth and durability on the various kinds of soil.

I might here say that in September, 1884, I made a trip to the Experimental Farm at Guelph, to visit their Permanent Pasture, to see how it compared with mine, and to note the different kinds of grass grown separately, as I thought some I had sown had failed to grow. On examination I found no Permanent Pasture there, except in the experimental plots, which proved to me that the Fan Oat and Creeping Bent grasses were entirely extinct with me, and the Rye grasses nearly so. The Lucerne will not succeed in the low land, but does fairly well on moderately up land, and extremely well on high gravelly soil. I would recommend well-drained dry land for this pasture and would advise the seed according to the land desired to be put down. I have adopted the following formula where the land is not too low, viz., Timothy, six

pounds; Orchard, five; Italian Rye, one; Perennial Rye, one; Red Top, five; Meadow Fescue, five, Kentucky Blue, three; Lucerne, two; White Dutch, three; Red, one; Yellow, one; Alsike, three; making 36 lbs. per acre.

I have tried it thicker and thinner, and find that the above is about the right quantity per acre for this locality. I see Prof. Brown reports Meadow Fox-tail as a good pasture grass, but I have not grown it as yet and therefore cannot speak definitely about it from the standpoint of experience.

A few hints here how to prepare a piece of ground for Permanent Pasture may not be out of place. 1st, —Thoroughly cleanse your land from all foul seed and rubbish, as these will materially affect the young tender grasses the first year. 2nd,—Have the ground well manured or in a good state of cultivation. 3rd,—Have it well drained and fenced, as water lying on it will destroy the tender grasses, and cattle getting on it in the spring before the ground is settled, will tramp it full of holes and choke out a large quantity of roots. 4th—Have your land all ready in the fall; sow your grasses as soon as the snow goes off, and when the land is in a honey-comb state on the surface. Later on sow your clover and roll it in. 5th —Sow no grain with it, and do not pasture the first season but mow in the fall if it grows too rank. 6th —Sow such seeds as you think adapted to the ground and by following these suggestions you will succeed, and be pleased with your investment.

The seed cost me \$6.12 per acre the first season, and the second about \$5.00.

R. J. GRAHAM.

Belleville, Ont.

### The Dairy.

It seems to be a practice with large numbers of dairymen to use bulls simply for the purpose of getting their cows with calf, without any regard whatever to the quality of the bull. This may do where the dairyman buys all his cows, but what how many of them, we ask, is this the case? A very large majority of them raise their own cows in part, and when the services of a nondescript bull are allowed, his offspring go to form the dairy herds of the future. One object of the dairyman should be to secure cows that are uniformly good, which he cannot do if a bull characterless is picked up as a sire. So long as dairymen breed cows without a definite aim they will get plenty of weeds. Even with careful breeding we get some of these: how much more, then, may we expect them when little or no care is exercised. For the credit of the dairy as well as for the profit, suitable sires should be used.

### Holstein vs. Jersey Controversy. (Concluded from May.)

Let us now turn our attention to the Jersey. Prof. Brown, in his report, describes her as follows: "Beauty of the Mill may be described as a Jersey that pokes her nose into everybody's pocket—an uneducated pet. With such a disposition we have had much pleasure in handling this cow. Cream-colored, even, rosy, a fine skin, but with little milk mirror and medium udder." Three years old, weight, May 1, 322 lbs., which shows that she was above the average of her breed in size, and the Professor's description shows that she was of just the type and disposition to insure the largest results. The report shows just what we could expect from such an animal, viz.: That her combined milk, butter and cheese product for the five months is far above the average of her breed. In fact it is far above the average of any entire herd of Jerseys of a dozen heifers of the same age we have ever seen published. It should be borne in mind that this

heifer was fully acclimated—accustomed to the severe winters and feed of Canada. A few more singular facts regarding her are worthy of note. She is given in the report as a Jersey, three years old, but date of birth and herd-book number are not given. To get more definite information regarding this cow I went to the office of Mr. Hand, the Secretary of the A. J. C. C., and to my surprise learned that no such cow was on record. I then wrote Prof. Brown, who kindly replied that she was dropped in 1882 and was not recorded. I was not a little surprised that an unregistered animal should be taken as a representative Jersey, especially by such a breeder as Valancey E. Fuller. The question naturally arises: Is she a grade and does this fact account for her large flow of milk and the fact that her milk is much superior for cheese to any registered Jersey of which we have yet seen an account?

In order that a fair estimate of the two breeds (the Jerseys and the Holstein-Friesians) for the dairy may be formed, we will compare the product of this heifer with that of entire herds of the same age.

In the Lakeside Herd of Holstein-Friesians this last season twenty-four three-year-olds (entire number in milk for the time) gave by actual weight in five months an average of 6,114 lbs. for each cow, while this Jersey gave 2,944 lbs., leaving a balance of milk in favor of the black-and-white cows of 3,170 lbs. per cow in five months; or in other words the Holstein-Friesians each gave 226 lbs. more than double the amount given by the Jersey.

Our tests for butter do not comprise the whole herd, but I will make as fair a comparison as the data at my command will admit.

At the Lakeside Herd thirteen heifers three years old have been tested, and they averaged 13 lbs. 6 oz. of butter per week. Messrs Yeomans & Sons, in their recent butter reports, give four three-year-olds which averaged 17 lbs. 6 oz. per week. It will thus be seen that seventeen three-year-olds average for a week 14 lbs. 5 oz. In all the butter tests, in both the Yeomans and Lakeside Herds, the butter was worked dry and weighed before salting.

This Jersey made an average for the five months of a little over 11 lbs. per week, a difference of 2 lbs. 12 oz. per week in favor of the spotted cows. This I will frankly say is hardly fair for the Jersey on account of her longer test, but it will convey a good idea of the merits of each, and will satisfy any one that these seventeen Holstein-Friesians far excel her for butter.

I will make a few comparisons by taking as a basis the number of pounds of milk for a pound of butter, and as the following tests were made when the cows were in full flow and fresh, I think the fairness of the comparison will be conceded, for I believe it is an admitted fact that as the time after calving lengthens and the flow diminishes, the milk becomes richer, taking a less amount for a pound of butter.

The following table will show the results of the tests of seven heifers in the Lakeside Herd—four three-year-olds and three two-year olds. It gives the amount of butter made by each in a week's test; the average weight of milk required for a pound of butter; the amount of milk given by each for five months, and on this basis the amount of butter each would have made in that time:

Name.	Age at time of test	Butter per week — lbs., oz.	Pounds milk to make pound butter	Pounds milk given in five months	Lbs. butter in five mos. at same rate
Netherland Belle 1876....	3	16 07	22.34	7,191	321
Netherland Countess 2634....	3	15 15	20.88	5,724	274
Netherland Jewel 2642....	3	15 03½	26.31	6,667	253
Alexander's Queen.....	3	15 04	21.93	6,028	274
Benola Fletcher 6891.....	2	16 09	18.11	6,634	366
Soldene 2896.....	2	13 00	24.93	7,068	283
Aaggie Sarah and 7142.....	2	12 01½	24.41	6,301	258
Total.....					2029

Average of the seven head for five months 289 lbs.; Jersey for five months, 248 lbs.; balance in favor of Holsteins, 41 lbs.

The "funny" part of this whole affair, the one which makes all dairymen smile, is the claim that the Jersey leads all other breeds for cheese. This is the first instance on record that has come to my knowledge where such a claim has ever been made. One of the prominent Jersey breeders of the country recently remarked to a large gathering of dairymen that

"the superiority of the Holsteins for cheese was conceded by everybody excepting Valancey E. Fuller." Nearly all former tests have shown the Jersey milk, while superior for butter, to be inferior for cheese. It should be borne in mind that, to obtain the results for cheese which are apparent in the report and in Mr. Fuller's letter, the same "lanky and leggy" little unacclimated twenty-two and a half months heifer had to be pitted against older native competitors.

I cannot give results in cheese production from personal experience, for I have made no tests, but will take Prof. Brown's own figures as used by Mr. Fuller, and concede for the time being that the Holstein-Friesian heifer would represent the breed in quality of milk for cheese (a statement that no intelligent breeder will believe to be a fact), and what is the result? It shows that it required 8.95 lbs. of the heifer's milk for a pound of cheese. The twenty-four three-year olds referred to above averaged for the five months 6,114 lbs. of milk, and hence would have made 684 lbs. of cheese, while the Jersey of the same age made 456 lbs, leaving a balance in favor of the Holstein-Friesian of 228 lbs. per cow, or in other words, they excelled her for cheese by just fifty per cent. The fact that Holland is the greatest cheese country in the world, making more cheese not only in proportion to the area of the country, but in proportion to the number of cows, should be satisfactory proof of the superiority of her cows for that purpose.

A comparative test made by J. E. Grant, the owner of several large cheese factories in Illinois (who did not own any Holstein-Friesian cattle), with the milk from a herd of 50 pure-bred Holstein-Friesians, in comparison with the milk of the other herds brought to his factory, showed that the Holstein Friesians made six and one-half per cent. more cheese from the same amount of milk. He declares the test to have been a fair one, the conditions being similar in all respects.

What are the conclusions to be drawn from the above facts?

1st. The Holstein-Friesian gave over 107 per cent. more milk.

2d. The Holstein-Friesian made sixteen and one-half per cent more butter.

3d. The Holstein Friesian made fifty per cent. more cheese.

If we call the average milk of the twenty-four Holstein-Friesians equal to that of the Jersey for cheese (and we verily believe it to be better), they would have made 107 per cent. more cheese.

From the above we feel fully justified in quoting Mr. Fuller's conclusions: "It seems, therefore, that there is little doubt as to which is the best all round cow."

As to the test made at the exhibition at London and Toronto we will only say that so much depends upon the condition of the cow, the amount and quality of her previous rations, her care and treatment, the length of time in milk, when due again, the distance covered, whether fully acclimated or not, etc., that such tests have no practical value as an evidence of the actual merits of the cows tested, and we will spare your readers a useless discussion regarding them.

We will simply add that these tests were made "by the same experts" as those given in the report referred to above.

E. A. POWELL.

Each in its Own Sphere.

EDITOR CANADIAN LIVE-STOCK JOURNAL.

SIR,—The Holstein heifer, Maid of Osnabruck (H. H. B. 6070), which I bought of M. Cook & Sons, Aultsville, Ont., then Lord, Cook & Son, dropped a fine bull calf on the first of February, sired by Brilliant (H. H. B. 2905). The heifer will be two years old on the 20th of this month. Two weeks after calving she averaged 39 lbs. 11 oz. of milk per day for one week. The week following she gave 41 lbs. 13 oz. per day, from which I made 11 lbs. of butter. "How you must be stuffing her!" is the general exclamation. Now I say, "from nothing you can take nothing," and I should be willing to give the following amount of feed to any cow of any breed who had the capacity of converting the same into milk. Her ration consists of timothy and clover hay, 3 quarts of oats crushed, twice a day; 1 peck of cut roots and all the water she will drink. The bull Brilliant has also given entire satisfaction, my grade calves being finely marked and some of them resembling the thoroughbred in all points save pedigree. They need no patient feeder, or fussing in teaching them to drink, as

they go readily to the pail, even after having been allowed to remain with the cow. I have two graded Holsteins, one due soon to calve, which still gives a good mess of milk. They hold out wonderfully, and I am much pleased with them.

An effort was made here to start a co-operative creamery, but the farmers are somewhat timid. The time for such an enterprise is evidently not yet. Still things are looking brighter for the future. It is plainly to be seen that we are awaking to the fact of its being necessary to make a stir of some kind. Some intend making butter at home.

The long period devoted to cheese-making has been very detrimental to the farm and stock. The scarcity of hay has compelled many farmers to cull out their stock, and it is to be hoped that, as far as they are able, they will replace it by something better. Many of the young men are dissatisfied with merely existing; they desire to make farming pay, and this is as it should be. But we need to be educated to a higher standard; we must read more, practice, experiment, and venture more than we have done hitherto. "Nothing venture nothing have;" at the same time we must act cautiously. I do not advocate running into debt, rushing into everything new we read or hear of, without due deliberation and careful thought, or failure will be certain, which will end in discouragement and disgust. We have been too long contented to *drudge*, working early and late until our hands are toil hardened enough to be sure, while our brain has lain almost dormant. I believe the time has come when head and hand will work together on the farm, when we shall leave the beaten path trodden out for us, open cross-roads, and make new tracks for ourselves. Men of all professions and callings continue to study, else how could they in this go-ahead world keep up with it? And why not the farmer? Is "the noblest calling of all" to be neglected? Yet how difficult it is to make many a farmer understand that a good agricultural paper is a necessity. How quickly he will spend a dollar on tobacco, perhaps on liquor, when the same amount would benefit him so much if it were spent for a subscription to a paper. I am very much interested in the discussion going on just now in our JOURNAL about the different dairy breeds, and I am quite sure, that with all his arguments, Mr. Valancey E. Fuller will find that he cannot drive the Holsteins back. But why not let each breed fill its particular place? "Live and let live." There is room for all, and as Mr. Fuller says himself, the Jersey is essentially *the cow* best suited for *his* purpose, so the Holstein has her mission; she is grandly filling a long felt want—a general purpose cow for the farmer. Mr. Fuller can keep the Jersey, and make butter and koumiss. We'll have the Holstein and make butter, cheese, veal and beef! Trust the Holstein to make her way. She is capable of speaking for herself, in spite of Mr. Brown's tests and Mr. Fuller's disparagements—she will yet make many a district in Canada as famous for dairying as she has done in her native land. I shall stand by the black and white; she suits my purpose exactly, and I am always glad to have people come and see for themselves; and I am not afraid to let Mr. Fuller or any one else know just how much I "stuff" my Holsteins.

Sweetsburg, Que.

CALEB COTTON.

Holsteins vs. Jerseys.

(Held over from May.)

EDITOR CANADIAN LIVE-STOCK JOURNAL.

SIR,—In your April issue, Mr. Valancey E. Fuller alludes to a series of tests for five years in England to show the comparative merits of the various breeds, and says: "For the past five years a series of experimental analyses have been conducted by that eminent specialist, Dr. Aug. Volcker, under the auspices of the British Dairy Farmers' Association at their shows at Islington with the following results of solids, as it relates to these two breeds:

	Fat.	Total Solids.
Jerseys.....	4.26	13.6
Holsteins.....	2.97	11.8

or with the Holstein such a lacking in solids as would in many of the American cities under their laws be condemned as "watered milk," as would be the case under the analysis as made by Prof. Brown at the Agricultural College. A higher authority than Dr. Volcker cannot be found in England or on the continent, and the result of his tests for five years of Holsteins,

above cited, bear out Prof. Brown's analysis as to the total solids very closely. The Shorthorns in these tests made an average of within 2 lbs. of milk in 24 hours as compared with the Holsteins, while in fat the Shorthorns averaged 3.79, and in total solids 12.7 to 2.97 fat and 11.8 solids of Holsteins; yet Mr. Cook claims the Holsteins as the great general purpose cow. In these tests of five years duration at Islington, as also at London, Ont., when subjected to public test, the enormous yields of milk of Holsteins vanish, as the Holsteins average 46.99 lbs. of milk to the Shorthorn's 44.91 for the five years."

I wish to thank Mr. Fuller for calling attention to such strong evidence in favor of Holsteins, as is seen by examining these tests more thoroughly. This series of tests appeared in a paper read by Mr. M. C. Tisdall before the Gloucester (England) Dairy Conference on the selection and breeding of dairy cattle. The results of the "Islington Dairy Tests" for 1883 (one of the five years' tests) I happen to have and give them here:

Name and breed.	Milk in one day.		Per Cent.		Lbs.
	Lbs.	Per Cent.	Solids, not Fat.	Fat.	
Shorthorn (Red Cherry).....	51	3.85	9.11	1.96	5.60
Friesian (Maggie).....	60 1/2	2.86	9.26	1.72	7.30
Guernsey (Gentle).....	18 1/2	5.54	8.71	1.02	2.60
Jersey (Little Katie).....	26 1/2	5.54	9.07	1.45	3.83
Devon (Myrtle 7th).....	26 1/2	5.28	9.47	1.38	3.83

From the above it is seen that the Friesian not only produced more milk, more fat in pounds, a higher per cent. in solids not fat, but nearly twice as many pounds of solids as the Jerseys, and also more milk and more pounds of solids than any other breed. It was probably not Mr. Fuller's intention to point to the results of this year in particular, but to those of the entire five years, so I will give them as presented by Mr. Tisdall, who says: "The following is a summary of averages of milk given in twenty-four hours, by the various breeds:

Breeds.	No. Samples.	Lbs. Milk.	Per Cent. Fat.	Total Solids.	Total Lbs. Solids
Shorthorns.....	23	44.91	3.79	12.7	5.70
Jerseys.....	19	29.27	4.26	13.6	3.98
Guernseys.....	10	25.29	4.80	14.09	3.56
Dutch.....	6	46.99	2.97	11.8	5.56

The column lbs. of total solids omitted by Mr. Tisdall is here supplied, and cross-bred cows omitted, as having no bearing on the comparative merits of full bloods.

From the above it is seen that although the Holstein milk showed the lowest per cent. of total solids, the amount of milk given in one day exceeded all others, and the number of pounds of solids exceeded that of the Jersey by 1.60 lbs. or over forty per cent. This is the result of the five years' tests to which Mr. Fuller calls my attention.

As the fat globules of Holstein milk are small, more time is required for them to rise than those in Jersey milk, which are larger, and if the fat was obtained from the cream before it had entirely separated, the low percentage of fat would be accounted for. Mr. Tisdall says: "No herds of Dutch cattle, simply, are known to be in this country (England), but general experience credits them with equaling or surpassing the Shorthorn in quantity (of milk), and this is supported by dairy show returns."

From these returns and other reliable information Mr. Tisdall gives another table as below. It is not apparent why Mr. Tisdall, after making the above statement concerning the quantity of milk produced by the Dutch cows, puts the annual yield of the Shorthorn at fifty gallons more than that of the Dutch.

Breeds.	Av. yield of milk per annum.	As butter at 32.		As cheese at 75.		As milk at 9d.	
		Lbs.	S.	Lbs.	S.	Lbs.	S.
Shorthorns.....	700	25	10	25	13	25	5
Jerseys.....	520	17	8	17	5	19	10
Guernseys.....	460	19	5	16	7	19	5
Dutch.....	650	16	4	19	19	24	9

From the above table it is seen that although the Jersey as a butter cow excels the Holstein by £1 4s 6d., the Holstein excels the Jersey for cheese by £2 14s 9d. per annum and for milk by £4 19s. 0d.; or for butter, cheese and milk combined the Holstein excels the Jersey by £2. 3s. 1d. per year, viz., over ten per

cent. Thus in her natural life of ten years in milk the Holstein would as a dairy cow produce twice as much, and hence is worth two Jerseys.

This is estimating the value of their products to be alike. Any one who has handled Holstein milk can testify that it is superior to other milk for consumption, as it retains its natural condition longer and bears shipping better. As cheese producers the Holsteins have a world wide reputation not enjoyed by any other breed.

As to the comparative value of Jersey and Holstein butter, in my letter which appeared in your April number I quoted the London market on two dates, the first showing that Holstein butter sold for much more than the Jersey; and the second quotation of the Foreign Butter Market placed Holstein butter at the head of the list and Jersey at the foot. The butters quoted were from Sweden, Denmark, Germany, Holland, Belgium, France and Jersey.

Prof. Long, in the letter referred to by Mr. Fuller, mentions a Dutch cow at Amsterdam giving 35 litres in one day, and another whose owner said she had given at apudictorial 42½ litres in one day, and that she gave 6,900 litres in nine months. This cow, Prof. Long says, dropped her last calf a year previous, and had the largest udder he ever saw.

These yields accord with ours in America. A litre weighs 2¼ lbs., consequently the first cow gave 79½ lbs. in one day, and the second 96½ lbs. in one day, and in nine months 15,663 lbs.

Prof. Long, in speaking of quarts and gallons, means imperial measure, and calls a gallon 10 lbs., whereas one gallon of milk, wine measure, weighs 8¼ lbs.

DUDLEY MILLER.

Oswego, N. Y., April 25th, 1886.

For the CANADIAN LIVE-STOCK JOURNAL.

**The Ayrshire's Defence.**

A person after reading Mr. Fuller's article in the March number of the JOURNAL, pages 72 and 73, would naturally be left under the impression that the results of the experiments at the Experimental Farm at Guelph had gone to establish the supremacy of the Jerseys as a dairy breed. Now I have read the mid-summer report of the Agricultural College, and I find that, instead of the Jerseys being the best breed of milch cattle, the Ayrshires have beaten all the breeds at the farm as cheese and butter producers. In proof of my assertion I here give the result of the experiments at the Experimental Farm:

Breeds.	Milk per year.	Butter from 100 pounds of milk.	Butter per year.	Dried curd per 100 lbs. of milk.	Dried curd per year.	Mean value of milk, butter and cheese.
Holsteins	7000	2.35	164.5	11.8	826.	\$39.
Ayrshires	6000	4.45	267.	14.45	867.	47.
Ont. Grade	5000	3.90	195.	15.85	792.5	33.
S. H. Grade	4500	3.70	166.5	16.70	751.5	43.
Guernsey	4000	3.00	120.	14.15	566.	33.
Durham	3000	4.25	127.5	16.05	481.5	40.
Jersey	3500	5.15	180.25	16.82	588.87	46.
Devon	2800	3.70	103.6	13.97	471.2	35.
Quebec Grade	3600	3.70	133.2	14.95	538.2	39.

It will be seen at a glance that, although the Jersey milk at the farm is slightly richer than the Ayrshire, yet the Ayrshire gives enough milk to make 278 lbs. of cheese curd per year more than the Jersey, and also nearly 90 lbs. more butter per year. Mr. Fuller says that 3,500 lbs. of milk per year is 1,000 lbs. too little. Well, even then the Jersey would only make 231.75 lbs. of butter per year, and 757.07 lbs. of dried cheese curd, so that they would still be below the Ayrshires for both butter and cheese per year, and as "Mr. Brown's accuracy and impartiality is too well known in Canada to be lightly set aside by the 'champion of the vanquished,'" I hope to see an article in next month's JOURNAL from Mr. Fuller acknowledging that the Ayrshires are the best dairy breed in existence. Mr. Brown gives the mean value of milk, butter and cheese per year from the Ayrshires as \$47, and from the Jerseys as \$46. I cannot understand how that 278 lbs. of cheese curd, or nearly 90

lbs. of butter, are only worth \$1; but perhaps Mr. Brown can tell us.

With regard to the tests at London, I believe they did manage to get one Jersey to beat the Ayrshires, and I suppose it was something worth crowing about, for the Jerseys to beat the Ayrshires for once in a public test, as the Ayrshires had defeated the Jerseys so regularly at the exhibitions for years back, that it is rather refreshing to have the monotony broken for once.

I will enumerate a few of the prizes won by Ayrshires during the past four years. At the Provincial Exhibition at Kingston in 1882 they won the prize of \$100, for the best herd of five cows for general purposes and profit. They also won the Dominion special prizes of \$20 and \$10 for the best cow of any kind for milking purposes. At the Toronto Industrial the same year they won the prize offered for the best milch cow of any breed. At the Provincial at Ottawa in 1884, the Ayrshires won all the prizes offered for best milch cows of any breed, although there were large herds of Holsteins and Jerseys on the grounds. They also won the prize offered at the Eastern Township Exhibition for the best milch cow of any breed; so that it can be fairly claimed for the Ayrshires that they are the best breed of dairy cattle.

JOHN MCKEE.

Brookside, Norwich, Ont.

**Professor Brown's Reply.**

EDITOR CANADIAN LIVE-STOCK JOURNAL.

Sir,—In your issue of last month, Mr. J. M. Cook, of Aultsville, Ont., has made up a full column of what may be termed—"disappointed croak." The first feeling is fight, but the second is pity for him, and I do not even ask for one linetomeet the unbusinesslike and ungentlemanly remarks. My reputation is not in Mr. Cook's keeping, and while I desire even his good wishes, I cannot condescend to littleesses.

What is all the storm about? We made certain tests with several cows of different breeds, and have told the simple facts. Because one of these cows did not give as rich milk as some others we are denounced as very bad indeed. The denouncer is a prominent breeder of the class of cattle that gave us that milk. If that milk had been the best on the card, would not The Ontario Experimental Farm have been an impartial, important and valuable institution? Of course it would. Wasn't me for average humanity and the influence of the "great dollar!"

That is really the whole story, and yet I shall explain the apparent troubles. The age of the Holstein cow, "Verasina 10450, or Verapina," it matters not which—the cow is the same cow. We purchased her from G. E. Brown & Co., Aurora, Ill., when in Quebec Quarantine, on 29th August, 1884, and did not get her exact pedigree and age until her registration in August, 1885, two months after the closing of the midsummer experimental report. This therefore proves three things—that we could not give her registration, that we guessed her age as close as eight months, and that she was several weeks longer "acclimated" than any of the other pure-bred cows, which were all in quarantine at same time. Note also that we gave wrongly the age of all the cows—not splitting half a year.

The Secretaries of both the Provincial and Toronto Exhibitions were supplied with full details of the testing of every cow, and it was expected they would publish.

During the meeting of the Eastern dairymen, at Belleville, I was engaged every day among the Western Farmers' Institutes. Hence Prof. Barré took my place. Mr. Cook asks why I attended the "little" meeting at Huntingdon in place of Belleville. I was then free, and I beg respectfully to assure him that in place of a "cross roads" dairy meeting, Huntingdon had a big intelligent and vigorous two days' work, and though about one hundred miles nearer Aultsville than is Belleville, Mr. Cook was not there, and may be is not aware that that section of Quebec holds no second place to much of Ontario in progress, good land, and good men.

Mr. Powell writes so much more reasonably that I

do not require to reply other than the foregoing with reference to cow's name and age.

One would think the day were past to tell men that "one swallow does not make a summer." Experimental stations must needs exercise lots of patience, and be thankful for the coming of the other swallow, as to which Mr. Cook, I trust, will ere long share when we send out our second bird this summer.

I consider it is but fair to Mr. Fuller, of Hamilton, to say that he knew no more of our experiments before or during their progress than Mr. Cook did.

WM. BROWN.

Ontario Experimental Farm, May 31st, 1886.

**Poultry.**

For the CANADIAN LIVE-STOCK JOURNAL.

**Hatching and Care of Chickens.**

BY REV. JAMES QUINN, EMERSON, MAN.

It seems to me about time that I should have the privilege and pleasure of addressing your large constituency on my favorite topic—a topic increasingly interesting, especially to farmers at this season. I will, therefore, with your kind permission, address myself to this phase of the poultry question—the hatching and care of chickens.

Hens should be set in a place apart from other hens, as during incubation they need to be kept quiet and undisturbed except by the usual attendant. Farmers will find it advantageous to have chickens come out from May to July (fanciers require them earlier). It is a good rule never to hatch after harvest time. It will save both time and trouble, both for the owner and the hens, if four hens are set at the same time, and on the eighth day in the evening remove the eggs by candle light. Reject all that are transparent (infertile) and give the balance to three hens; and give the fourth hen a fresh sitting of eleven or thirteen, according to the size of the hen. We learn by experience, and there is no business in which this is more true than in poultry raising. In order to best results we must remember when to have chickens come out. This depends upon the breed kept.

Leghorns, as they feather soon and mature rapidly, being very active birds will do well coming out upto 1st July, but if hatched by 1st May they will begin to lay by October. Light Brahmas must be hatched early, as they feather slowly from March to 1st June. Same for Cochins and Leghorns. You can hatch Plymouth Rock and Wyandottes from April to middle of June with good results.

Let your nests be so placed that the hen can walk into them (not have to jump down into them). Eggs hatch best on a ground floor moderately moist.

Sometime after the twelfth day, if the eggs are found to be dry, it will be well to sprinkle them with tepid water when the hens are off for breakfast. Always have food and water accessible to the setting hen, and keep the others elsewhere. Do not interfere with the setting hens, they do well left alone. Every morning when off for feed, look that the eggs in nest are all right, and nothing more.

If the eggs were fresh when set, the chicks will come out usually at one time (within a few hours). Never help a chicken out of the shell. Let it alone; if it gets out itself, all well; if it cannot, better leave it alone; it will die any way.

Your little boy runs in one evening, saying, "Oh, father, come and see the hen, she is talking so!" Yes, sure enough, she is chattering away to eleven nice-doing chicks. The chicks will be hungry? Not a bit of it. Each chick has enough food in its little system to last it 24 hours after it is hatched. Rule: Do not feed chickens until they are out of the shell 24 hours. This is a standing rule with the fraternity.



After that, feed hen and chicks on the nest, and be sure to satisfy the hen; give her all she will eat and save further trouble.

First meal, bread crumbs moistened with sweet milk, with yolk of egg hard boiled broken up with it, will make an excellent feed for the first meal, and for the first week. First week, feed chicks every hour; next three weeks every two hours; fourth week, three times a day. The best rule is, feed little and often, but keep them steadily gaining until fully developed. Give no more than they will eat up clean at one time. Give the hen and chickens a clean coop and as large an enclosed run as you can, with the space at your disposal, and they will thrive. You will do well to have them in a covered run to keep them from rats, crows, hawks and cats, all enemies of chickens. See that fresh water in shallow vessels is always within reach. Chickens need much water.

Chickens that have a good run, with plenty of grass and chickweed and worms, will advance without much care on your part. Nevertheless, the enthusiastic breeder (and every breeder should be enthusiastic) will find it to his advantage to look at his birds himself. Your business will always be best done by doing it yourself. Chickens confined to a limited range require constant care so that they may be kept steadily advancing to a full state of maturity rapidly.

This is one of the most important rules to be attended to. Many failures occur just here. Do not stint the feed now; keep them growing during the growing season. "He that soweth sparingly shall reap sparingly" holds good in this as well as in higher matters.

I have always found my chickens do best, after they could use it, on whole good wheat, even when I had to pay \$1 a bushel for it down east. I say again, be liberal with your chickens; bye and bye they will remember you well and make good and regular returns for the care and attention given to them now.

If you want good table poultry, raise Brahmans; if eggs, raise the Leghorns, white and brown; these cannot be excelled as best layers.

Another important element in chicken diet is green feed. This is even more important for them than for adult fowls. Whilst very young it will be found best to cut grass with scissors and give it them, and in a few weeks they will be able to help themselves. It will be well to sow some lettuce seed in a box; in a short time it will make excellent green feed for the chickens.

When the weather turns cold and damp put a little Douglas mixture into their drinking water. This invaluable mixture is made as directed—one half pound of sulphate of iron and one ounce of sulphuric acid dissolved in two gallons of water, and kept in a stone jar for use. Dose—put one teaspoonful into each pint of drinking water used. It will be found exceedingly helpful to the birds and chicks, and will keep them in condition.

See that the hen-house and coops are kept clean, and attend carefully to the details. Do not despise trifles; trifles make perfection and ensure success in chicken-raising as in other matters. In this way you will have best results in the hatching and care of chickens.

FOR THE CANADIAN LIVE-STOCK JOURNAL.

### Beauty and Utility.

We often hear the story of the uselessness of prize birds except for the show-room, and that they are only valuable to the fancier for their beauty of form and plumage. I offer against this the record of one of my prize Wyandottes, hatched 10th June last. I

sent her to three shows, and she took one 1st, one special and one 2nd prize, with a score by I. K. Felch of 92, at six months of age. In January she gave me 28 eggs, February, 26, March, 2; one each for the first and second days. On the evening of the 2nd, finding her on the nest, I set her; she brought off her brood on the 23rd, and on the 19th of April commenced laying again, her chicks being only 27 days old, and I have had an egg from her every day since. Very few hens do so well at that early season, and it is another evidence of the recuperating powers of the Wyandotte. I set her sister 7 days later, and it is a strange coincidence that she began to lay also on the 27th day after her chicks were hatched. They had exactly the same care, feed, etc., and shared the one pen, and were so friendly they shared the chicks. If you think it will be any benefit to your readers, I will forward you a plan of my brooder (I can hardly call it mine), as I made it after the plan of "Dakins' Brooder;" but I have improved on it, I find it answers perfectly, and one of its chief merits is, that it is *exceedingly easy to clean*. Many brooders are so intricate in their construction, that the trouble of cleaning them is very considerable, and I have seen some in which there were corners that could not possibly be reached. These of course serve as a harbor for vermin.

I intend to raise nearly all my chicks in brooders, they are then so very tame, and this is an especially good way to raise the Leghorn varieties, for instead of being nervous and excitable, they are as tame as canaries when brought up in brooders. This one is heated by hot water, and is very easily and cheaply made.

W. C. G. PETER.

Please let us have the plan.—EDITOR.

## The Apiary.

FOR THE CANADIAN LIVE-STOCK JOURNAL.

### June Management.

Now begins the time of lively interest to bee-keepers, in the ingathering of honey and the promise of money. There are those whose interest in the business lies very much in the entertainment afforded; but most good bee-men find their interest largely enhanced by the prospect of replenished purses, and the intelligent observation which brings entertainment, is the best means of securing gain.

You should see that every stock has a good prolific queen. If a hive is not prospering now, you must know the cause and remove it at once, or find that hive a failure for the year. It is an important point that you know how to raise early prolific queens, to be introduced whenever needed. And you will require to know how to introduce. Introduction has often been unsuccessful, and expedients to avoid the necessity of introduction are wisely adopted. But it is most easily accomplished when the bees are in good humor and much occupied with a plentiful pasturage. For methods of introduction, see works on bee-keeping.

You will make arrangements according as you purpose to raise comb honey, or extracted, and as you intend to allow natural swarming or artificial dividing. If you are to raise comb-honey, supply frames or sections in good time—i. e., before the bees feel crowded and begin to prepare for swarming. Much swarming will interfere with the income of honey. If you are to extract, it may be well first of all to remove the mixed honey, which will be of an inferior grade, and so prepare to have all your white clover pure and unmixed. Thus you can keep up the great name of your products. Promptly make room for more honey when your hives are filled up, otherwise you will be a loser by swarming or idleness.

By all means let your bees have comb or foundation, and save their time and honey from building. A good bee-keeper will have large stores of good comb kept over winter for spring and summer use.

Bee-keepers will have their own notions as to one or two-storey hives. Two-storey hives are almost universally approved for comb honey. Not so for extracted. They do afford certain facilities and advantages. But if you extract only from the upper storey, how are you to control your swarming? To have complete control you require to know what is doing in the brood chamber. For this end you must examine and interfere when you want to attend to other work. In extracting from a one-storey, you can know and regulate your bees and queens all the time.

It will be well to equalize the strength of your stock by cards of brood from the stronger to the weaker. And having *nuclei* you can build them up from stocks that would swarm. By such methods you may have very little swarming in a large apiary.

Many methods are used in swarming. We always at swarming time had seven hives standing ready with their comb in foundation in place. When a swarm came off, we noted the hive from which. As soon as they were partially lighted on a neighboring tree (which ought always to be provided), we took our swarming-box, and, placing it under the cluster, shook them in, and held the box with its mouth open to the bees, when they flew thickest. In a few minutes they were all, or nearly all, in. We then marched off with them and planted them so they would run into their new home—which they would speedily do, with contented, tumultuous buzz. The swarming-box was made of half-inch lumber, about 12 or 14 inches square and 20 inches deep, perforated with many holes for ventilation, and having a pole 10 feet long passing through it as its handle.

If a second swarm came out before the first was disposed of, we had to look sharp or they would unite. We at once laid down our first box and bees and covered it up with a sheet. Then we brought our second box and put the second swarm therein and hived them. Then after, we hived the first.

See that your bees have sufficient ventilation, and your hives should be so constructed as to admit of its increase or diminution. A movable bottom board, I think advisable, where you winter indoors. Thereby you can give any amount of ventilation.

As to methods to be used in connection with extracting, the easiest way to learn is to go and see. But you can succeed very well if you begin and try, having a little ingenuity and manual dexterity.

Opinions differ as to the frequency of extracting. Some say, every two or three days. That time will not allow the honey to ripen and thicken in the hive, where I fancy the operation is best done. Yet bee-keepers, more successful than I, say that honey will ripen perfectly well in open vessels in a warm honey-house, or in any situation where there is continuous moderate heat.

Grenfell, N. W. T.

J. F.

## Horticultural.

### Manufacturing Raisins from Canadian Grapes.

In the March number of the JOURNAL, whilst advocating a more extended culture of fruit trees, the writer made special reference to the importance of planting grape vines, as the means of introducing into Ontario a new and desirable industry, the manufacture—if we may use so grand a commercial term for so simple a process—of grapes into raisins. We have

no doubt that in time this will be accomplished, and with great profit to any one, in any of our grape-growing localities, who may turn his attention to it.

But our present object is to suggest to farmers and others, having a few vines, how they may, with scarcely any expense, and with little trouble, supply themselves for the whole of the winter season, with several boxes of this delicious fruit, so handy and so useful in a variety of the culinary arrangements of every family.

All grapes will make raisins, but some varieties are to be preferred to others. For table raisins, the Concord, Eumelian, Barry-Rogers No. 43; Brant-Arnolds No. 8; Canada Arnolds No. 16; Isabella; Black Hamburg; the Muscat Hamburg—all either black, bluish-black or purple. For cooking purposes, the Agawam Rogers No. 15; Delaware, Iona, Lindley-Rogers No. 9; Salem-Rogers No. 22. These are either light, dark, or brownish red.

The methods of drying, as we have said, are very simple. With a sharp knife you cut half through the stem, when the grapes soon shrivel by the evaporation of the water they contain, leaving only the sweet pulp. In about ten days, by exposure to a hot sun, the process is perfected. The bunches are then placed in boxes, direct from the vine, with sheets of paper separating the layers, and slightly pressed. These are the best, or table raisins. The cooking raisins are treated rather differently. The grapes are picked when nearly ripe, and left in the sun or heated room to dry. Most of the Valencia raisin are room or oven dried. The bunches, whilst under the process of drying, are dipped in a ley of wood ashes, to every two gallons of which is added a half-pint of oil—any kind of sweet oil—and a handful of salt. The effect of this, it is said, is to cause a saccharine exudation to take place, which forms concretions upon the raisins, and coats them with a thin varnish. They are now picked from the stalk and packed in any suitable box. With the produce of half a dozen vines any one with careful attention to the above directions, may lay up for family use half a dozen boxes of the usual size, of this useful fruit, in addition to the enjoyment of the luscious grape in its natural state, and before its manufacture into raisins. In California raisins are extensively manufactured for home consumption, and there is no reason why Ontario should not do so likewise. It is said that our summers are not quite so long as in some grape-growing countries; but in general they are long enough for the ripening and the drying of the grape. Even in Europe the sun does some seasons withhold his potent beams, and otherwise the weather is not always auspicious for the drying of the fruit, which, as we have shown, is then taken and placed in a hot room or oven to dry, and raisin manufacturers here can do the same. We should like the experiment to be tried in several grape districts, and we would feel thankful if vine-growers making such experiment, would communicate the result to the editor of the JOURNAL.

The importation of raisins into Ontario is very large, and since we have the raw material in great abundance, it would seem that if at first, only moderate success should attend the trial suggested, encouragement would be given for the manufacturing of raisins, not only for home consumption but also for exportation. There were imported into Ontario in 1885, 7,762,830 lbs. of raisins, valued at for duty, \$353,124. The selling price to purchasers would be nearly treble this sum. There is here, therefore, a wide scope for Canadian enterprise in the establishment of a new and most important industry, alike

beneficial to vine-growers and to commerce and the country generally.

The writer of the above has certainly raised an important issue. Our grape-growers have expressed grave fears when met in convention lest the market for grapes be overstocked. Let them but once succeed in the manufacture of raisins and the market will be in a sense unlimited. Ontario cannot afford to pay more than \$1,000,000 for raisins every year if they can as well be manufactured at home from the overabundance of grapes, which in the natural state scarcely repay the handling in the latter stages of the grape season. We shall only be too glad to receive communications as to results from any who may try the experiment.—Ep.

### The Home.

For the CANADIAN LIVE-STOCK JOURNAL.

#### God Knoweth Best.

Ah! easy 'tis to feel that true,  
When in life's joyous morn;  
When skies are clear, and friends are near;  
Our flowers without a thorn,  
But soon the deep'ning shadows fall,  
Betokening coming storms,  
Now, tossed about by fear and doubt;  
Our pathway paved with thorns.

With bleeding feet, and aching heart  
We groping seek for light,  
And learn through ill, to do His will,  
To live by faith not sight.  
This world is but a training school,  
To fit us for the skies;  
We'll find some day that seeming ill,  
Were blessings in disguise.

MAUDE.

#### A Recipe for Cooking Husbands.

Miss Carson said at the Baltimore cooking school that a Baltimore lady had written a recipe for "cooking husbands so as to make them tender and good." It is as follows: A good many husbands are utterly spoiled by mismanagement. Some women go about it as if their husbands were bladders and blow them up. Others keep them constantly in hot water; others let them freeze by their carelessness and indifference. Some keep them in a stew by irritating ways and words. Others roast them. Some keep them in pickle all their lives. It cannot be supposed that any husband will be tender and good managed in this way, but they are really delicious when properly treated. In selecting your husband you should not be guided by the silvery appearance, as in buying mackerel, nor by the golden tint, as if you want a salmon. Be sure to select in yourself, as tastes differ. Do not go to market for him, as the best are always brought to your door. It is far better to have none unless you will patiently learn how to cook him. A preserving kettle of the finest porcelain is best, but if you have nothing but an earthenware pipkin, it will do, with care. See that the linen in which you wrap him is nicely washed and mended with the required number of buttons and strings, nicely sewed on. Tie him in the kettle by a strong silk cord called comfort, as the one called duty is apt to be weak. They are apt to fly out of the kettle and get burned and crusty on the edges, since, like crabs and lobsters, you have to cook them while alive. Make a clear, steady fire of love, neatness, and cheerfulness. Set him as near this as seems to agree with him. If he sputters and fizzes, do not be anxious; some husbands do this until they are quite done. Add a little sugar in the form of what confectioners call kisses, but no vinegar or pepper on any account. A little spice improves them, but it must be used with judgment. Do not stick any sharp instrument into him to see if he is becoming tender. Stir him gently; watch, the while, lest he lie too flat and close to the kettle, and so become useless. You cannot help but know when he is done. If thus treated, you will find him very digestible, agreeing nicely with you and the children, and he will keep as long as you want, unless you become careless and set him in too cold a place.

#### How to Select a Boy.

A GENTLEMAN advertised for a boy, and nearly fifty applicants presented themselves to him. Out of the whole number he selected one and dismissed the rest. "I should like to know," said a friend, "on what ground you selected that boy, who has not a single recommendation." "You are mistaken," said the gentleman; "he has a great many. He wiped his feet when he came in, and closed the door after him, showing that he was careful. He gave his seat instantly to that lame old man, showing that he was thoughtful. He took off his cap when he came in, and answered my questions promptly, showing that he was gentlemanly. He picked up the book which I had purposely laid on the floor and replaced it on the table; and he waited quietly for his turn, instead of pushing and crowding, showing that he was honourable and orderly. When I talked to him I noticed that his clothes were brushed, his hair in order; when he wrote his name I noticed that his finger-nails were clean. Don't you call those things letters of recommendation? I do; and I would give more for what I can tell about a boy by using my eyes ten minutes than all the letters he can bring me." Little things show character, and frequently determine a boy's whole career. It is the boy who does the kind, polite and thoughtful acts unconsciously that wins his way to employment and success. And success does not mean wealth or fame. True success means the development of a character that is worthy of example—a character that is honest to every duty, faithful to every trust, and that is unselfish enough to find time for kindly acts that are not forced, but the simple expression of a warm and generous principle. True success is fidelity to every relation in life.—*Christian Union.*

### Jottings.

**Dairy Furnishings.**—Messrs. Caswell & Co. have purchased the dairy furnishings supply, lately carried on by Mr. C. H. Slawson, Ingersoll, Ont., and are prepared to supply the trade in the requirements of the dairy.

**Seeking for Water.**—Mr. Albert I. Hart, Baddeck, Cape Breton, wishes to get information as to some party who could be secured to bore for water—we presume deeply. Will some of our readers volunteer the information?

**Wash for a Poultry House.**—*The National Stockman* says that next to whitewash for a poultry house a "black wash" is best. Boiling gas tar applied with an old broom is very penetrating and will effectually destroy insect life, and close up the small cracks against them. It must be applied hot or the coat will be so thick as to run in warm weather.

**Seed Corn for Fodder.**—Messrs. John S. Pearce & Co., seed merchants, London, Ont., offer the Mammoth Southern sweet corn for sale at varying prices, from \$1.50 and downwards, according to the lots. They advise owners of cheese factories to buy in quantity, and sell to their patrons at cost with a view to improve the quantity and quality of the milk. We commend the idea.

**White Welsh Cattle.**—Although the dominant race of cattle in Wales are black in color, there is still in that country a remnant of a breed that is white. Earl Cawdor has one of these herds at Stackpole Court. They are said to be better for milk production than the black cattle. Their horns are strong, and the muzzle, ears, eyes, tips of the horns and hoofs are black. It is said that long ago this breed had red ears.

**Annual Report of the Secretary of Agriculture for Nova Scotia.**—This report for 1885 is to hand. It is a very comprehensive report, and contains the proceedings of the Central Board of Agriculture wide and varied in their nature, and operations under direction of the Governor in Council, which includes amongst many other things, the annual reports of agricultural Societies for the year 1885. Its perusal gives one a good idea of the state of agriculture in this maritime Province.

**Watering Horses.**—Horses should be frequently watered; indeed it would be all the better if a supply of fresh water could be constantly within their reach. Water does not lie long in the equine stomach, and when horses get thirsty, and drink a large quantity of water at a time, particles of indigestible food are carried into the intestines. This is all the more inevitable if they are watered after being fed; they should always be watered before being fed. The washing away of indigestible particles of food in the manner described accounts for the seeds of grain that pass through the bowels, and are observed to vegetate here and there on the fields.—*North British Agriculturist.*

**Indications of Feeding Qualities.**—A slow feeder is marked by having a thick-set, hard, short hair, which constitutes a bad touch; a thin, meagre, papery skin, covered with thin silky hair, though the opposite of the one just mentioned does not constitute a good touch, but is indicative of weakness of constitution, though probably of good breeding properties. A good touch will be found in a thick, loose skin, floating as it were on a layer of soft fat, yielding to the least pressure, and springing back towards the fingers like a piece of soft thick chamois leather, and covered with thick, glossy, soft hair, which looks rich and beautiful, and seems warm and comfortable to the animal. A curly pile of soft hair indicates a vigorous constitution, and also a propensity to fatten.—S. G. in *London Live-Stock Journal*.

**Indications of Fat.**—The point or top of the rump is the first part of a feeding ox that shows fat, and the parts that are last in being covered with flesh are the top of the shoulder and the point of the shoulder joint, when these points are felt to be well covered; the other and better parts may be considered to be in perfection, and a prime condition may be expected. The general handling must establish the real condition, as there is a wide difference between the apparent and real fatness of an ox. The flesh of an ox that appears very fat to the eye may feel loose and flabby, but a truly fattened animal always feels "hand fat." Such handlers never deceive the butcher, while loose fattenings never kill well.—S. G. in *London Live-Stock Journal*.

**Cement Stable Floors.**—The plan of using cement in one or other of its forms in laying stable floors, seems to be growing in favor. We have heard the objection offered that a floor thus finished in under the cattle is too cold. Will some of our readers who have had experience in the matter please give us their ideas in reference to this point, and also as to the exact methods which they followed in constructing these floors. Amongst others who have used cement in constructing stable floors, we call to mind at present the names of Messrs. G. Laidlaw, The Fort, Victoria Road, Mr. Mulock, Markham, and V. E. Fuller, of this city, and we trust that those gentlemen, and any others who have experience in the matter, may find time to accede to our request at an early day. In our ideas regarding the possession of useful agricultural knowledge we are decidedly communistic.

**Mr. Powell's Lecture.**—Mr. W. B. Powell, of the firm of Powell Bros., Shadeland, Springboro, Pa., has prepared a lecture on the horse, which is attaining a wide popularity. It goes down deep into the foundations of things, and for this reason it has been criticized as "too flowery" and "too deep" for purposes of general utility. It pleases us to hear of a lecture of this nature on anything agricultural, as there is so much written and said upon it that is so very full of chaff that every whiff of opinion blows it all away. Mr. Powell gives much prominence to the fact that animal life is very plastic in the hands of man. He can mould it into shapes almost at will, and impart to it characteristics best adapted to the various uses intended in a wonderful degree. The lecture throughout shows much patient thought and a good deal of research. It is thus that good things are got in agricultural literature as in that of other classes.

**The Great Central Fair.**—This Exhibition will be held in Hamilton, Ont., from September 27th to 1st October, 1886. The prize list for stock is even fuller than usual, and should draw out a good exhibit. The prizes in the seven different classes of horses, range from \$25 and under. In Shorthorns and Ayrshires, from \$20 and downwards, and Jerseys, Herefords and fat cattle, from \$12 and downwards, are offered. Messrs. L. D. Sawyer & Co. offer the handsome prize of a mower, value \$75, for the best herd of Durham cattle, consisting of one bull, and four females of any age, and several other gentlemen of Hamilton offer substantial prizes for herds, foremost amongst whom are the scale manufacturers of the city. In the seven sheep classes the prizes run from \$10 and under, and the pen prize in each case consists of a ram and six females, any age. In the pig classes, the prizes run from \$3 and downwards, for which there are no pen prizes. The prize list will be forwarded free on application to the Secretary, Mr. Jonathan Davis, of this city. W. Hendrie, Esq., is the President this year.

**Rules Governing Entries into the Clydesdale Stud Book of Canada.**—Clydesdale stallions and mares will be admitted to registry in the Clydesdale Stud Book of Canada as follows: 1. Clydesdale stallions or mares by sire and out of dam both recorded in the Clydesdale Stud Book of Canada. 2. Clydesdale stallions having five top crosses with their damson record, and Clydesdale mares having four top crosses, in each case by sires recorded in the Clydesdale Stud Book of Canada. 3. Imported Clydesdale stallions or mares recorded in the Clydesdale Stud

Book of Great Britain. 4. Imported Clydesdale stallions or mares by sire and out of dam both recorded in the Clydesdale Stud Book of Great Britain. 5. Imported Clydesdale stallions or mares, eligible for registration in Clydesdale Stud Book of Great Britain. Imported Clydesdale stallions or mares, after the year 1883, will be admitted only upon the certificate of the Secretary of the Clydesdale Horse Society of Great Britain and Ireland, that rules 3 and 4 have been complied with. Canadian Draught Horses of mixed breeding will be admitted to registry in the Appendix of the Clydesdale Stud Book of Canada as follows: 1. Stallions having five top crosses of recorded horses with their dams on record, of which two crosses or less may be Shire, and mares having four top crosses, of which two or less may be Shire. 2. Fillies from mares recorded in the Appendix having four crosses of pure Clyde, after a Shire cross, will be eligible for the Clydesdale Stud Book of Canada. A Clydesdale Office Record will be kept, in which horses and mares with two top crosses or more of recorded sires will be entered, and a certificate given showing the breeding. So soon as their progeny possess the sufficient number of crosses, they will be admitted into the Stud Book.

**Remarkable Milk and Butter Records.**—The Messrs. Smiths, Powell & Lamb, of Syracuse, N. Y., owners of the splendid Lakeside herd of Holsteins, have recently been testing two of their two-year-old Holstein heifers, Albino and Benola Fletcher, with results that are simply astonishing. Albino and H. H. B., 3500, dropped her first calf April 7th, 1885, when two years, one month and twenty-three days old. Her record commenced on the morning of April 11th, 1885, and ended on the evening of April 10th, 1886. She gave during that time 18,366 lbs of milk, a record never hitherto equalled by a two-year-old Holstein, and what is very worthy of note, the daily yield at the end of the year was higher than at its commencement, so that the yield for one year ending May 4th, 1886, was 18,462 lbs., 1 oz. of milk, or 715 lbs., 150z., more than the famous record of Aaggie and, when a two-year-old. One very important feature of this test is the evidence by which its integrity is supported. Mr. W. Judson Smith gives sworn testimony as to date of birth of the heifer—Feb. 15th, 1883, and to date of calving, April 7th, 1885. Mr. S. Burchard, a well known inspector for the Holstein-Friesian herd book, Mr. S. Hoxie, superintendent of advanced registry, Mr. Isaac C. Ott, inspector, and Mr. Dudley Miller, a former inspector for the Holstein-Friesian herd book, all testify to the integrity of the test at different stages thereof, and Hiram H. Gibbs, who milked Albino and during the whole year, clenches the whole with his sworn affidavit. The two-year-old heifer, Benola Fletcher, H. H. B., 6891, also at Lakeside, is as remarkable in the butter line as Albino and is in that of milk. She dropped her first calf, April 18th, 1885, and was put on a butter test April 30th, 1885, when but two years, one month and twenty days old. From April 30th to May 6th inclusive, she gave 300 lbs., 10z. of milk, from which was made 16 lbs., 9oz. of worked, unsalted butter, being an average of one pound of butter from 18 lbs. 11-100 of milk. Benola Fletcher has given in just one year ending April 19th, 1886, 13,159 lbs., 4 oz. of milk.

"Although very good before, I think the JOURNAL is improved. I have read the January number with increased interest, and wish it every success."—R. Coad, Strathburn.

"I would not do without the JOURNAL for twice the price."—John Sword, Bognor.

"I am well pleased with your JOURNAL, and will try and persuade more of my neighbors to take it."—M. E. Bullard, Iron Hill, Que.

"Am well pleased with your JOURNAL."—James Dz'iel, Chesterfield.

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**Stock Notes.**

Parties forwarding stock notes for publication will please condense as much as possible. If written separate from other matter it will save much labor in the office. No stock notes can be inserted that do not reach the office by the 23rd of the month preceding the issue for which they are intended.

**Horses.**

Mr. F. Lowell, Galt, has sold recently from his farm, at West Montrose, several thoroughbred horses, as follows: Onda, bay mare three years old, by Francis L. dam, Octoroon. O Lean, chestnut gelding, 4 years old, by Francis L. dam, Olga; also the bay mare, Lottie, by Major Wickham (imported from New York by Mr. Jno. Dulmage, of Wingham), dam, Jess Harris, imported from Lexington, Kentucky, by Mr. Lowell. They were a fine lot, and the first three were in training for the Queen's plate to be run for at Toronto, but the large sums of American gold offered by Mr. H. A. Danville, Michigan, U.S.A., proved too strong a temptation. Mr. Lowell is henceforth going to give more attention to his herd of Shorthorns.

We are pleased to notice that the Messrs. Graham Bros Myrtle, Ont., have made another importation of Clyde stallions consisting of 4 three years old and two years old. They arrived on the 17th May, and are described below: Broomkern *alias* Macintyre (3471). Light brown; 3 years old, sired by the celebrated Macgregor (1487), a perfect model. Bright Smile (4268). Bay; 3 years old; sired by Prince Henry (1257), large and of good quality, will make a "big un." Royal Blue (number to appear in vol. ix). Bay; 3 years old; sired by Blue Ribbon (1961), another large and muscular colt. Bannerman (number to appear in vol. ix). Bay; 3 years old; sired by the noted stallion, Jacob Wilson (2178). Bannerman is very compact, with fine action, and good bone and muscle. Duchrae and Cossack (numbers to appear in vol. ix). Colors brown and bay; 2 years old; both sired by Sir Michael (1530), very promising. The enterprise shown by this young firm is very creditable to them.

**Shorthorns.**

Mr. Samuel B. Gorwill, Ballymore, Ont., has sold a fine one-year-old Shorthorn bull to Mr. J. Millar, jr., Gowrie, Co. Perth, Ont. His Scotch cow, Buchan Lassie drooped a fine red bull calf on May 21st, sired by his imported Cruikshank bull, Duke of Guelders.

Mr. John H. Drought, of Binscarr, Manitoba, has purchased from Messrs. Green Bros., The Glen, the white yearling heifer, Emerald, out of imported Eliza IX and the roan yearling heifer, Mignonette, out of imported Miss McBeth *alias* The Belle.

Messrs. C. G. Charteris & Son, of Beechwood, Chatham, Ont., have recently sold two Bates Shorthorn heifer calves and one bull calf to Thos. Shaw, Woodburn, Ont. They are all bred by the old Beechwood stock bull Lord Byron, and the three are a fine lot. One of them, with the exception of the top toss, is a pure Lady Garland, and a faultless red in color.

Mr. David McKay, of Owen Sound, Ont., purchased the bull Napoleon from Mr. Samuel Holman, Columbus, Ont., some time ago, which is doing good service in the neighborhood. He has at least ten good substantial crosses in his pedigree, and was sired by imp. Lord Glamis. Mr. McKay was the first to take a pedigree bull into his neighborhood some 8 or 10 years ago, and finds the offspring a great improvement on the scrub stock. He also mentions that his Oxford Downs, Berkshire pigs and Rouen ducks are doing well.

Messrs. Sharman & Sharman, of Breeze Lawn Stock Farm, Souris, Manitoba, mention that they have arrived home safely with their recent purchases from Ontario. They are a splendid lot, and include 10 head of Shorthorns and 2 Berkshires. 5 head of the Shorthorns from J. C. Snell, Edmonton, and a head of Shorthorns and Berkshires from J. G. Snell & Bro., Edmonton, and the three remaining head of Shorthorns from T. & A. B. Snider, German Mills. These in addition to the large stock already at Breeze Lawn make a fine herd.

Messrs. E. Gaunt & Sons, St. Helen's, Ont., mention that since last report they have sold their 4-year-old stock bull, Young Farmer, 703, to C. Campbell, Ripley, a yearling, Prince of Willowdale, to H. Deacon, Belgrave; he weighed at 17 months 1470 lbs., and was an exceptionally promising animal; also to Alex. Patterson, Lucknow, the yearling bull, Oliver; to Jno. Clow, Michigan, U. S., a shearing ram. They have purchased

**Advertising Rates.**

The rate for single insertion is 18c. per line, Nonpareil (22 lines make one inch); for three insertions, 15c. per line each insertion; for six insertions, 12c. per line each insertion; for one year, 10c. per line each insertion. Cards in Breeders' Directory, not more than five lines, \$1 per line per annum.  
Copy for advertisement should reach us before the 25th of each month (earlier if possible). If later, it may be in time for insertion, but often too late for proper classification. Advertisers not known at office will remit cash in advance. Further information will be given if desired

**STOCK FOR SALE.**

**HALF BRED PERCHERON FOR SALE**—rising five years old. SEBASTIAN WEIS, Plattsville, Ont.

**BLUE-BLOODED BERKSHIRES**  
From the Gold Medal Herd. Four imported boars in use. A fine lot of spring pigs for sale. Can supply pairs not akin, and well up to standard in every respect. Will ship to order and guarantee satisfaction.  
JOHN SNELL'S SONS, Edmonton, Ont.

**FOR SALE.**  
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**Stock Notes.**

from D. Milne, Ethel, Ont., the bull Lord Lovell, bred by Messrs. J. & W. Watt, Salem, and got by Bampton Hero, dam, Matchless and the Messrs. Watt's great show cow. They think Lovell is Bampton Hero's best son, and that he suits their herd well. Their Leicesters are doing well, and they have an exceptionally fine lot of lambs from the imp. Whitelaw ram.

Mr. N. W. C. Baugh, of Kinbrae, Assiniboia, N. W. T., has recently purchased a three-year-old Shorthorn bull, Acme and (12715) certificate No. Bred by Mr. John A. Brown, Rapid City, Man.; got by Red Rover (9223); dam, Princess Beatrice (vol. ix, page 259, C. S. H. B.). Mr. Baugh sends copy of extended pedigree, and asks whether it is eligible for entry in the new Dominion Shorthorn Herd Book. We think it is, but owing to the exactness with which the work of examining pedigrees is being done now, it becomes of necessity a study in itself, and therefore it is better in every case to submit the pedigree to the Secretary, Mr. H. Wade, Toronto, for registration, with the fee \$1.00 enclosed, when it will receive prompt attention. Where the individual has several animals to register, it is better to forward to the same address \$5.00, the membership fee, which will entitle the sender to the volume issued during the year, and to registration of each animal for 50 cts. The annual membership fee is \$4.00 after the first year.

Mr. James Hunter, of Sunnyside Farm, Alma, Ont., writes under date of May 18th: "I have made the following sales this month: Socrates (45640), to Messrs. Lackners & Weber, Hawkeville, Ont.; Isaac, a very smooth well formed bull, got by Sir Hugh—2267—, dam, Lady Sarah and, by Knight of Warlaby—472—, tracing to the show cow, Lady Fanny, imp. from the herd of Amos Cruikshank, Aberdeenshire, Scotland, went to Robert Johnston, Johnston, P. O., Ont., British Boy—3322—, one of the smoothest and best formed bulls that ever left 'Sunnyside,' was sold to David Moore, Hull (near Ottawa). British Boy—3322—, is by Socrates (45640), dam, Rose of Killerby, by Knight of Warlaby—472—, dam, Rose of Autumn, by Prince Alfred (27107) I have 30 head of cows and heifers out on the grass, nine days ago and are looking well. Although the season is so well advanced, many of our farmers are far back with their seeding. Stock all doing very well."

Mr. James I. Davidson, of Balsam, Ont., has made the following sales of Cruikshank bulls since last report:—To Mr. James Burns, Greenbank, Ont., the imported Short horn bull Abdullah (5071), of the Lavender tribe, sire, Dunblane (47792). To Mr. George Haddon, Wick, Ont., the bull Perfection, ind. of the Abanilla tribe; sire, Baron Bampton, of the famous Witley Butterfly tribe; sire and dam both imported. Scottish Lord of the Secret tribe, sire, Cumberland (46144), to Mr. J. F. McFee, Lenox, Iowa. Germanicus, of the Kingfisher tribe; sire, Cawdor (44506), to Mr. Jos. Moffat, Paw Paw, Ill. These are all good roans, Prince Bishop, of the Duches of Gloster tribe; sire, Dunblane (47792), was sold to Mr. C. G. Norton, Corning, Iowa; his dam is the 24th Duchess of Gloster, the dam of Mr. Wm. Wilson's bull Endymion, and Col. W. Higginbottom's Double Gloster (49383), for which he paid \$1000. Mr. Davidson has still a few good imported bulls for sale, red and roan, notwithstanding that he has sold since December, 35 Shorthorns, mostly imported, which conclusively proves the strong demand for Cruikshank cattle.

**Aberdeen-Angus.**

We have just received the supplement to the private catalogue of Aberdeen-Angus Polled cattle, the property of Messrs. Hay & Paton, of the Kinnoul Park Stock Farm, New Lowell, Co. Simcoe, Ont. The catalogue itself we noticed in the April number of the JOURNAL, and the occasion of the issuing of the supplement is the purchase of the entire herd of this breed owned by Messrs. Hiram Walker & Sons, of Windsor and Detroit. Mr. J. G. Davidson, the manager, has done his work well again, the supplement as well as the original catalogue, being a model of its kind. It contains the pedigrees of 15 cows and heifer calves, and those of 21 bulls and bull calves. The imported four-year-old cow Heatherbell 3rd of Aberlour (5983) (17), an old-country prize-winner and of a strain of blood that has produced "some of the finest animals of the Polled breed the world has yet seen," stands first in the catalogue. Lucy 9th (5276) (64), imported, of the favorite Drumlin Lucy family, follows, which has a fine heifer calf to the valuable Pride bull Waterside Standard, imported (3374), and which is expected to found a valuable family at Kinnoul Park. No less than six of the females come from the valuable herd of the late Capt. Beedie, Pitgair, Gamrie, Scotland. The two-year-old bull Waterside Burke, imp (3361), is said to be a splendid animal—just the bull for any one commencing a herd of Aberdeen Polls. Of the bull calves it is stated that it would be hard to get a finer lot, and we know Mr. Davidson measures carefully his statements. The firm announce in their supplement that they are now able to supply the public with almost everything they can desire in the Aberdeen-Angus line

**Holsteins.**

Our sincere thanks are here tendered to B. R. Lord & Son, of the Sinclairville Stock Farm, New York, U. S. A., the noted breeders of Holsteins, for one of the handsomest engravings of their favorite breed that we have ever beheld. Of course the bull Barrington (278 N. H. B.) 2103 H. H. B., is there the world renowned lord of the herd. Also Hamming 3851, his dam, with her milk record of 99 lbs. in one day. Brexje (1228 N. H. B.) 6340 H. H. B., record 906 lbs. in 10 days—Baroness S., 5098 H. H. B., record 565 lbs. in ten days at two years old, and Trjntje (370 N. H. B.), 2943 H. H. B., record 18 lbs. 9 oz. unsalted butter in seven days, completes the group, with the exception of the beautiful Percheron horse Gold Spray, No. 2717 N. R. of N. H., which occupies a central position. Gold and silver medals give additional charm to the picture.

**Ayrshires.**

Mr. Albert I. Hart, of Baddeck, Cape Breton, mentions the sale of two pure-bred Ayrshires during the month of April, and at fairly good prices.

The new catalogue of the Shade Park Stock Farm, of Mr. T. G. Norman, Merivale (near Ottawa), Ont., is to hand. It contains a description of his pure bred Ayrshire cattle, and many breeds of pure bred swine and also different varieties of poultry. It is also beautifully illustrated. A strong list of prizes won by various classes of stock, at London and Toronto exhibitions in 1885, prefaces the work. The prize winning bull, Sultan (1288), still heads the Ayrshire herd. The Chester Whites amongst the swine are the best in Canada, judging by the prizes won. There are also Ohio imported Chesters, White Lancashire, small breed of English Yorkshire, Jersey Red and Poland China. Amongst the fowls are Plymouth Rocks, White Leghorns and Light Brahmas, and an encouraging list of testimonials is appended from his patrons. Mr. Nankin states that he commences 1886 with four times the amount of stock possessed at the beginning of 1885.

**Herefords.**

Mr. Chas. C. Black, Amherst, Nova Scotia, has purchased from R. H. Pope, of Cookshire, Que., two Hereford heifers, very good ones, and with calf, which are the only ones in that Province registered. He has also a bull, Ledbury, one year old, imported last autumn by the Iowa Hereford Cattle Co., which he says is doing very well. Mr. Black remarks that if more of the breed were down there in his Province, it would tend greatly to improve the stock.

**Sheep and Pigs.**

John P. Anderson, Guelph, Ont., makes a change in his card this month, and places it in the sheep directory. He writes his imported ewes have all lambs from Duke of Walsingham, from the imported Model Farm ram, and that he has had good luck with his lambs this season.

Mr. Robert Hannah, of Bethany, Ont., writes that he has had grand success with his Shropshire lambs this season. They came good and strong. Out of twenty lambs at the date of writing, he had not lost one. He also mentions the JOURNAL is meeting with much acceptance in the neighborhood.

**WANTED.**

**AN EXPERIENCED FARM MANAGER** for the East-wood Estate, with good recommendations. Only those having some knowledge of Shorthorns need apply. Single man, or married, without children. Apply to T. C. PATTESON, Postmaster, Toronto.

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**BULL CALVES, HEIFERS AND YOUNG** Cows in calf, also Southdown ram lambs, Shearlings and Ewes, all bred direct from imported stock from the best breeders in Britain. Prices moderate. Write for particulars to SETH HEACOCK, Oakland Farm, Kettleby, Ont. nov-6

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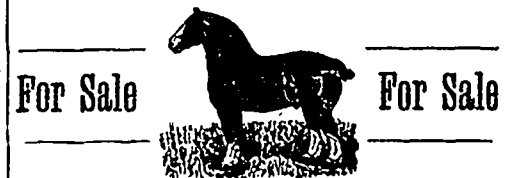
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and mares. Several of them were prize winners at the leading shows in Scotland and Canada.

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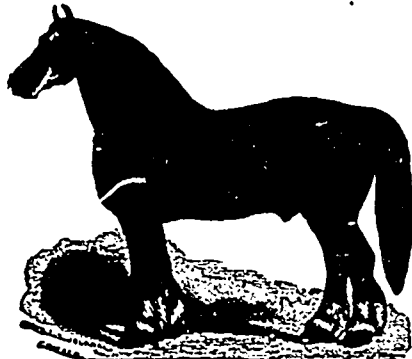
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**CLYDESDALES.**—1 stallion, 3 years, imported; 1 stallion, 2 years, imported; 1 filly, 2 years, imported; 2 fillies, 3 years, imported; 2 fillies, 3 years, Canadian bred, four crosses; 11 fillies, 2 years, Canadian bred, three to five crosses, and two fillies, one year, Canadian bred. Several of them prize-winners.  
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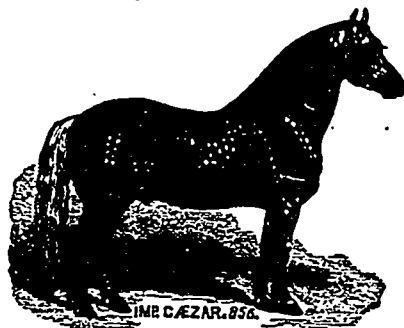
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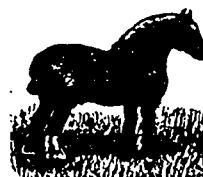
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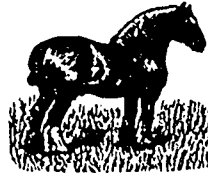
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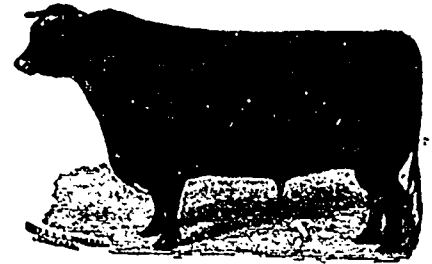
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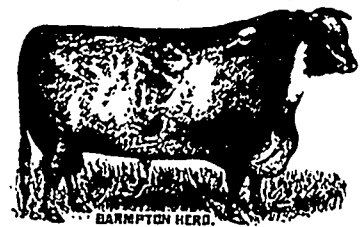


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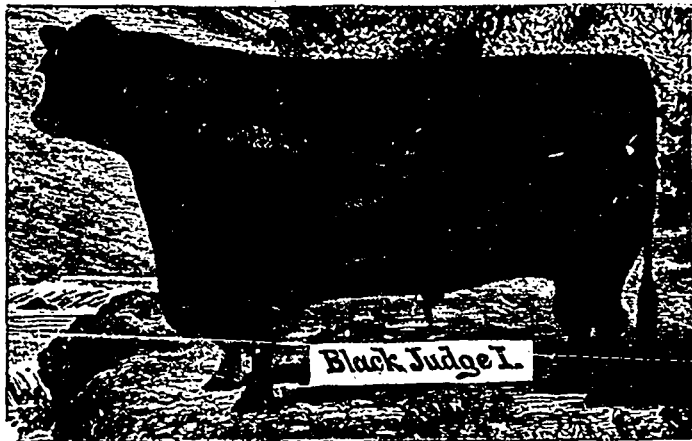
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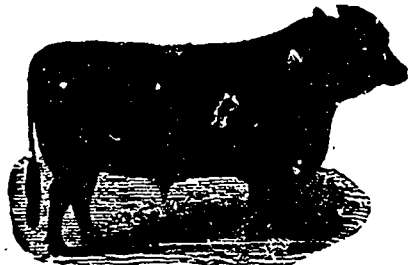
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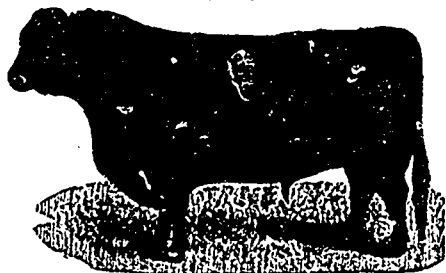
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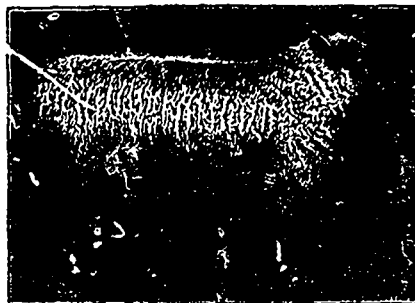
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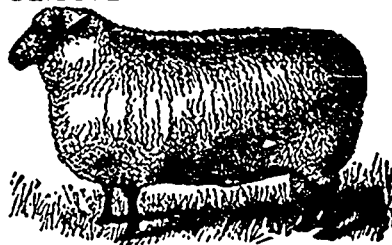
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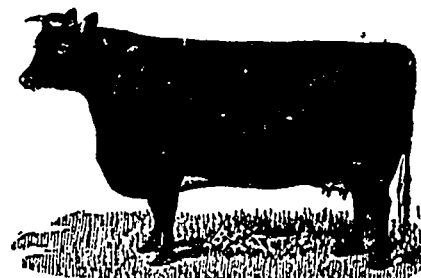
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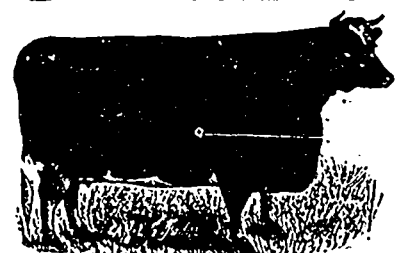
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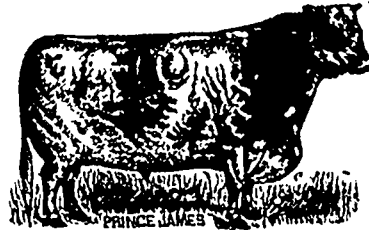
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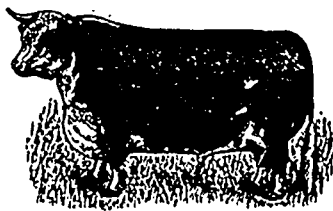
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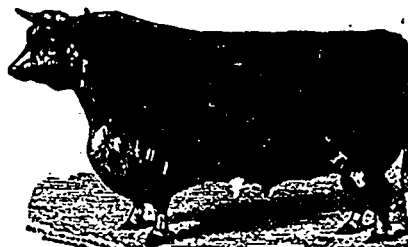
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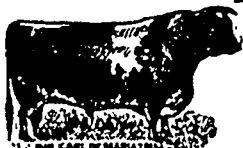
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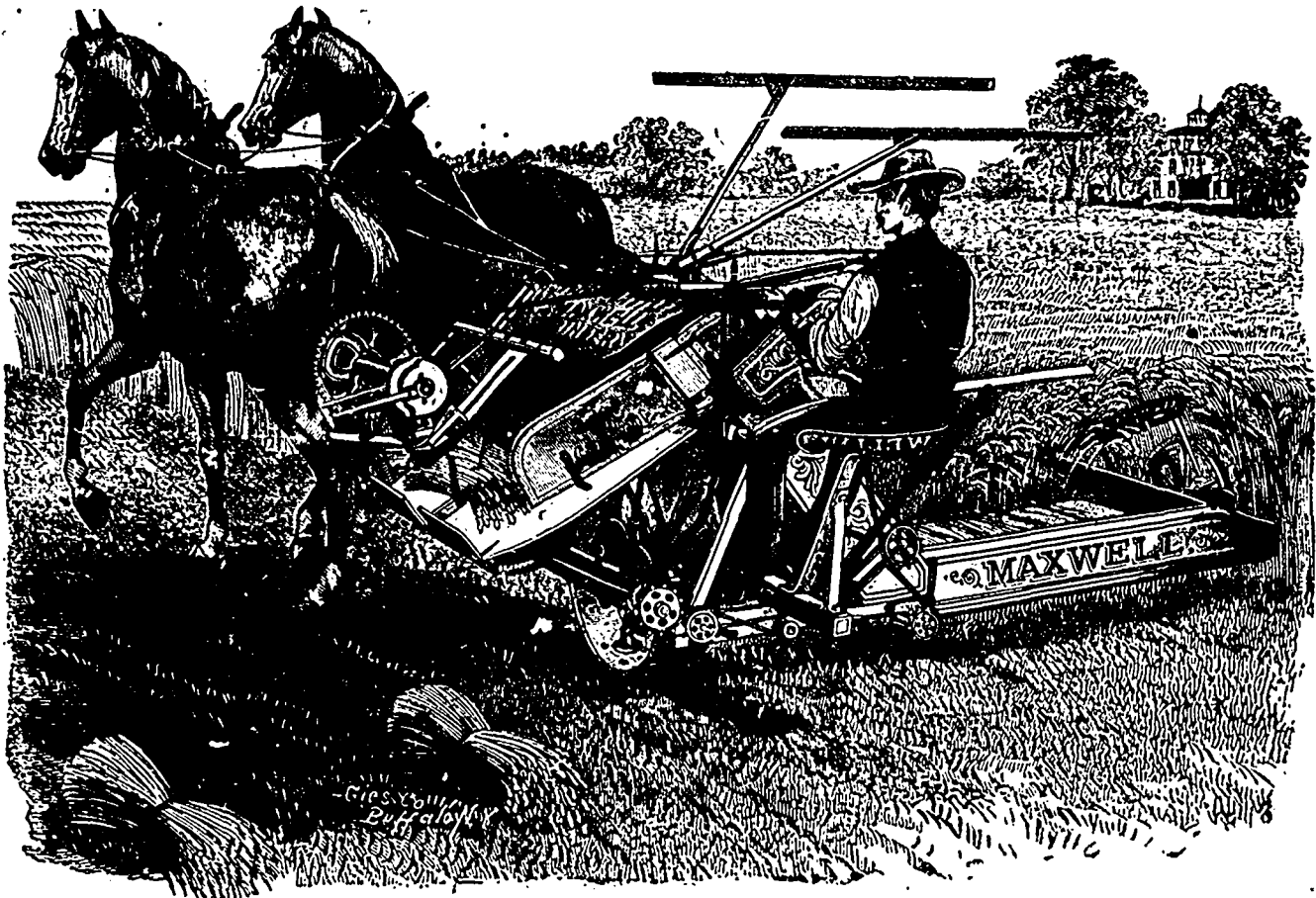
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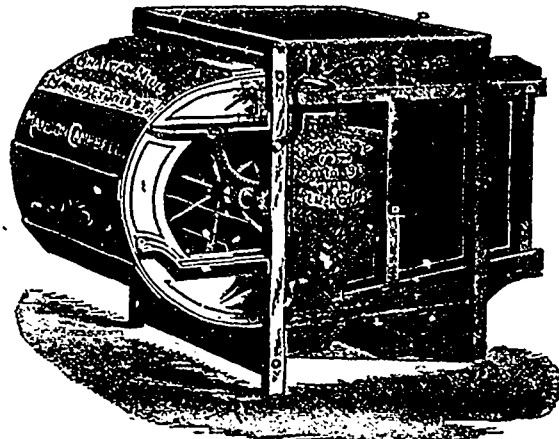
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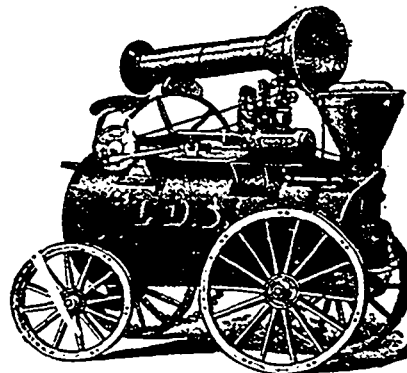
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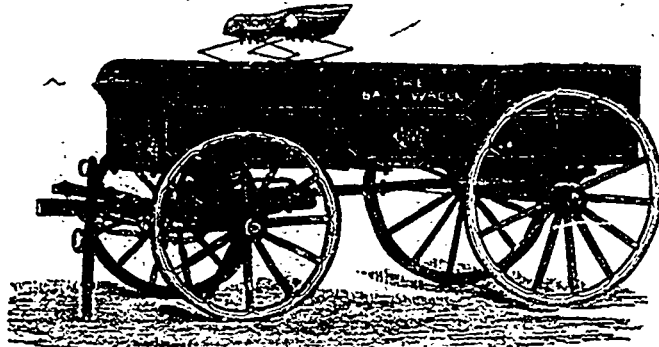
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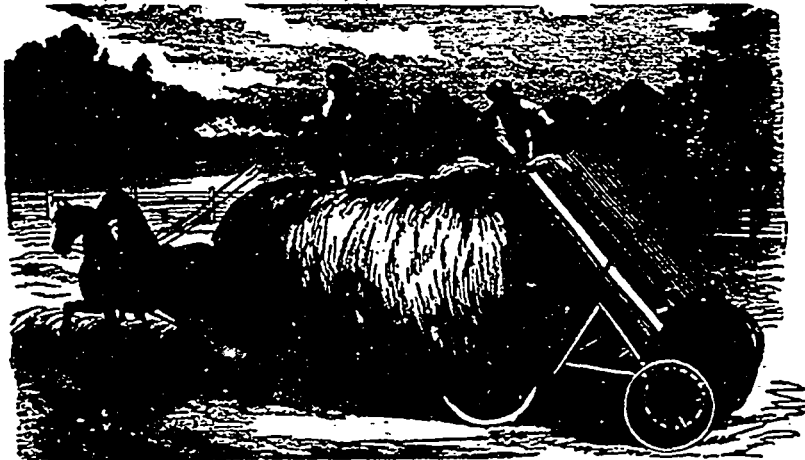
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Jan-7

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SPECIALTIES—Hay Loaders, Hay Tedders, Hay Forks and Carriers.

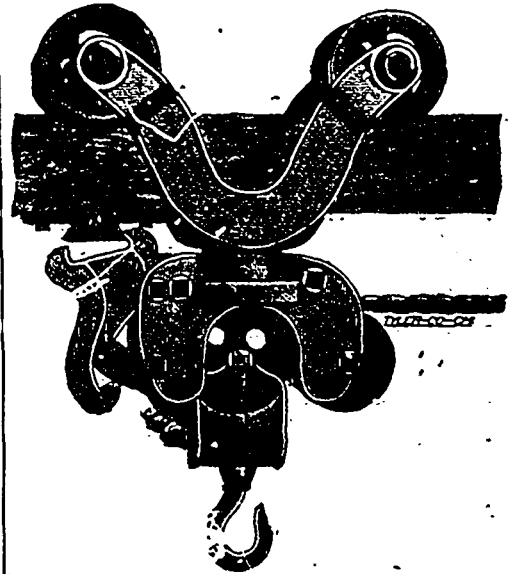
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The above cut represents the

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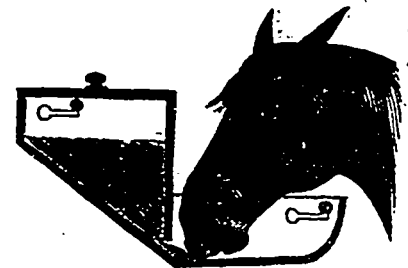
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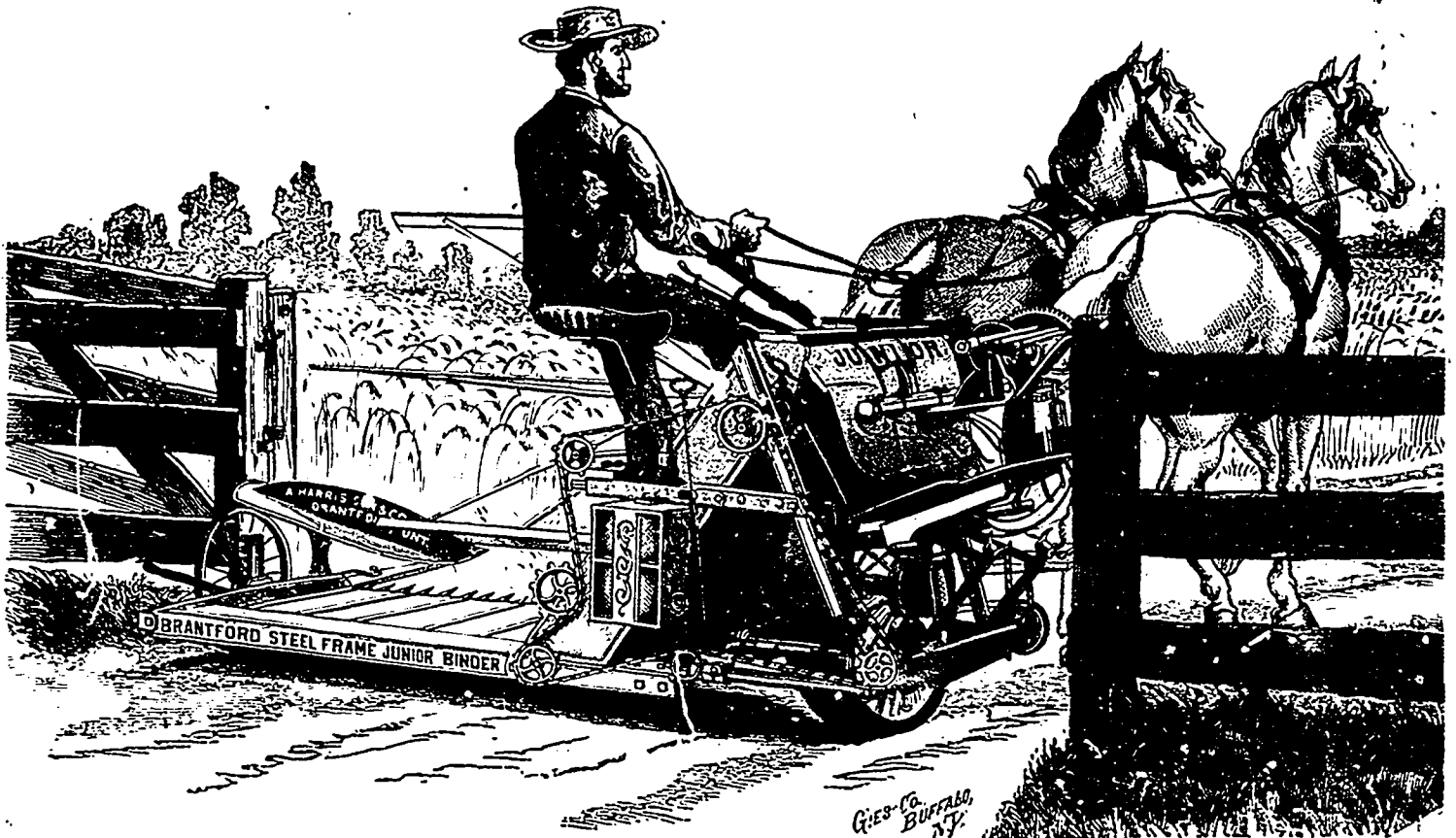


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