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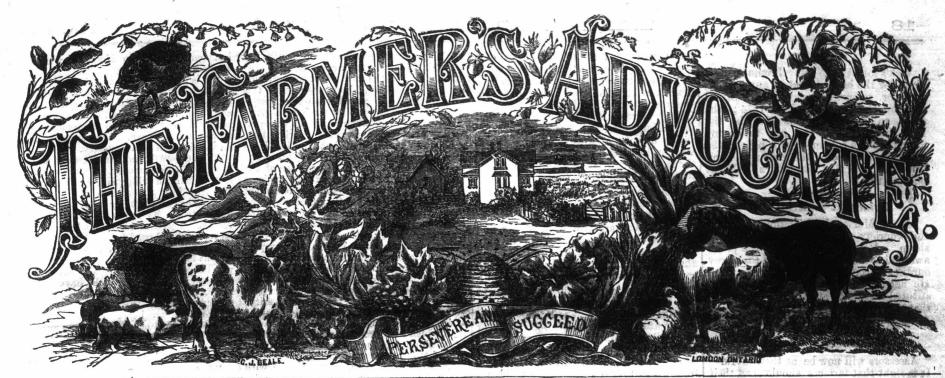
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VOL. IX.

{ WILLIAM WELD, Editor & Proprietor. }

LONDON, ONT., FEBRUARY, 1874.

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Granges.

This is the name applied to the new farmers' organizations. It means the same as lodges or clubs. The object of granges is to unite farmers in action for their mutual protection and advancement.-Lawyers, doctors, capitalists, surveyors, mechanics and merchants all have their organizations and accomplish much for their own protection and advancement by them. The farmers are fair game for all to prey on, and well they have been and still are being fleeced by the many devices planned for them.

The farmer stands alone; he can accomplish but little individually, but by uniting his strength with his brother farmers, he could accomplish much. In union there is strength. To make unity there must be some band of henor to combine parties together. The Masons, Orangemen, Odd-fellows and Temperance organizations all have their private bonds and secrets; they are able to use strength when required. In the granges there are secrets which are not divulged to the public; information is spread from one to the other of its members. These societies or granges admit of the farmers' wives, sons and daughters becoming members; in fact a grange cannot be established without having some ladies in it. This of the Order have been adopted chiefly for the rate that political papers are charged we consider is a beneficial regulation, as the purpose of accomplishing desired effici-by their presence and aid greater good ency, extension and unity, and to secure by their presence and aid greater good can be done and the granges be kept free from abuse and coarseness, and more harmony and good feeling will exist.

As in other secret societies, a fee is charged for admittance, which is expended for the benefit of the granges and to cover working expenses.

Religion and party politics are not allowed to be discussed by the granges; the members must be agriculturists. The granges have been organized in the western States for some years; we have long been working to organize farmers under the Agricultural Emporium, to work together. We have tried for many years, but have as yet only partially suc ceeded.

The granges in some instances propose to do more than we attempted, and in some instances not as much. They are fairly at work in the States and are rapidly increasing in strength; they at first were very weak, the existing powers were against them, the papers, merchants, middlemen, railway men and manufac-turers opposed them. Despite this heavy opposition, they combined, increased, and fear nothing now; they have done good work for their members, who are enabled to realize more for their productions and procure their requirements at much lower selves against impositions, which they

could not otherwise have done. They have meetings and spread information to one another; they have happy, pleasing and enlightening gatherings wherever they have been established. They have never allowed a single grange to cease work, and all appear to be adding members and establishing others.

There are already a few granges established in the eastern part of Canada; we expect an association will soon be formed in this part to establish granges here. We do not, of course, know the secret working of the society, but on account of the good they have already done to many farmers where they have been organized, we intend to identify ourselves with them, and join the first grange or-

ganized in this section. We advise all our readers to consider over this subject, and let us hear their ideas upon it. Shall we farmers in Canada unite in action for our mutual interests? That is the question. The following is taken from one of their circulars:

From the Official Circular of the National

Grange: In the meetings of this Order all but members are excluded, and there is in its pro-

ceedings a symbolized ritual. The secrecy of the ritual and proceedings among its members, in the internal working of the Order, confidence, harmony and security.

Women are admitted to full membership, and we solicit the co-operation of women be cause of a conviction that without her aid success will be less certain and decided.— Much might be said in this connection, but every husband and brother knows that where he can be accompanied by his wife or sister no lessons will be learned but those of purity and truth.

The Order of the Patrons of Husbandry will accomplish a thorough and systematic organization among farmers, and will secure among them intimate social relations and acquaintance with each other, for the advancement and elevation of their pursuits, with an appreciation and protection of their true interests. By such means may be accomplished that which exists throughout the country in all other avocations and among all other classes-combined co-operative association for individual improvement and com-

mon benefit. Among the advantages which may be derived from the Order are systematic arrangements for procuring and disseminating, in the most expeditious manner, information relative to crops, demand and supply, prices, markets, and transportation throughout the country; also for the purchase and exchange of stock, seeds and desired varieties of plants and trees, and for the purpose of prorates, and are enabled to protect them curing help at home or from abroad, and situations for persons seeking employment; mail matter.

also for ascertaining and testing the merits of newly-discovered farming implements and those not in general use, and for detecting and exposing those that are unworthy, and for protecting, by all available means, the farming interests from fraud and deception, and combinations of every kind.

We ignore all political or religious discussions in the Order; we do not solicit the patronage of any sect, association, or individual, upon any grounds whatever, except upon the intrinsic merits of the Order.

The most important work to be done by the order is, first, to thoroughly organize in all parts of the country. We suggest to the farmers that they take an active interest in this work, and secure subordinate granges in every township as speedily as possible.

To the Hon. A. Mackenzie and other Members of the Levislative Council: GENTLEMEN,

On behalf of the working farmers of Canada, whose interests our journal—the FARMERS' ADVOCATE—professes to represent, we would respectfully call your attention to a requirement of our thousands of readers. We have for years complained of the injustice to farmers of compelling agricultural affairs. publishers of agricultural papers to prepay single copies of such papers at double | vantage be discussed at these meetings .to pass through the post office, and even then on credit or payable by the receiver. In justice to farmers, we would suggest that agricultural papers should be charged no more than weekly political papers, namely, half a cent each. We are quite willing to pay that rate, and would rather do so than to pay an indirect tax to allow all the papers to pass free.

that receive daily from two to ten papers, should pay the postage on them. that you contemplated to remove the than for the good that can be done. postage from all papers. If this is done, we believe that the poor farmers who can only take one or two papers, will have to pay a greater amount indirectly than they now pay directly, and the rich man who filled and the officers there to elect each can afford to take many papers, receives other? another advantage at the expense of the farmers.

Also, we beg leave to suggest to your Honorable body the propriety of reducing

Humbly requesting that you may look favorably on the cause of the farmers, and grant to them a just and fair consideration, I remain on their behalf, Yours, &c., W. WELD.

E. Middlesex Agr'l Society.

The annual meeting of the East Middlesex Agricultural Society was but very sparsely attended. The same directors and office bearers have been elected, with but slight change.

It is much to be regretted that the slightest attempts should be made to stifle the spread of agricultural information or anything pertaining to agriculture and its pursuits. We think discussions should be encouraged at these annual meetings, and when any new and beneficial plans are brought forward, as was the case at this meeting, by a real farmer of the name of Axford, they should be discussed and encouraged.

The subject brought forward by Mr. Axford was in reference to the best means of obtaining the highest price for beef by shipping it; also hinting at the necessity of farmers uniting for the discussion of

Such useful questions might with ad-We presume these annual meetings are seldom of any more benefit than the mere election of officers, or some individual may wish to deliver himself of a little self praise, or talk against time. These meetings should encourage discussions among the members.

Apathy takes the place of activity, and objects that are intended for agricultural advancement are often overlooked, and The large capitalists and merchants the whole energy of the members is often displayed in getting up a species of Barnum Exhibition, more for the considermake this request because we have heard ation of the dollars that can be received,

Let us hear how your annual meetings passed off. Were there a few hours spent in discussing agricultural affairs brought forward, or were the legal regulations just

Notice,

To our friends who are getting up clubs we are prepared to send the numbers from the rate of postage on seeds. One pound of printed matter, in the shape of periodinumber we shall furnish you a list of cals, can now be sent for four cents; one some seeds that may be required by some pound of seed cannot be sent for less than of you. Any of you that send us one er eight cents. Thus the farmer who requires more new subscribers during this month a change of seed has to pay for its car- will be entitled to claim a package of riage twice as much as paper can be sent some kind of seed, depending on the for. For the benefit of the farmer we number of subscribers sent. In sending would suggest that seed in small quantities for the seed the date on which the subshould be carried as cheaply as other scribers names were sent in need only be referred to. Send in a few new names,

A Prize.

Vick's latest and best chromo will be given for the best account of any county, city, or township annual agricultura meeting, held during Jan., 1874; the article to be sent into this office by the 15th day of Feb'y, and not to occupy more than one column of this paper; the award to be based on the most useful and beneficial report of discussions held at said meetings.

Prizes at Exhibitions.

Mr. M. Morwood, of Thorold, suggests the propriety of altering the prize list for His opinion is that the prizes awarded to shearling ewes tend to destroy our best sheep for breeding purposes.— He suggests that wethers should be substituted instead of ewes. He informs us that this is already done at many of the Agricultural Exhibitions in England.

Assessment.

Assessors will now be at their work. It is right that farmers should pay their fair share of taxation, but it is not right for them to pay more than their just proportion. Farmers living a distance from gravel roads, railways, towns or cities pay a higher proportion than those living contiguous to localities where public money has been expended.

Often the expenditure of public money for the construction of public roads and buildings has increased the value of the lands near the central points an hundred fold, but the taxes are but very little increased. They are often neld by speculators or wealthy persons who will not sell even though double or even ten times the assessed value is offered to them. know of one speculator who had been paying but \$70 per annum for years past by having his landassessed to suit himself by the powers that were. From a change in the acts of assessors the next season he had to pay \$400 for taxes.

If people hold land adapted for build-

ing lots, and will not sell them, they should be assessed at what they would bring if put into the market. We all pay an indirect tax for all railroads and all public improvements. The lands in the immediate vicinities of these improvements are scarcely ever taxed in proportion to the enhanced value.

Farms are vastly increased by the expenditure on railways, and to some extent by the erection of public buildings, but the lands in the proximity of the centres of these expenditures are not taxed near as much in proportion to the enhanced value of them.

Politics.

You are again plunged into the turmoil of another election. Perhaps you consider, as we do, that we are having them rather often. The object of the present one is to strengthen the power of the Reformers.

It is fortunate that this election takes place in the winter, as you can all spare time to attend the meetings much better than in the summer season. By attending the gatherings held by each party you will gain much information and be better enabled to form a correct opinion of the position of the affairs of the country than by attending only to meetings held by one party. Many of our readers are strong partizans, so strong that they would not be seen at a gathering of their opponents in politics; so strong that they will not read a paper published contrary to their opinions.

To be able to judge fairly you should read political papers on both sides of the question, and attend meetings held by both parties, not for the purpose of disturbing them, but to hear quietly both

sides and judge and act for yourselves. We have listened to some of the addresses given in this city by leading legislators, and we have noticed some of the

ture; words can often cloak deeds of a dye. One question we have asked at political gatherings is, What has been done or is contemplated being done for the interests of agriculturists? Neither Conservative or Reformer, at any gathering we have attended, has been able to satisfy us with a suitable reply. Much wool or dust has been thrown about, but the facts are : party first, the farmers' interests are nowhere.

The citizens are for city interests; the lawyers have and will well guard and protect their interests. They have the power; they are trained to speak, and will use every device known to gain power, and in this they are invariably ahead of the farmers. You will have enough lawyers in the House.

If you have a choice in your riding to vote for a lawyer or a farmer, by all means vote for the farmer. The hue and cry of the great sacrifice of the timber lands or of the Pacific Scandal, are second in importance to this question: Are farmers to be always ruled and used as the substance from which to extract money to build up all other interests at the expense of their calling? Vote for farmers! Vote for farmers!!

Transportation of Produce.

The profit obtained by the farmer for the products of his lands is so inseparably connected with the facilities for bringing his produce to a good market that we may consider the question of transportation and the farmer's just remuneration for his expenditure of labor and capital as one. 'Tis true that without good farming, and, dependent thereon, good crops, there must be, not a profit, but a loss, in agriculture; but, even with the most skilful and persevering appli cation of labor, directed by practical experience, and aided by all the researches of science, and, as their natural result, the most abundant yield, there can be no remuneration for the toil of the husbandman if he have not a good market for the product of his fields, with not more than fair expenses for freight. We are not line than fair expenses for freight, subject by the difficulty and delay in forwarding freight to the European markets. We are not in the same sad predicament as the farmers in the Western States-we can yet obtain good plices for all the products of our fields. But we know that it is the part of a wise man, when his neighbor's house is on fire, to look to his own. The European demand for meat and cereals from every available source and the abundant and constantly-increasing supples sent to meet that demand from the vast territories of the Western Hemisphere demand additional means of transporting, first to the seaboard, and thence additional lines of steamers with far greater carrying capacity to those markets that are ready to give good prices for all our surplus produce. There would now be less of the fluctuation of prices were it possible to send forward freight to our seaboard without delay, and to forward it thence at once, on its arrival, to Europe; but, while 'miles of freight" are said to be lying at one point unable to be sent forward, and freight accumulates so rapidly along the line of the Frand Trunk Railway that another line of steamers from that port has become a matter of necessity, with the existing inefficiency of the means of transportation, merchants must hold back from purchasing largely, and the produce market cannot be firm, as, under other circumstances, it would be.

The importance of the transportation ques tion has been brought practically home to the farmers of the Western States by the impossibility of their obtaining anything like a fair remunerative price for their produce, fully two-thirds of the price obtained when produce has reached the market being swallowed in the cost of carriage. Of three bushels of corn two are required to pay freight and other market charges, and the

orice of one is secured by the producer.

We are not in as bad a plight as those Western farmers, but we must see to it that we suffer no inconvience and incur no loss by any failure or delay in the carrying of our produce. Even now we require greater fa-cilities for reaching the markets of Europe. Markets easily accessible with remunerative prices are a great incentive to improvement in industrial pursuits. To secure those all their influence to promote its developement. If now the means of transportation are found insufficient, how much must this insufficiency be increased when the resources of the country are far more developed!

Any delay or interruption in the transportation of produce must prove a serious loss, not only to the farmer, but also to all engaged in its sale and transport. This delay, amounting almost to a total cessation of the produce trade, seriously affects the business of Montreal. Her merchants are dependent on a winter outlet other than their own, and the increasing business, as a centre of dis-tribution, demands increased means of transportation. A Select Committee of the Corn Exchange Association say in their report that, "The annual lockout by the Grand Trunk Railway of the merchants of Montreal from all freighting facilities eastward has occurred this year at a somewhat earlier date than usual, and with exceptional severity.

Montreal is merely a centre of distribution, a point near to the seaboard from which such produce may be conveniently shipped to the consumers. The measure of Montreal's requirements for shipping eastward are, therefore, in equal ratio with its receipts from the west.

The ground of complaint is simply this:-The Grand Trunk Railway Company's business is not solely a Canadian business. Its terminus is Portland—its only or principal outlet, and its freight carrying is greater from Chicago than from Montreal. Of 150 car loads per week—the capacity of the regular mail steamers of the Allan line—70 cars are reserved for Montreal, leaving 80 cars for the local stations east and the stations west. There remains to be noticed another deficiency-that in the means of ocean transpor-The Allan line of steamships during the season of transport is unable to take from Portland all the freight required. An exchange of recent date says: More cars left Gorham, N. H., for Portland on Monday by the Grand Trunk than at any time in the history of the road. Furthermore, there are a number of freight cars along the line awaiting a chance to come in, and 840 car loads here waiting shipment. The largest Allan steamers take only 100 car loads. ,250 loads now on the way to Portland, this side of Montreal

Such a freight blockade as occurs annually and as must become greater with the increas ing produce trade is a great loss to all. It is one that demands the most serious consideration of the Government. The producers of the national wealth should have every means afforded them of transportation for their produce to the best markets. Our far mers and produce merchants have certainly the first claim on Canadian railways and shipping. Our demands for means of transport must increase with our increasing popuation and prosperity

The great demands now made on the carrying powers of the G. T. R. may be estimated from the following extracts.

"Those who think that Portland business cannot sustain a line of ocean steamships should take a look at the Grand Trunk freight yards, which are crowded to the utmost capacity with freight bound over the water. A vast quantity has accumulated not one-half of which the Allan line of steamers can take away for weeks to come. 750 cars loaded with freight stand in the yards, while in every freight house and shed great quantities are piled up. One half the passenger station, generally given up to the storage of cars, is filled with barrels and boxes. All the tracks in the rear of the station are cumbered with cars, while the tracks that creep round warehouses to the wharves are in a similar condition. Even the Boston and Maine freight sheds have been brought into requisition, and sixty car loads are awaiting shipment there. One hundred cars have been stopped at South Paris because there is no room for them nere. 600 have been transhipped at Montreal, and 500 wait at Toronto. Nothing like the quantity has been known before. The average number of cars loaded with foreign freight which come in during a week is 600. No steamer of the Allan line can take 300 car loads, and few go above 100. So the freight constantly accumulates. It is estimated that there will be freight enough this winter to load five steamships a week, for the amount gives promise of increase rather than diminution. One Montreal house alone has 160,000 barrels of flour awaiting shipment. Since the change of acts of both parties relative to agricul- facilities, let all who are interested in the gauge and the laying of steel rails freight of the value of a fruit diet,

wealth-producing powers of the country use has come forward to Montreal with unexampled rapidity.
"It is expected that the change of gauge

will be effected by next August. Forty miles of steel rails will be laid between this city and the Canada line the coming year, 60 miles the year after, and the remaining distance the third year. Then another line of steamships will be a necessity.

"The Grand Trunk are already working in view of this necessity. The burnt whar is to be built in piling, and will be extended 125 feet into the stream and widened 75 feet. The contract for Galt's wharf will undoubtedly be renewed and the wharf rebuilt. The Grand Trunk wharves are to be repaired and used for coal wharves. order to supply the increasing demand for freight facilities the rolling stock of the road will be greatly added to. The old and imperfect locomotives, which have hitherto been a hindrance, will be done away with. Already sixty of them have been thrown into the scrap heap. Great numbers of freight cars will be added to those already in use. Then the company will be ready to put on a line of ocean steamers should it be deemed desirable."—Press.

"A demand for a new steamship line is made by the Directors of the Grand Trunk Railway who desire to enter into a contract with the owners of steamships for the transportation of freight from Portland to St. John and Halifax and from Portland or Boston in Liverpool and Glasgow. The Directors guarantee to furnish cargoes for two large steamships each week between the lastnamed ports. Boston Transcript.

The growth of American cities and the increase of their commerce has always been a matter of surprise to visitors from the Old World. Cincinnati and Chicago and other towns have grown up as if by enchantment. But the progress of Montreal has been of late years unequalled even in America. The great American towns are becoming quite jealous of her nnexampled progress. We mark her enterprise with pleasure, not only as a Canadian city, but also as affording us an outlet to the best markets. On the Canadian export trade the Montreal Witness says :-

"The exports of grain this year have been 8,060,003 bushels of wheat, 3,520,000 bushels of corn, 322,000 bushels of wheat, and 288,000 bushels of oats. The exports last year were 3,620,000 bushels of wheat, 7,467,-000 bushels of corn, 1,063,000 bushels of peas, and 406,000 bushels of oats—the total for 1873 being about 12,700,000 bushels, against 12,450,000, or an increase of 250,000 bushels, in spite of the early close of navigation. To this increase, also, must be added the increase in the amount of flour, 130,000 bbls., equal to 600,000 bushels of wheat. These figures show that the opinion expressed by some of our leading shipowners last year, that the business of that year was not likely to be repeated, was a mistake, and that, instead of diminishing, there has been a step in advance, which, if not so large as that taken last year, is still very encouraging, and gives us good ground of hope for the future, more especially as we have now much reason to believe that canal improvements will be pushed vigorously. The increase in the shipments of butter and cheese has been more important, and a gratifying feature in the trade is the good eputation which they have acquired in the British markets — Canadian cheese, we believe, ranking above American, and butter taking a high stand. The amounts exported are 154,000 packages of butter this year, against 116,500 last year, and 390,300 boxes of cheese this year, against 208,450 last year.'

A number of the leading merchants in Montreal are preparing to take a more active part in the export trade. They are entering with their accustomed energy into are now building one vessel, a pioneer of the line about to be established. This will, it is said, be strictly a Canadian enterprise; its vessels will be registered in this country, and reckoned part of the marine of Canada, While conducing to the credit and wealth of the city carrying on this most important business, the additional means of transportation thus afforded must inevitably tend to

agricultural prosperity.

RURAL AND DOMESTIC.

Hogs that run in an orchard pick up the windfalls and occasionally good apples never have the hog cholera; which is another proof Short - Ho

Feb., 18

This assoc and fifty mer of the Unit Horn breede portance; as interest to s improved far the few. Br that only fro port to reali feeding, and every hand herds of old sive has beer are the old forced to gi

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Short · Horn Breeders' Convention at Cincinnatti.

Feb., 1874

This association, comprising one hundred and fifty members from the several sections United States, all of them Short-Horn breeders, is one of considerable importance; and their convention is of no little interest to stock breeders. The raising of improved farm stock is not now confined to the few. Breeders and graziers have learned that only from well-bred stock can they export to realize any considerable profit from feeding, and the consequence is seen on every hand in stock far superior to the herds of old-time stock owners. So extensive has been the change, that in few places are the old stock to be met with, being forced to give place to grade cattle.

We give to day an extract from an address delivered at the Cincinnati Convention, by Dr. Sprague, of Des Moines Town, on "The best colored cattle. We purpose in our next issue to take up the address by Prof. Miles on "In-Breeding."

THE BEST COLORED CATTLE.

Dr. Sprague, of Des Moines, Iowa, read

a paper on the color, contour, etc., of Short-horns, from which we extract the following: "Our skill in fashioning the contour of our favorite breed of cattle is entiled to, and has received the highest praise, but nature laughs at our efforts, for, going back to the wild animals cited, as far as the knowledge

of man reaches, the texture and flavor of the flesh of the deer has not changed. It affords the same delicious roast as it did a hundred years ago. No less flavor, no higher, no different. But who, when he takes a cut of beef on his plate, though he may have himself bred the animal from which it was taken, and have declared the beast to be mellow under the touch, can fully appreciate whether the morsel will be savory or not.

"While our efforts to appear well in the show ring, and to possess specimens of certain favorite families, are commendatory, we are too much led away by the surface of things. The demands of fashion in cattle are too much like the demands of fashion in dress. If the surface captivates by its splendor, no matter how much shoddy is under

'Throughout the system, under the skin between the muscles, and under the fibres of these, there is distributed what is termed cellular tissue. As its name implies, this is made up of cells, and in these cells the accu mulations of adipose matter is deposited. The extent to which this tissue is found, varies very much in different animals. Where abundant, and associated with strong digestion, active absorbents, and a well formed carcass, flesh is taken on rapidly, and if with these combinations the skin be pliable and soft, the animal will almost inv handle mellow when in fair flesh.

"Now the common notion is that all animals that handle mellow have high-flavored, tender flesh. This is an erroneous idea. proved so every day upon the butcher's block.

"We couple two animals together expecting to secure well formed, ready feeders in the progeny, and if the parents possess this fattening tendency they will generally transmit it. But, if both the parents have dark unsavory flesh, they and their get, and all the progeny after, for all time, will have the same, unless modified and improved by new crosses having light colored savory flesh.

"Many Shorthorns carry light colored, well marbled, firm flesh, which, when cooked is equal to the flesh of any of the smaller, but in place of tests being made in all herds as should be done, by slaughtering off-shoots from every animal in the herd, so far as practicable, testing the meat of the old cow when no longer of value, as an index to what she leaves in the herd, there is hardly a thought given to this, and we propagate for

color and contour. "If I were to advise, and this body of men should indorse the recommendation, that we greatly, or even materially less n the size of our Shorthorns, aiming thereby to approach the quality of meat found in the little Kerry cow, this recommendation would The popular demand is for size. We are a fast people, and slow growth makes us restive. We like to turn an honest penny, and turn this quickly. We can do this with Shorthorns, and please our fancy at the same time, but

any other breed. Hence our policy should be to breed for exquisite quality of flesh, thus enabling us at all times to offer our friends a savory roast of steak, as well as to treat them to the finest view that can be placed before a man of expanded ideas, viz. : a collection of representative Shorthorns."

THE SUPPRESSED PAPER. --- Apaper was contributed by Mr. Matthews, of Virginia, to the Convention and by them suppressed. The National Live Stock Journal in giving a very full report of the proceedings of the Convention, says:—"The writer was not giving his opinion on this point, but reciting facts and circumstances which occurred independently of his agency. Doubtless the convention, composed of average breeders, thought the circulation of such a paper would disparage the value of their cattle; but those gentlemen should have considered that it was the facts and prices which was the facts and prices which formed the basis of the paper, and not the paper itself, which tended to the disparagement of their cattle." The paper would not be generally interesting to our readers. The conclusion the writer arrives at is:-"As far as the interests of the Short-Horn breeders are conceaned, I don't think they would have suffered had the breeders let these Duchesses be packed off to England at the prices they sold for."

The Chinese Northern Yam.

China is a country we know but little about; it supports a denser population than any other country. The northern part is very similar to ours in regard to temperature, being quite as cold as with

A Dr. Prince has brought to this country an entirely new plant to us, bearing the above name. One of our readers residing near Belleville has forwarded us one of the yams, 13 inches long, weighing $1\frac{1}{2}$ pounds.

The tuber is a small round ball of a dark color, and the sets or cuttings are about an inch and a half long. The following are Mr. Embury's remarks regarding it; we have procured a few sets and tubers, and purpose giving one of each to any person that will send us one subscriber. If the few we have are not all taken up by this means, other parties may be supplied with a few.

It is our intention to grow some ourselves this year; we only give you the information we receive and the opportunity to test for yourselves. If they should at all approach Mr. E.'s sanguine expectations they will be a great advantage to the country.

CHINESE NORTHERN YAM.

(First introduced in the States by W. R. Prince, M. D., LL D.)

This remarkable plant is a native of northern China and Tartary, and the northern limits of Temperate Zones. Having been the first to introduce this most important of all esculents my country, and to urge its adoption by my countrymen, more especially of the Northern, Eastern and Western States, I have declared in my previous publications that when I shall have passed from earth I solicit no other heavy source at the state of the licit no other boon from my country than the recognition of whatever service I may have thus rendered my brother man by the introduction of this plant as a sovereign and per manent provision of cheap and nutritious food for the poor, and as an absolute preventive of famine throughout all time.

When making our first experiment with his esculent, some of our cultivators having heard of the Chinese practice adopted in extreme cases of scantiness of land, when trenching four or five inches is pursued, assumed therefrom the erroneous idea that this was the therefrom the erroneous idea that this was the necessary culture required. Nothing could be more erroneous. The usual growth of the root is 10 to 12 inches in length, and such is the average cr. p in ordinary farm culture. An extra growth to 15, or even 20, inches may be foreed by deeper culture, and more deeply enriched soil. But we now have eight varieties of every form—some round, some oval, others short oval others alonger oval. oval, others short oval, others a longer oval, and then we have oblong varieties that average 5 to 6 inches in length, and others averaging 7 to 8 inches, and longer ones of 10 to 12 inches in length. They vary in color, several varieties having snow white flesh, others straw c lor, yellow, and others of a reddish tinge. Thus every cultivator can choose to suit himself, the same as with potatoes In the vicinity of Pekin, 40° north, they cultivate more than fifty varieties, which are particularly dewe have not found that we can do this with scribed in their agricultural books. These inches apart, and I find they can be planted the third year will grow the remaining

improved varieties have not been obtained by chance, as our seedling potatoes have been but societies had devoted their special atten but societies had devoted their special attention to the attainment of superior improved varieties for ages before Europe had emerged from its barbarism. I have announced the Chinese northern yam to be the most important esculent food for man which God and nature in their benign provision for our race, have planted upon our globe. I make this assertion on the following facts. No other plant which has been proposed as a substitute for the potate has presented claims meritorious and so well entitled to success as this, whose and so well entitled to success as this, whose various estimable properties place it among the most desirable acquistions of the vegetable

department: -Its hardihood and capacity of withstand

ing the cold of the most frigid climes during the winter in the open ground. 2.—Its facility and simplicity of culture, so 2.—Its facility and simplicity of clutter, said its adaptation to such a variety of locations and seemingly all soils, but more especially to such light and hitherto neglected lands, as have been deemed valueless for other agricultural

3.—It productiveness and cheapness in which if far exceeds the potato or any vegetable. When its culture shall be properly established the crop of the long varieties will not be less than 600 to 800 bushels, and of the round and oval varieties is 400 to 500 bushels to the acre and still more is ardently and confidently look-ed for. Its propagation is more rapid than that of any other esculent, and it is hereby proven to be, in proportion to its actual value and importance, the most cheaply produced of all food.

4.- The nutritious and farinaceous qualities comprising the essential constituents of an es ulent of the alimentary character. It will fill the positions of both meat and wheat as aliment; the flour made from it surpassing in pure whiteness, farinaceous excellence, the best obtained from wheat which it is destined hereafter to come into successful competition on account of its cheapness. It also possesses a peculiar distinctive chara ter, superior to all other vegetables from its combination of nitrogin, the same constituent as is existent in meat, which thus becomes blended and assimilated with properties the same as are found in the best wheat flour, in corn starch, and in milk. It therefore presents the distinctive characteristics of substances essentially alimentary, and meat as food is rendered entirely unnecessary.

Its unexceptionable excellence of flavo and freedom from any sweet, acid, or insipid taste, as is the case with most other prepared substitutes, and its congenial accordance with the entire human organism. Some contend that its flavor is a combination of the best potato and arrowroot.

6.-Its long keeping and freedom from all decay, as it never rots in the ground or out of it; it retains its excellence for more than a year, thus rendering it of prominent import ance under any contingency, and respecially so ance under any contingency, and especially so in long sea voyages, and as its character is antisconbutie, it furnishes a preventative against scurvy and similar diseases. I have myself preserved the roots in an ordinary cellar, with out any extra care, until June of the second year, when they were firm and sound, free from all sprouts, and in perfect condition. They may be kiln-dried, and thus preserved for the

various uses for an indifinite time.
7.—It is a purifying and highly, nutritious constitutional food, beneficial to the mind as well as the body, and capable of developing the muscular power of man to its fullest

capacity. -The roots being perfectly hardy the crop when desired, may be allowed to remain the entire winter in the open ground, or may be buried in burrows in autumn, ready when required for winter use.

CROP FROM TUBERS. The growth of vines is similar to he sweet

potato, and run over the ground or ascend any poles or bushes placed for the purpose. Each tuber of the long varieties produce one straight root, differing in length according to the variety, some 10 to 12 inches, others 12 to 18 inches and the round, globose and oval varieties produce roots of their respective char acter. These roots usually weigh from 8 oz. to 1½ and 2 lbs. each. The new tubers are produced at the axit of the root, and when the ulants are well cover for they average 20 to 22 plants are well care t for they average 20 to 35 to each vine, and o ten more. The blossoms are very diminutive but fill the air with delicious cinnamon perfume, and the vines are consequently very often trained on p'azzas and trellises as valuable appendages. Some persons place a pole about 5 feet in height to each and train the vines thereon, but in general they allow them to trail on the ground the

same as the sweet potato.

I have been cultivating the Chinese Yam since 1870. I find it to be the best substitute for the potato that man can cultivate. As soon as the frost is out of the ground in the spring the roots and tubers may be planted. Last spring I planted in drills about nine

six inches in the drill and do well. They don't receive any nutriment from the atmosphere. It is from the earth they get all the nutriment they require. There is not any trouble with them after they have been planted. All there is to be done is to keep weeds down; the time for digging is about the last of October, the nicks must be cut in small sections, about It inches in length, they must be laid by for 14 inches in length, they must be laid by for 48 hours, so that the sap will pass off. Plant in drills 2 inches deep, and the tubers 1 inch deep and 5 inches apart in the drill. GEORGE EMBURY.

Wild Oats.

ESSAYS BY PRACTICAL FARMERS ON THE BEST MEANS OF EXHERMINATING THEM.

Written for the FARMER'S ADVOCATE.

In the January number of the FARMER'S ADVOCATE, the Editor invited contributions

from farmers, detailing their experience in freeing their farms from "wild oats," a weed spreading rapidly in many sections of the country.

The essays received in reply to our invita-

tion are concise and practical, containing in little space much valuable hnowledge, not learned in colleges, or gathered from books, but the result of their own observation. The contribution to which the first prize has been awarded is by Francis Squires, Leeds Co., Megantic, P. Q. The decision was only arrived at after much care-ful consideration of the merits of the twelve essays contributed. To Mr. Squires contribution the prize was awarded, as his method was adjudged to be the most thoroughly efficacious, though others entered more fully into many details connected with the plant. It was deemed advisable that a second premium also should be given, and it was awarded to Richard Moore, Ful-

These two essays we publish now; and give a review of the others, arranging the copies systematically, so as to present to our readers the views of the writers in detail, and at the same time so ordered, and in such bright space as to give at one view the essence of the whole.

On this subject G. Davis says:-Many imagine that it grows many years from the same root; but this, from considerable experience I believe to be erroneous. Two ears I consider to be the utmost extent of its existence. It may be said in reply to this that if the plant lived two years it would not be so hard to destroy; but when you come to consider the fur jacket, thick skin and small, fur-covered kernel, it will be easily understood that they may lie for a great length of time, especially in a dry season, on, or in, the ground without either germinating or decomposing." In the prize essay published-No. 2.—the seed is accurately described, with its ripening, and means of propagation, showhow readily it is propagated and leading to the inference that even if it be a biennial or only an annual, the task of complete extermination is no easy one. N. Dickie in his essay speaks without hesitation of its being an annual, and, in this respect, "different from its brother nuisance the Canada thistle." The other essayists, the Canada thistle." The other essayists, though not in direct terms calling it an annual, in speaking of its destruction, treat it as such, referring to the extermination of the seed, and not at all referring to the root.

It is spoken of as not indigenous to the country, and only of late attracting the attention of farmers. One of the essays published speaks of its introduction from Germany. It is a known fact that some of the weeds, as well as most useful vegetables, now seeming from universal growth throughout the country to be indigenous, have in reality been introduced by European colonists, and are strictly speaking exotics.

LONGEVITY OF THE SEED. Ill weeds grow apace is a familiar proverb; and not only is it true, but also the seeds of many weeds possess an extraordinary tenacity of life and in this the Wild Oats seem to be not a whit behind the other unwelcome occu piers of the soil. Some extracts on this subject from the essays received will be sufficient to make known the experience of the tillers of the land: -- "As soon as the wild oats are fairly headed, the top oat is ripe, and before those lowest in the ear are out of their milk, about a third of the grains are dropped and ready to grow the first year; the second year the next third, that is, those on the middle of the ear; and

third of the grains. I am satisfied it takes three years for one crop of wild oats to grow.-D. Larke.

"DESTROYING WILD OATS. I have been troubled with these pests for a number of years, and not got clear of them yet. Follow my plan for two or three years and I think the wild oats will be few and far between. -W. Agar."

the seed of the wild oats is very hardy. It ripe is much earlier than other grain, and a great part of the seed falls off. In a few years you may make them scarce.—B. W. Kendry." The care necessary to prevent the propagation of wild oats from the manthe propagation of wild oats from the man-ure heap is also spoken of. G. Davis says: "See that your manure, which in all proba-bility has plenty of wild oats in it, is thor-oughly heated before it is applied to the land," H. G. Smith goes still farther; he says:—"If you have a field bad with wild oats, when you harvest, thrash the crop on the same field, and burn the straw, &c., so as to prevent the oats getting into the man-

3. DESCRIPTION OF THE WILD OATS.-In order to aid in the detection of a criminal the police authorities give as accurate a description as possible of the offender. How may we know the wild oats? oat is black, grows on a stalk a little taller generally than the common oat, and carries a large spreading head, which, as the ker-nel ripens, bends the stalk, and ripens before the general crop can be secured."-R. Moore.

4. Soil most Suitable to the Growth OF WILD OATS .- The better the soil the greater will be the crop, not only of cereals and other valuable products, but the more flourishing also will be the growth of weeds, if the farmer permit their seeds or roots to find a nursery in his land. We have seen the luxurious appearance of thistles, ragworth, and many other of the larger weeds on rich soil; though there are some weeds that a change from a neer-do-well, impoverishing tillage to an improving mode of cultivation is a means of eradicating. Of the soil in which the wild oats are more at home, F. Squires says:—"A deep dry soil is the ground they flourish in most, though they grow in any soil.'

MEANS TO EXTERMINATE WILD OATS -Give the infested ground a thorough, oldtime fallow. This is the mode recommended by no fewer than four of the essayists, among others by the writer of the essay awarded the first prize. Summer fallowing, at one time so much practised, has fallen greatly into disuse. The general introduction of root crops has taken the place of the naked fallow; the thorough cultivatien required in the good cultivation of a turnip field is of itself a fallow; but there are in-stances in which it is still found necessary to resort to the year's fallow as practised by It is in some cases the only really effectual mode of clearing the land from weeds. The cultivation of root crops does not go deep enough to eradicate weeds root and stem. And deep summer ploughing, as of old with four horses or oxen attached to the long plough is in some soils very beneficial by exposing a greater depth than is usual to the mellowing and enriching influence of the atmosphere.

Plough the ground that is foul with wild oats as early in the autumn as you can, after harvesting the crop, and harrow it. Let the ploughing be shallow, about two inches in depth, but the furrow well cut in a workmanlike manner, without leaving a bone in it. A large proportion of the wild oats that have been shed will by this means be induced to vegetate freely. The majority of the essayists recommend plouhing a second time before the winter sets in, saying that by this a second instalment will be in duced to vegetate in the fall; while T. S. in his system of fallowing advises to let it remain, after the first ploughing and harrowing, in that state till early in the spring. The shallow ploughing, as early as possible, is generally recommended by all the writers on the subject, and they have no doubt of

ts advantages. N. Dickie well says:-"The great object is to get the plant to germinate; therefore the land must go through a process of working by which the seed will be brought near enough to the surface to do this. It is a fact well known that seed can only germinate once; if the radicle or seed-root is injured the seed is destroyed." He adds: Skim plough the ground after harvest letting it lie just long enough for the seed to fine day.

sprout before plowing deep, very deep so as to go down as far the ground is likely to be ploughed for any succeeding crop. Before winter ridge up the ground so as to expose as large a surface as possible. In spring split the ridge, making the outside of the former the inside of the latter. The ground will then be in splendid condition for root

The summing up of the testimony is as follows:—viz.—F. Squires, G. Carter, H. G. Smith, and ———, of Kirkton, four of the essayists, recommend, in accordance with their experience a thorough summer fallow. N. Dickie and G. Davis recommend, from

their experience, a root crop, after several ploughings in fall and spring. R. Moore and B. McCennre recommend

buckwheat to be sown and ploughed under, the fermeutation arising from the ploughed in buckwheat causing the destruction of wild oats in the soil.

Four of the essayists recommend certain otations of crop viz:--

D. Larke—1st year, rape fed off by sheep; 2nd, root crcps; 3rd, barley laid down with

W. Agar—1st year, oats and peas to be ploughed under; 2nd, fall wheat; 3rd, peas.
W. Dixon—1st year, barley laid down with clover; 2nd, hay, ploughing the aftergrass under, and cross ploughing in the spring.
R. Switzer—After a shallow ploughing in

autumn harrowing and rolling, a second ploughing late in the fall, and a ploughing in May; 1st year, barley; 2nd, peas.

W. Murray—After fall ploughing, 1st year, peas; 2nd, roots.

Of all the methods recommended, we be-

lieve the summer fallowing to be the most effectual remedy. The root crop after the partial fallowing has in its favor the advantage that no year's crop is lost; and if the summer cultivation of the root crop be thoroughly performed, we have no doubt the ground will be pretty free from the wild oats and all the other annual weeds. method by Moore and McKendrie seems feasible and so does that of Larke. We would wish to see rape now generally sown in this country as a fall feed for sheep; and one of the profits of sheep feeding is that they are so destructive of weeds.

FIRST PRIZE.

SIR, -- I see by the ADVOCATE that you offer a prize for the best means of exterminating wild oats, and I can safely say you have set your readers a task not easily performed to perfection; but as I have had considerable experience of that sort, I shall contribute an article on the subject to your notice, if you

think it worth much.

I spent the first thirty years of my life on a farm in Devonshire, England, and there was a track of land $\frac{1}{2}$ a mile wide, and 5 or 6 in length, that was subject to this pest, wild I believe that some soils are more subject to it than others; a deep, dry soil is the ground they flourish in most, although they will grow in any soil. It is not hard to era li cate them from wet or damp land. But you do not ask where or how they will grow, how to stop their growth - in fact, to clear it from the land.

I will endeavor to show you how it may be done, and also give you reasons why it is ne-cessary to use the method I adopt, although I labor under a disadvantage by not knowing the general way of farming in your parts; but if your farmers cannot keep down the wild oats, let them adopt my plan and they will not re-

Many farmers think they lose both crop and labor in summer fallowing, and, in a great measure, they do men it is not done effectually. I have not seen one acre of land fallowed properly since I have been in Canada, now nearly thirty years. The most favorable time to eradicate wild oats effectually is after harvest. Immediately after the erop is taken off get the land plowed, but in no case plow over two inches deep, and have it plowed on a fine, dry day. Harrow it and let it remain so until early in spring; then harrow it with a heavy harrow, so as to cut the two inches through. My reason for this is that the seed that fell on the ground from the former year's crop must be kept so near the surface that it will have every chance to grow. In two or three weeks your wild oats will look splendid; then plow them down four inches deep, and you will bave a nice few after this plowing. Give the land at least three plowings after this through the sunimer, increasing in depth, for the seed will lie in the ground a long time, until it is brought near the surface with the plow. Plow a little deeper the last time than is your usual custom; harrow after each plowing, when you see the enemy appear, and always choose a

This and this only will effectually kill-all kinds os weeds, and if strictly adhered to, the farmer will find he has a field of grain not only free from weeds, but also grain not in quantity and quality, provided always that he sows clean seed, which he should not fail to do, if he has to send 500 miles for it.

if he has to send 500 miles for it.

The reason why the first two plowings are so shallow is to keep the seed that fell from the former crop from being buried too deep. Each time you plow go a little deeper, for the wild oat will lay in the ground for years and grow when brought near the surface, that is, in dry, deep soil, but in wet, heavy land it will not live long at any great death. live long at any great depth.

Yours truly, FRANCIS SQUIRES. Leeds, Megantic Co, P. Q.

2ND PRIZE.

Wild Oats-Means of extermination, etc.

MR. EDITOR, I had all my life long heard of persons in their jolly period "sowing wild oats," and allowed the expression to pass as a practical one which might mean almost anything that was not very serious; but it remained for me to find out, on my settling in this neighborhood that there was really a practical and matter-of-fact meaning too, that of such an important nature that I had little dreamed of.

Not many miles from where I now sit lives, or did live, a man who has the credit of importing the article from Germany; and he being one of the pioneers, sold seed to the new settlers who came around the locality until by this means the pest spread and took hold on almost every patch tilled for miles around. There being very few who had any knowledge as to the nature of the nuisance, it seized immediately on the virgin soil, and has ever since—from twenty to 30 years—disputed with the farmer the right of possession Some have died and left the unfinished

battle in the hands of their children, others facing it, the struggle would be endless, and resistance unavailing, have "given out," and sold at a sacrifice, while others, true to the motto "No surrender," still held out; but some from having chosen better tactics, have with ease completely cleared the field and now stand victors. Of the last mentioned many of your readers will be glad to hear. For the benefit of those still unacquainted with this prince of nuisance, let me first give it a short description. The wild oat is black, grows on a stalk a little taller generally than the common oat, and carries a large, spreading head, which, as the kernel ripens bends the stalk over like the twigs of a weeping willow (unless when supported by surrounding grain); but immediately on ripening, and before the general crop can be secured, it drops from the stalk and lies scattered on the ground where it The stalk thus relieved at once erects itself, bringing its empty head into full view above the surrounding grain, and impudently informs you that you have raised wild oats, and that seed is also sown for another crop, the first intimation, it may be, that any existed on your premises. The plow soon comes along and turns it all under, there not to die but to live in peace and contentment, until it shall be your good pleasure to turn it up again, when it will be found ready, like the wild mustard or charlock, to display itself and laugh you to scorn. Could it be gathered with the crop and placed in a fermenting manure heap; its management, I think, would not be difficult, as I have never yet observed a kernel taken from such a situation to show any sign of life, but it appears as liable under such condition other grains. But how can the field be fermented, you ask. I answer, by first sum-mer fallowing, then sowing buckwheat upon it and plowing the crop under in a green state as a manure, which I warrant you, Mr. Editor, will clear the field of every grain of wild oats. I imagine I already see a number of your readers dropping the paper to straight en up with a significant nod and say, Hem!!
"All very fine!" "Rather too good to be
true, I reckon!" Just so, Mr. Editor. I am prepared to expect such a reception for this prescription. It has met with the like heretofore, but not within my knowledge by anyone who has fairly tested its efficacy. It certainly is little mortifying to a person's vanity to reflect on the immense waste of time and slrength, to say nothing of the annoyance that might have been saved by the simple process indicated. If which is very surprising, has kept aloof from some great thing were prescribed they might the great and little political parties. Don't be

try it; or if some travelling humbug would offer for sale a prescription of trash of which they know nothing, many would pay their hardly-earned cash for it, as facts will prove, although the use of such receipt not only prevent wild oats, but everything would useful from growing on the soil. A moment's reflection will satisfy any sane man that few are the fields which would not be improved by plowing into them a crop of green buckwheat, hence nothing could be lost by the trial. But, Mr. E., I am preto show from the best of testimony that a fair trial will result in success

RICHARD MOORE, Fullarton.

Jan'y 13, 1874.

Correspondence.

A VOICE FROM THE BACKWOODS. Dear Sir.-

Some time ago the invitation used to appear in our paper: "write for the FARMERS' ADVOCATE." As you still make the same in spirit I will avail myself of it, hoping to do some good. For 25 years I have taken an active part in public affairs, and never in all that time have I would read any account of the same of the s time have I met with a paper so well named or more zealously and honestly acting up to its professions. Not only do we get the best information concerning agriculture, an occupa-tion which is fast becoming a science; the best information concerning seeds tried and proved; but you have set yourself the very difficult but not hopeless task of creating a Farmers' Party. As I think this the most important point, my remarks will apply chiefly to it.

I think you are quite right in saying such party must be distinct from existing political parties. Your task is difficult because it seems almost impossible to rouse farmers; it is diffi-cult because, as has been mentioned to me repeatedly farmers are jealous of one another. Shame on us that it is so! What! are we so selfish that we suspect every one else is so? Is there not one amongst us wise enough to win the support and confidence of his fellows?-We have too many lawyers and lumbermen in Farmers, vote for farmers; away with your jealousy! Surely in every constituency there must be some honorable and intelligent men fit to represent us in Parliament, men who are farmers in earnest and zealous for their class. If you cannot agree upon one such take the names of several, put them in a bag and let one be drawn out, and pledge yourselves to support that one; as honorable men keep that pledge, and you will soon have that voice in the Legislature which is your right. Don't ask whether they are Conservatives or Reformers; ask if they are intelligent and hon-

But there is another thing you should do.-Look to your assessments. I say this more to the new townships, of which there are many in different parts of Canada. In some 100 acres are assessed at \$100; in others 100 acres are assessed at \$50. There is no wisdom in this. Say your municipality is assessed at \$25,000, and you have to raise \$1000 for municipal purposes: that requires \$4 on the 100.—Raise your assessment to \$50,000 and you require but \$2 on the 100 to raise the same amount of a thousand, and this will increase your county votes many fold. You will have to pay, it may be, five cents more for county rate, but what is that compared to the influence it gives you? You will then have your members coming round cap in hand "soliciting your vote and interest." They will pay court to you commonly, not merely a flying visit in four or five years and then twit you in the papers because you have not given them as showy hospitality as richer men might have done, a'though quite likely you have denied yourselves to do them honor. Do this and you will make yourselves felt.

But there is another thing you should do.— Irganize farmers' clubs, and let them be the Organize farmers' clubs, and let them be the machinery by which you will work the elections. Organize! organize! Look at the Granges in the Western States of American States of States erica; but don't do as they do; have nothing secret—let all be fair and above board—free as the air you breathe-generous as the soil you cultivate. Do this and you will make yourselves felt.

Another great point is to secure a good, influential and powerful organ in the press. You have as good a one as ever I knew—the FAR-MERS' ADVOCATE-and it is in your power to make it the most influential and the most powerful that Canada ever saw. Let every mer who now reads it make a point of getting at least one new subscriber; strengthen the hands and cheer the heart of your advocate a staunch friend that has persistently and skilfully advocated your interests so long, and, country paruling the a forget that well as you. I have no Parliament, what should on the relati Cardiff, I

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HARD MOORE, Fullarton.

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E BACKWOODS.

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right in saying such rom existing political ficult because it seems se farmers; it is diffi-mentioned to me reealous of one another.
o! What! are we so very one else is so? Is s wise enough to win nce of his fellows?ers and lumbermen in have more farmers. ers; away with your ery constituency there and intelligent men rliament, men who are zealous for their class. on one such take the em in a bag and let pledge yourselves to norable men keep that on have that voice in is your right. Don't Conservatives or Ree intelligent and hon-

hing you should do.— ts. I say this more to ts. I say this more to which there are many anala. In some 100 0; in others 100 acres here is no wisdom in cipality is assessed at raise \$1000 for muniuires \$4 on the 100.o \$50,000 and you re-00 to raise the same and this will increase fold. You will have compared to the influ-u will then have your cap in hand "solicit-rest." They will pay not merely a flying and then twit you in have not given them as ieher men might have ikely you have denied onor. Do this and you

thing you should do.—
, and let them be the
ou will work the elecnize! organize! Look Vestern States of Amhey do; have nothing nd above board-free as enerous as the soil you nd you will make youris to secure a good, in.

organ in the press. You ever I knew—the FAR-it is in your power to ential and the most powsaw. Let every far-make a point of getting criber; strengthen the eart of your advocate— at has persistently and ur interests so long, and, ng, has kept aloof from itical parties. Don't be niggardly! Don't mind a dollar; any one number may more than pay you. Support your paper well and it may soon come out as a weekly newspaper, fighting the farmers' battles all over the country. Do this and you will not only make yourselves felt, but you will be respected and courted; your voice will be heard in the halls of Legislation; you will no more be the "rurals," the "bucolics," the "bush-whackers," but you will be the great country party, influencing and ultimately ruling the affairs of the country. But don't forget that others have rights and claims as well as you.

I have now shown how you may get into

Weil as you.

I have now shown how you may get into Parliament, and in future letters I will show what should be done there.

My next will be on the relations between farmers and lumber-men. Yours truly,
P. HARDING.

Cardiff, Dec. 24th, 1873.

CROPS IN MANITOBA.

ONANDAGA, July 5th, 1874. I am going to move to Red River in the pring. I was out there this summer, and spring. I was out there this summer, and I like the country well. The crops were good. Wheat averages from 35 bushels to 50 per acre. Oats average from 60 bushels to The potato crop was splendid. 1 saw potatoes that weighed 3½ lbs. each and onions which measured 18 in. round. I think that is good for the North-West.

DANIEL OLIVER.

W. A., of Pigeon Hill, asks how to kill ce on cattle. We have given such information previously. We now give you a good tried plan. Wash the cattle with soft soap down the back. If they are not all killed by the first trial, repeat the application. Another plan is given by a correspondent in this paper.

PARMA, Jan. 6, 1874.

SIR,—There is one point I would like to see you advocate in your paper, and that is drains through or across several lots to an outlet in a river or bay, which the farmers will not open unless compelled to do so. By the Government you could induce the Minister of Agriculture to frame such a law that every farmer had to dig his part or the Government would do it for him, and make him pay for it—the said drain to commence at the outlet and from thence for the length required. Such a drain would be a great benefit to a large number of farmers in Canada. These drains will not be made by the Township Councils, particularly when the said drain runs through two townships. If there was a law that compelled every farmer to do his share or pay the full value for digging it then there would be no call for boring with the augur in meadows where sour grasses grow. Hoping that you will take this matter up in your valuable I remain yours.

JOHN MCMURREN. There are two sides to this question, and we therefore ask our readers to give us their ideas on this subject.

WHITE PROBSTEIER OATS.

I have raised probsteier oats for three The first year I sowed one bushel and a half by measure, and harvested 41 bushels, weighing 40 lbs. to the bush. The second year I had (as near as I could judge without actually measuring them) about 70 bushels to the acre. Last year they were sowed on sod, and the grubs near ate them all up. Still they yielded about 40 bushels to the acre. With me the straw has been short and stiff, always standing up first. Their bad qualities, if any, are that, being large and plump, the machine hulls some in threshing, and, if not cut till dead ripe, they shell some. I sold some to a few of my neighbors last spring, and they were well pleased with them. One of them who raised other oats in the same field told me that he thought the others were as good as the probsteier until he came to harvest them. Then he saw by the way the heads of the probsteier sheaves tipped down that they were far the best. He has not threshed

A. Yale, Danville, wants information as to how to take care of young fruit trees, what time is best to trim, &c. We have already given information upon this subject in our columns, but, if any of our subscibers has something new to say upon the subject, we will be happy to insert it in answer to Mr. Yale's inquiry.

and let the convention appoint a committee to draft by-laws to be guided by. We want the movement to spread all over the Dominion, so that the farmers may be protected. We refer Mr. Mackie to our remarks on granges in another column.

Mr. John Mans, Paris, asks for information about orchard grass, when, where, and and how to sow, and price and where to obtain it. Sow it at the same time in the spring as timothy and clover, on good land well prepared, the richer the better. Sow about 7 lbs to the acre, as the seed is light. The price is \$4 to \$5 per bushel, which weighs 14 lbs. It can be had of all the leading seedsmen. If we can procure a genuine good article we will supply it. Some of our correspondents who have had experience with this grass might give us fuller information.

Mr. Alvin Wooley, of Simcoe, complains that our correspondents, in reporting their crops and experiments, do not give enough details about their method of cultivation, soil, &c. We are thankful for the correspondence we receive, but will be pleased if Mr. Wooley will favor us with communications of the kind he mentions.

Mr. S. Kerr says the cheapest and best wash for apple trees is common white-wash. Apply once every two years. It will keep them clean. He prepared to wash them in June.

SOWED CORN.

To the Editor of the Farmers' Advocate.

It is not my intention at this day to speak of the propriety of every farmer raising sowed corn, neither the kind, or time to sow, or quantity, &c. All has been ably and instructively set forth in the pages of the ADVOCATE in times past. But I merely wish to give my exderience in curing it for winter use. As, until the past season, cutting and curing what I did not want to use green has been a slow and unsatisfactory process. Last September I took one of the Johnston reapers from the establishment of Brown and Patterson, Whitby, raised the rakes a little higher than usual for grain, and let the machine run every other rake, threshing off a sheaff which made a nice-sized bundle. I bound them with some of the same stalks, and let them in round stocks of 10 or twelve sheaves, with a band of stalks around them. In that position they stood until cured sufficiently dry to pack in any sized mow with-out injury. I consider that cutting them with a machine overcomes the greatest obstacles heretofore felt in the way of raising large quagtities for winter use. My corn was sowed with a broad-cast seed drill—one half the field with common yellow corn; half the field with common yellow corn; about 4 lbs. per acre. It grew about five or six feet high, with find stolks. The remainder was sowewdutiohio corn without changing the machine. It was rather thin, and grew very tall—in some places from 8 to 10 feet high—still the rake placed the bundles out of the way for passing next round without much tangling. without much tangling.

PLATT HINMAN, Pres. Haldimand Agr'l Society. Grafton, Dec. 24, 1873.

FARROW WHEAT.

DEAR SIR, -I see by the ADVOCATE that the Farrow wheat as well as other spring wheats are inferior this season. Now, I have grown Farrow wheat for the last two seasons, and it has done splendidly with me. It has doubled the yield of the Scotch or Fife wheat sown on the same land. HENRY G. SMITH.

CORRECTION.—The Typos made Mr. Cook say in the January number that he sowed three pounds of Farrow Wheat and reaped forty-three bushels, which ought to

NORTH BRUCE.

I shall continue the ADVOCATE, as it is a paper independent of politics and well worth the money.

The erops in this county were over an average, excepting hay, which was rather light; fall wheat was uncommonly good, from 30 to 30 bushels per acre; oats 40 to 50; peas 25 to 35; spring wheat 20 to 30; potatoes were the best I have seen in Bruce, the Early Rose, Early Goderich and Cups were

very heavy crops, I had one quarter of an acre and had 120 bushels. I intend to plant an orchard this spring, and should be much obliged if you would give me a little information on the adaptability of certain soils for certain kinds of fruit. My soil is a strong clay, but naturally dry where I intend the orchard to be. I should be glad to have the names of about half-a-dozen of the best varieties of apples, also a few of the best pears, plums and cherries. Would quinces grow on clay? What kind of nut trees would grow on clay soil? I should think nut-bearing trees would answer for shade trees, and answer the double purpose of use and beauty. Evergreens do not answer very well here, these two or three years past they have nearly all died. Are there any kinds of evergreens that will stand drought?

JOB CARR.

Much obliged for your expressed good pinion of the ADVOCATE, my best endeavors shall not be spared to make it continue to

You say where you intend to plant your orchard that the soli is a strong clay, but naturally dry. Very, very few soils, especially clay soils, are well adapted for an orchard without the assistance of draining. For the first few years, perhaps, the trees would not indicate this upon your soil, but by and by, when they have become large and strong, extending their roots down into the sub-soil, it is most likely, that to an experienced eye, both the trees and fruit would say, "There is something wrong at the foundation." The following list of apples are all standard varieties of established eputation, the first two summer and fall, the rest winter :- Early Harvest, St. Law rence, Baldwin, Rhode Island, Greening, American, Golden Russet, Ribston Pippin, King of Tompkin's County, Northern Spy. To the last named there is but one objection. which is. that it takes a long time to come into bearing, but that can be obviated in a great measure by judicious root pruning to check its rapid growth. Pears and plums both like a stiff soil, of pears we can safely recommend the following :- Bartlett, sum recommend the following:—Bartlett, summer; Duchesse de Angouleme and Flemish Beauty, fall; Beurre Diel, Lawrence and Vicar of Winkfield, winter. Plums:—Lombard, Washington, Yellow Egg and Duanes Purple, all first-rate. Cherries:—Eton, Yellow Spanish, Napoleon Biggareau and May Duke are good. Quinces will do well on clay soil well cultivated, Apple or Orange the most desirable variety. Most Orange the most desirable variety. Most of our native nut-bearing trees seem to prefer a rich, alluvial soil, except it is the Chesnut, which is more at home on a dry, sandy or gravelly soil, certain it is that it does not appear to grow more rapidly on the richer than it does in poorer lands. The Butternut, when young, makes a very handsome shade tree, while the Chesnut, equally as prepossessing in its appearance, has the advantage of its fruit being more valuable as an article of commerce. The Scotch Pine, which constitutes a large portion of the forests of Sweden, Russia and other countries in the north of Europe, thrives in the most dissimiliar soils, is said to be most at home on barren, rocky hills; he should be a good customer to stand drought, but is very chary of being moved unless when very young. The Norway Spruce is our favorite, however, and acknowledged by all competent authorieties to be the best tree in the greatest variety of situations, where a wind break or shelter is required. By mulching the surface of the ground about the trees three or four inches thick with rotton leaves, until they become sufficiently large to shade their own roots, you would remedy the evil you complain of. Perhaps a large white grub which eats the bark off the roots of Evergreens may have been the cause of your trees failing to live.

A. D. Sutherland, Lakeside, say Golden Drop wheat has done best with him. He asks if it is the same as the Morden. cannot tell him without examining the heads

Mr. John Mackie, St. Vincent, says We are forming a Farmers' Club here, but We are forming a Farmers' Club here, but find ourselves at a loss from want of proper regulations. Please send us some of the bylaws of Farmer's Clubs in working order in your part. We intend to hold a convention and send two delegates from each club to it,

We thank each for their correspondence, but cannot insert all this month. We will in-sert all that is left over and of sufficient value in my next issue, and hope none of you will cease writing, and that more may take their pen to serve the general interest of the farmers.

Garden, Orchard & Horest.

TO DESTROY SQUASH BUGS.

This insect brings to grief many a fine bed of squash plants. The following remedy will prove effectual in destroying them. Take a quantity of poppy leaves, stalks, bulbs, &c., or any part of the poppy and steep in water either cold or hot; and if poppies are not to be had, take a small quantity of opium and dissolve it in water. This liquid supplied with an exceedingly fine sprinkle to the vines once or perhaps twice, will cause the

bugs to leave the plants, never to return. The same liquid applied with a squirt-gun to apple trees, effectually prevents the ravage of the apple tree worm. An ounce of opium would probably be sufficient for a large

LIME FOR APPLE TREES.

A Mr. Miller referred to the effects of lime on his orchard, and said. I have found nothing better than lime in producing good apples; we have lime and gravel soil. Newton pippons planted in 1863; in twelve or fifteen years, the apples got scabbed, and I threw lime under some trees, and the apples growing on those trees are to-day as fine as any apples I have ever seen. I scatter a bushel of lime under a tree in the spring some other varieties do not require so much. The apples are as good as 20 years ago when I used lime. My trees had deteriorated, and I used lime, and they are as good to-day as ever. I always keep plenty of hogs in my orchard—they pick up the insects. Barn yard manure tends to introduce iusects, and make them breed more rapidly, and hence should not be used.

DETERIORATION OF APPLES.

M.M. Bateman at the late meeting of the Ohio State Horticultural Society of which met at Mansfield on the 10th of December, said: Our orchards do not average 50 bushels of really good apples to the acre. What is the cause of this? First, the apple worm does more mischief than any thing else. Secondly, smutty fungus attaching itself to the apple stops its growth and renders it unfit for market use. These are growing on us. We are likely to suffer more and more as the orchards grow older, and the young orchards are damaged by proximity to old orchards. We can only look to newer portions of the States for good fruit. If I were looking for land on which to grow applies I would go to a new which to grow ap for good apples unless we discover some We will be driven to the West means of checking the nuisances. We have discovered only one practicable and effective method of checking them, and that is by keeping hogs in the orchards. The hogs root out the worms from the ground and destroy them. I have known orchards that were prevented by this cause from bearing any good apples which afterwards bore good ruit, this cause being removed by this method.

SYSTEM OF FARMING IN GUERNSEY. In Guernsey, as in Jersey, a very "high, system of farming prevaile; great use is made of see-weed as manure, both in the direct application as it is taken from the shore, and in the use of the ashes of that which has been dried for the use of fuel; deep plowing —for the parsnip crop—puts the land in an excellent state of tilth; and the considerable population of the towns afford an abundant supply of stable manure. The result of all this is a degree of fertility that is equalled in America only in the market gardens; and the farmers of these islands find, as we should under similar circumstances, that the garden system of farming is the most profitable.

The lesson which they teach is that "a small farm well tilled" is worth much more than a large one half tilled.

A blacksmith has succeeded in changing the

N. Dickey, Ed.

DEVON AND SHORT HORN COWS.

An English breeder very sensibly and per tinently says:—I have kept them pure, crossed the Short-horn cow with the Devon bull, and crossed the Devon cow with the Shorthorn bull. In either way they made a large return, and paid for their meat much better than the pure Devon; but by far the greatest unan the pure Devon; but by far the greatest success has been to commence with the Devon or native cow and pure Short-horn bull. I have also used the Devon bull on the cross from the Devon cow and Short-horn bull; but the progeny rapidly decreased, and no trace of the Short horn remained.

In these days of great consumption and high prices, it does not pay to stick to stock the breed of which requires four or five years to mature; but I am firmly of opinion that if pure Short-horn bulls were used on the native cows and their crosses in the different districts of the United Kingdom for a few years, our beef supplies would be doubled. Many farmers have a great horror of crossing their stock, while others admit that the first cross is all that they could wish, but after that it is all "gone goose" with the next generation. Of guest I would sak have you ever tried? and if "gone goose" with the next generation. Of such I would ask, have you ever tried? and if so, how? and, with what object in view? My theory has always been—and practice and observations have fully borne me out—that we can make almost anything we like of our flocks and herds in a few years, by fully adhering to pure male animals of the kind we wish them to resemble. If beef is our object, use pure, high-class, Short-horn bulls always never by any chance or pretence use a cross-bred bull, even if he be the best animal one con procure, and if the cross were only once in a dozen generations back. It is the crossbred males or cross bred females that have made so many people distructful of any but

I wish to lay great stress on the useing of pure bred Short-horn bulls, by which I do not exclusively mean those fancy-priced beasts that figure so prominently in the agricultural periodicals, but those selected from a good herd, where pedigrees sires have been used for at least twenty years on cows of undoubted Short-horn blood, and that have not been artificially forced. It is not difficult to purchase hundreds of such at reasonable prices. hundreds of such at reasonable prices

VALUE OF GOOD FEEDING.

We must not expect good animals from calves that are allowed to get thin and weak every winter, until they are finally turned off to the butcher. We can not realize excellent beeves or breeders from calves that have had only skimmed milk from the time they were two weeks old until they were ten weeks old, two weeks old until they were ten weeks old, with such grass as their hunger may have forced them to eat, although they have been thenceforth, through the summer, given good pasturage, and well fed through the winter.—
They will never thereafer be able to digest and assimilate the necessary quantity of food to make heavy beef. They will always be "runts." We can never get first class stock if the runts of whotever it in the level of the tree of the state o if the animal, of whatever kind, he allowed to shrink seriously from the time of its birth until it reaches maturity.

Too many farmers seem entirely to forget that the true object to be aimed at is the steady and progressive improvement of the animal through all the different stages of its growth. Growth is a constant process, and, if checked, it is at the expense of the animal itself, and can never be entirely resumed, for the flesh required is at the expense of a certain additional amount of food, whose equivalent has been wasted in the act of getting poor.—
Therefore to say nothing of the economy in many other directions that might be named, a certain amount of food has at least been

GUERNSEYS.

A visit to the Island of Guernsey modified my long-entertained opinion of the cattle of that Island -which are as distinct from those of Jersey as are the Ayrshire from the Devons. Pretty they are not, as a class, either in form or about the head, but they are unmistakable good farmer's cows. If I were starting a herd to-day with sole reference to butter making I should use only well-selected Guernsey's They are larger than the Jerseys (which is, not necessarily an advantage), they are deep milkers, and they are very high-colored race, which is a matter of importance. The pre-vailing color is a rich fawn with much white The muzzles are buff, and the eyelids are almost yellow. The horns are usually amber-colored, and under the white hair, wherever it appears, the skin is of a bright orange that

is the yellowest I ever saw. It is not only of a good color, but also is firm in its texture and of a fine flavor. Being larger, the cows when they dry off fatten to heavier beef than do those of the sister island, and the steers have the same superiority. The importance of this latter peculiarity may, how-ever, be easily overrated, and one of the last things a farmer should regard in selecting a cow for her value while living is the amount of meat can be made of her when she is dead. A very slight difference of profit in fattening for the shambles form is a better indication of the tendency to profitable fattening then is size, and the best form of fattening is not the best for milking.

While the Guernseys are perhaps the most promising for the butter dairy, the Jerseys are so much prettier and more taking to the eye, that even a butter-maker pure and simple, would have a better chance for good prices for his surplus animals for sale among his farmer neighbors if he had bred Jerseys than he would with the butcher if he bred Gernseys. My commendation of the latter is to be taken rather as an act of fair play on the part of one who is a ffrm believer in the Jerseys as an expression of the opinion that they as good, all things considered as a breed for adoption in America. Certainly the best of either breed are better than the ordinary animals of the other, and the best cows to be found in Jersey (as a class) are those which have the coloring, and which approach the size of the Guernseys. The size is an indication of good keep for generations, which has also had a tendency to stimulate the milking capacity. To this extent size is an advantage. Beyond this, a large animal eats more than a small one. It is doubtful whether it is so in a better-producing herd.

WHAT IS THOROUGHBRED.

What we call the thoroughbred horse was created in England by the importation of mares and stallions from Arabia and Barbary and by the judicious commingling of the foreign with the native blood. Through contests on the turf and the right kind of crossing, the horse was gradually improved or elevated to the high standard of existence and these improved horses were then recognized as the progenitors of an aristocratic race. Equine heraldry has been made a science, and the birth and pedigree of each horse of high breeding has been preserved in the "stud book." Useage has decreed that any animal which can show an uncontaminated pedigree for five generations shall be classed as a thoroughbred; that is, no drop of cold or coarse blood must appear in the veins the origin of which cannot be found behind five successive periods of reproduction. Five removes from a common parentage refines the blood and makes it aristocratic. -Turf, Field and Farm.

The following method, is now practised in the main by all our best butter and other manufactories of milk, and the best dairymen of the country, will be a matter of great interest to all who may adopt it. Nearly every manufacturing establishment of milk, which receives milk from direct parties, has a set of printed rules, which, though varying slightly in the expression, yet all agree in the main principles. I will therefore admit the substance of what all agree in, and to a considerable extent copy the language ver-

batim.
1. The milk should be drawn from the cow in the most cleanly manner, and strained through wire-cloth (afterwards it is strained by some through fine linen and

others, flannel strainers.)

2. The milk must be thoroughly cooled after it is drawn from the cow, in the can in which it is contained, in a tub or vat of cold water deep enough to come up to the height of the milk in the can, containing three or four times as much water as the milk to be cooled; the milk to be occasionaly stirred until the animal heat is expelled.

3. In summer, or in the spring and fall, the water shall not be over 52 ° temperature. This may be drawn from a well, or made cold by the introduction of ice, or better still by running water from a spring where the temperature will be uniform necessary to reduce the temperature of the milk within forty-five minutes to below 58° and if night's milk, to remain in such bath until the time of bringing it to the factory.

the temperature of the milk be soon reduced below 50 $^{\circ}$

5. In spring and fall weather a medium course may be pursued, so that nights milk shall be cooled within an hour below 50°. 6. If in running spring water it should be so arranged that the water flow over the top to carry off the warm water.

7. The can in which the milk is cooled should be placed in water immediately after milking and remain there until the process of cooling is finished.

8. Cows should not be fed on turnips or any food that will impart an unpleasant odour to the milk.

In the manufacture of butter, the milk when cooled, is set in tin cans about twenty inches in height and six inches in diameter, and the vat of cold water as near 45°. as possible; if higher the water should be cooled with ice. The cream will in this way separate entirely from the milk in a few hours, but is allowed to stand twenty-four hours for convenience, when, with a flannel shaped dipper it is removed and placed where it becomes slightly sour, when it is churned with a dash churn, being kept in a cool place.

COMBING WOOL.

The Western Rural has tried to keep permanent before the farmers of the West the importance ef breeding long and middle wooled sheep, both for carcass and wool. They are especially adapted to these farms where the flocks kept are small. We clip from the *Economist* the following extract from an article upon the importance of increasing the production of combing twools:

It is true it takes time to raise lambs and increase flocks of sheep. As yet there has not been much increase in the production of the staple in the Northern or Western States, but what is lacking in quantity is to some extent made up in quality, for some markets now present lines of fancy wools from Virginia Pennsylvania and Ohio which are equal to any wools grown in the world over. superfine fancy clips from Western Virginia are particularly choice, and will bear close comparison with the finest Austrian, Silesian, and Australian. These wools will command fancy prices at any time, no matter how stringent money may be, for they are always wanted for opera flannels, fine-faced doeskins, or ladies' worsted dress goods, or braids, and yet we fear enough of these grades will never be grown in the States to supply the constantly increasing wants of our manufacturers. The demand for combing wools continues very active—in fact it is urgent—until now, prices have rapidly risen, especially for Canadan. From a private letter, within by a well-knows firm in Hamilton, dated on the 3rd instant, we are enabled to make the following

"Combing wool cannot be got in any quantities at present. The country has been State, and as high as forty-four cents in gold has been paid, and the prospect is it will go somewhat higher. We estimate the clip at 1,250,000 pounds.

This sounds like big talk. But wait. Before the ink is yet dry on the paper we write upon, we have advices still more astonishing, with sales at forty-six cents gold for Cana dian combing, and the best article is now held at a half a dollar, gold. This would carry the price beyond eighty cents, currency, and yet it is not a fortnight since Mr. Walworth asserted he would not pay over sixty cents for the staple landing in the States. Such is the enormous demand for worsted wools the world over, that everywhere in Europe and America they are bringing prices out of proportion to fine clothing grades. It is a pity some of our farmers cannot get some of these Canadian sheep, and cross them with our Saxony, so as to give us a good grade of one-fourth blood wool.

SOMETHING ABOUT JERSEYS.

My traveller led me for some weeks to the Canadian Islands, and I had a better opportunity now thanlast winter to examine the cows and the dairies of Jersey. Our main effect of the Jersey cows improves on being transplanted to America. The fields that line the embowered lines of this beautiful island were filled to their fullest capacity with cattle of all ages and of all qualities. They have all the characteristics of the breed as we know it, but many of them were very poor trash, and many give evidence, in the defective form and small development of is only exceeded by the golden yellow of the ear. This universally rich color extends to the milk and especially to the butter, which

4. In winter, or in freezing weather, the water should be kept nearly at a freezing point by the addition of ice or snow, that and of breeding with reference to the farmany farmers in America keep no sheep?

shionable color standard or so the mere points of beauty. Others again, while good milkers showed a less reprehensible disregard of form. But notwithstanding all this, there, were hundreds of cases in which both beauty and quality were combined in a way to eclipse our best efforts. Single animals may be found in America as fine in all respects at any in Jersey, but our very best herds do not show so high an average of both characteristics as do several herds in Jersey. All that we need is to have our future importations on a more careful selection than has hitherto prevailed—and that now prevails. The principal importers cater only to the taste for color and good looks, and they find their profit in buying animals which bring a low price on the islands because of their inferior value for the dairy. In the Saturday markets the tast St. Heliers there were only very ordinary (but generally very pretty) animals: and on the boat coming to Southampton, where there were about thirty cows of almost universally great beauty, there was not one that seemed to be above a very low average in dairy quality. If we are to improve our stock by importation—and we may so improve it—we must select much better animals than those sent out by the regular dealers.

MR. MECHI'S FEEDING.

Mr. Mechi, the English farmer, who has established a world-wide reputation as a farmer and stock feeder, takes the position in all his farming operations, that the production of meat is the main dependence of the farmer, if the object is to make a profit on his labor. Mutton is produced largely by the English farmer, and like others, Mr. Mechi crosses two or three, as the readiest mode of getting hardy stock, and good feeders. The Hampshire Donn rams are used with Lincoln and Cotswold ewes. The fruits of this cross are said to be most excellent. Hurdles have been many years in use upon the farm. These are mounted on wheels, and the sheep are changed from place to place, only being allowed to remain a few hours upon one spot.

The ewes are retained as breeders as long as they will answer this end .- Thirty acres are in grass and roots, and upon this area Mr. Mechi produces £200 worth of beef and mutton, besides using a portion for young growing stock and breeders. All the fodder is cut with the chaff cutter, and the roots pulled and mixed therewith. Mr.M. has proved to his entire satisfaction that this mode of preparing food embodies the me principles of profitable feeding. Poultry is kept in considerable numbers, are allowed free access to grain feed, and are found to be profitable when liberally fed.

WOOL-GROWING IN AUSTRALIA.

Australian sheep husbandry is one of the many wonders of this wonderful century. scoured all around for manufacturers in our The number of sheep a few years ago was so small, that their product had no perceptible effect upon the markets of the world. In 1872, according to very careful estimates made by Geo. W. Brown, Esq., of Boston, one of the most thorough statisticians in the country, there was a total export of 182,478,716 pounds of which 173,266,436 pounds came to the United States. The number of sheep in Australia, according to statistics furnished to the International Exposition of 1872 is as

follows: 1970......51,292,241

seen that Australia produces nearly thirty to every man, woman or child it contains. The United States has semething less than three: fourths of one sheepfar each inhabitant.

SHEEP HUSBANDRY ABROAD.

From statistics relative to the production of wool it appears, in round numbers, Great Britain and Ireland grow more wool than the United States, although there are more than thirty States and two of them are larger than the former countries. In it stated that the Colony of Australia recently populated, grows as much wool as the States viz:—130-000,000 pounds, while Great Britain and Ireland produces 260,000,000 pounds.

In England a numerous well-fed flock of sheep is considered to be essentially necessary for the well doing of every upland farm and it is generally seen that those who keep the most sheep and feed them highly enrich

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pounds. s well-fed flock of ssentially necessary y upland farm and ose who keep the nem highly enrich d. How is it so keep no sheep?

INFLUENCE OF LIGHT ON MILK AND CREAM In responses to inquiries, Mr. L. B. Arnold, Secretary of the American's Dairymen's Association, sends the following to the Buffalo Live Stock Jonrnal. It will be seen by the facts cited, that light is necessary in the milk room, but a less degree of it than is generally supposed, or most dairymen would think necessary. It may be that other conditions than light had some influ-

ence in these experiments.

While some organisms of a peculiar nature flourish better in the dark than in the light, the general effect of light upon living organisms, both animal and vegetable, is to encourage growth and perfection of development. milk is full of organic germs, and it is found that light hastens the changes required for their development and multiplication. Direct sunlight very soon spoils milk or cream by premature souring and decomposition, The effect of indirect or reflected light has been but little observed. It nevertheless extends an active influence not only upon milk and cream but upon butter and cheese while curing. The general effect of light upon milk and cream is to hasten the action of the lactic yeast, and then the formation of alchol, and after that to hurry up putrefaction, and these changes are occasioned by the influence of reflected light the same as direct sunlight, only in a feebler degree,

NO GOOD FARMING WITHOUT STOCK RAISING

J. B. Lawes, the great indefatigable experimental farmer of England, gives it as his decided opinion that the fattening of animals on the farm is the only legitimate and profita-ble farming. And although he uses a large quantity of chemical manures, he does it only as a supplement to increase the stimulus to his farm-yard manure. He says that for every twenty-five pounds of food devoured by an animal he leaves twenty pounds in excrement, and this is by a growing animal; if the animal is fully grown, it tokes no part of the food to form his flesh and bones. Hence it is, that the English farmer buys young three-year-old steers in the fall, to eat his cut hay and straw, oat meal, and roots in winter to fatten them for market in the spring; he well knows that the manure they

make nearly pays for keeping.

John Johnston, the father of tile draining in Western New York buys some sheep in fall to fatten for spring market, feeding them through the winter on cut straw, clover hay with Indian meal and Wurtzel beets; and he considers the quality of his manures is enough improved to pay for the meal and roots.

To put on fat an animal requires neither mineral matter nor nitrogen, only available carbon and the elements of water. Thus to form 100 lbs. of muscular flesh

and bone in the growing animal it takes.

As stall manure supplies the nitrogenous fibrin, the potash and a good part of other mineral substances, if there is only enough of it to lispense with concentrated fertilizers the money they cost is saved. Yet the best farmers do not neglect to supply themselves with bone material and other commercial manures to quicken and eke out their farmyard manures, Joseph Harris, of Morton Farm, near Rochester, perhaps the best farm in both theory and practice in the States, says land never should be exhausted of vegetable matter as to require a green crop to be ploughed in, he says feed your clover and apply the dung made from it to the field, be it meadow or fallow. But if clover is ploughed in, it should be first well limed, to promote its decomposition; and lime itself is a capital manure for the Clover crop.—Southern Cultivator.

EUROPEAN AND AMERICAN DAIRY FARMING. FROM AN AMERICAN POINT OF VIEW.

Importance of clean milk. — In my report upon English Dairies in 1866, made to American Dairymen's Association, called attention to the character of English milk as cleaner than ours, and I attribute the finer flavored cheese of England, in a great measure, to this one cause. Nothing setshire to get good milk. The pastures are well drained, and provided with abundance of clean running water. The million of some of clean running water. The million of some of clean running water. are open on one side, paved with stone and cement. There is sufficient incline back of markable, fine, thin hair, and soft hide, to

gutters, and after milking, all the droppings re removed and the floors and gutters are flushed with water, so that everything is clean and sweet for the next milking. The clean and sweet for the next milking. The liquid'excrements and washings are conducted into a tank sunk into the ground, outside the milk house, and from thence as occasion requires are applied to growing crops.

You will see that under this system of clean pastures, clean stables and clean dairyhouses, a better milk is obtained than with us, and thus with proper attention to curing cheese on the shelf, the Englishman with less skill than ourselves in cheese manufacture is enabled to make a superior product. I am convinced that unless the dairymen of America commence at once to pay attention to cleanliness in pastures, not only in regard to slough holes, but the eradication of weeds, providing stock with sn abundance of fresh, clean water, together with attention to curing cheese, Europeanmanufacturers will soon outstrip us in the race "for making fine goods." The factory system is now being established in Europe. All our inventions and ap pliances are eagerly sought after and every good thing discovered by us adopted. England, Sweden, Germany, Russia, England, Sweden, Germany, Russia, Holland and Switzerland are adopting our factory system. Under monarchical government and hereditary landtenures like those of Europe, the farmer is compelled by his landlord to farm in certain directions, and the result is a systematic regular course of husbandary by which better results are obtained than by us, where every farmer does his work in a hap-hazard way without any regard of science, or a rational system of culture. Dead carcases exposed to the air to putrify, cess-pools reeking with filth, stagnant water filled with decomposing vegetable matter are there regarded as public nuisances, and those permitting them on their premises are liable to criminal prosecution.—X. A. Willard Address at Vt. Dairymen's Convention.

SUGAR BEETS FOR FATTENING SWINE.

Jonathan Talcott gives a statement in the Boston Cuitivator of an experiment performed on a Suffolk pig where sugar beets were largely employed for fattening. The animal was about a year old, and the feeding on boiled sugar beets, tops and roots, began on the 16th of August, and was continued thrice a day until the first of October, after which ground feed was given, consisting of two parts of corn and one of oats, three times a day, till the animal was slaughtered, the meal being mixed with cold water. The result was, on the 16th of August, when the sugar beet feeding was begun, that the weight was 360 lbs.; September the lst, 190 lbs.; October 1st 450lbs., November 1st 550 lbs. This is the substance of the statement given, by which we perceive that the increase the last of August, when fed on boiled sugar beets, was at the rate of two pounds per day; the same rate of increase of the same food continued through September. When fed on tundervalue pedigrees and would look carefully to this but no redigree is sufficiently and continued through September. on ground corn and oats, made into cold slop, the grain for the next fifty days was less than a pound and a half per day.

ORIGIN OF THE BERKSHIRES

The following account of this breed we extract from the American Agriculturist

for 1872:—
All who pretend to any positive knowledge on this subject (in England) with whom we conversed, agreed that this breed of swine originally was a large and rather a coarse animal, of a white or buff color intermixed with black spots, and that they were improved to their present great perfection of form and dark color, by a Siamese China

At Reading they told us they had known them (the Berkshire) only about forty years. When we wrote our "Chapter on Swine," which appeared in the Cultivator some two years since it was on the authority of different friends who have resided in the south and west of Berkshire-Professor Low and some others—that we asserted that the improve-ment began about the year 1800; but it seems that our informants only knew of it in their quarter at that period, and it is now distinctly traced by. Mr. Westbrook, as

far back as 1780. The Berkshire is now generally acknowledged the cows, so that all filth flows into the stone great hardiness of constitution. They are

thrifty growth, early maturity, easily kept on grass and carrot roots, or bran and brewers grains, and will fatten at any age. Their dispositions are also veryquiet, unless roused to a fight, and then, like all wild-bred animals, are game to the back-bone. Their powers of endurance are very great, and no-thing in England can travel with them of the

hog kind. Joined to all the above good qualities, their meat is of the best kind; the hams, shoulders and jowls, being lean, muscular and delicate, while the side pork is very fat and cuts as clear of lean as the Chinese, thus making the heaviest mess pork for barreling.

NOVA SCOTIA LIVE STOCK.

The Sun of Truro. N. S. says, a pair of cattle weighed a few days since in that town are probably the largest and fattest cows in Nova Scotia. They weighed 3,240 lbs. of the old breed; one is red with a white face and is a fine animal. When the old breed of oxen of which the above are excellent specimens are worked off by the Short-Horn Durham and Devon coming on, we do not expect to record the weight of any fattening cattle this time of the year under 4,000 pounds. This is pretty good for the old breed, and for grades in Nova Scotia.

WASHING BUTTER.

A very large majority of butter makers wash the butter; a majority do not, and claim that washing is not only unnecessary but injurious. Good butter is made by some of each way of thinking—and poor also when washing and un-washed. At a recent meeting of Chautauque Co., N.Y., butter makers the president decided the sentiment of the meeting to be in favor of the sentiment of the heeting water to be had. Several speakers thought but little water should be used. One man is reported to have made the extraordinary statement that applying salt freely would answer the purpose of washing and that butter would dissolve no more than it needs—Western Farmer.

SELECTING A BULL FOR BREEDING GRADE CATTLE

A successful breeder and feeder of grade Short-Horn cattle recently incidentally expressed to us his disagreement with the common impression that a coarse, rough Short-Horn bull was not only "good enough" but well adapted for use or common or goods. was not only good enough but well adapted for use on common or grade cows. Undoubt-edly even a somewhat inferior Short-Horn bull will usually produce calves decidedly su-perior to those from scrub bulls, but there is perior to those from scrub balls, but there is much force in this breeders suggestion that a finely formed animal is very important for breeding cattle for market. He finds that what we call a well bred look adds to the price what we call a well pred look adds to the price of cattle sold in the leading markets. The bet-ter the bull used the greater the probability of the calves sired by him will possess not only this look but the desirable qualities which we

not undervalue pedigrees an would look carefully to this, but no pedigree is sufficiently good to cover glaring defects in form. A well rounded and deep body, especially good in chine and crops—a good back, flank and hind quarters; a well shaped head and neck, are points, among others, which even an intending purchaser of a Short-Horn bull should look for whether he be buying for a well bred or for a whether he be buying for a well bred or for a common herd-Western Farmer.

HOW HE DID IT.

We know a farmer, now in comfortable circumstances, who, beginning with a few cows and constantly increasing their number, paid all the expenses of running his farm, all grain bills and brought up his farm to a splendid condition solely from the profits of his milk. His system of management was to buy good cows at the outset. He required that they should average each more than the can per day, season in and out, which many milk raisers are content with. His farm at the outside was run down and did not yield

hay enough hardly to pay for cutting.

Buying grain by the ton, and feeding it out to the cows; spreading the manure on the land and turning it over and sowing rye and oats and millet to be use successively for fodder; turning over more land and laying it down to grass; all this time selling his milk and buying grain and more cows, he now produces forty cans a day; is obliged to sell hay because he makes more than he can possibly use, and his management is such that he actually more than pays for all the grain that he buys solely from hay sold off

He believes in soiling cows; in fact he says he can't afford to pasture them, believing tha

prolific breeders, the best of nurses, of the increase of their manure will more than compensate for the extra labor employed in

soiling.

Two smart men can do all the work and not be over driven at that. He sells his cows to the butcher when they have reached the minimum product of milk that he counts on; and the prices realized are, because of their fine condition, often greater than the original cost of the animal. We know another farmer who manages the same way, depending on the liberal grain feed and soiling, and putting every dollar he made on the land. He buys what would be termed poor stock, that is, cheap, thirty or forty dollar cows, and looks to less profit from his milk than from the increased value of the cows for beef, and the increase of his manure pile. However, he is now rich and his money has been made solely by the above manage ment.—Mass. Ploughman.

EXPERIMENTS OF STEAMING FOOD FOR CATTLE.

In that excellent little work "The Illustrated Annual Register of Rural Affairs, published by Luttero, Tucker & Son, about 20 pages are devoted to the experiments of Wm. Bennie, P. A. Avery and others, on steaming fodder, mode of feeding, plan of stables, &c., from which we make extracts on the use of steamed food and the mode of

manufacturing butter

Wm. Bennie's farm contains only about 50 acres, but he has obtained enough food for 50 cows, with the exception of the pasture, most of which is on another place. pasture, most of which is on another place. By cutting and steaming hay and other fodder, including corn-stalks, straw, &c., he saves one-third of its value, so that two tons will last as long as three tons fed in the ordinary way. But this is not all the gain effected. The cows are kept in better condition, remain prefeatly healthy and condition, remain perfectly healthy, and give as much milk through the winter, and as good in quality as in the best summer season. The food is fed warm to the cattle, thus preventing the loss otherwise required to sustain animal heat; digestion is facilitated, and they do not have to work hard in chewing dry and tough fibre. When he has suspended the feeding of cooked food, and fed the dry fodder for a single day, the milk has at once fallen off at least one quart for each animal, and some days have been required to recover the full flow again.

The Way the Food is Steamed. He cuts and steams the food twice a week, t remaining warm and in good condition for three days, a slight fermentation sometimes commencing after the third day in warm weather. The steam is generated in a common vertical engine boiler, which is about 6 feet high and 2½ feet in diameter, and cost when new one hundred dellars. Second-hand boilers, which will answer as well, may be had for fffty dollars. The water is let in at the bottom, and the steam passes out through the pipe at the top. The fodder is cut by a horse by means of a tread power, and two men are required, two hours each, each twice a week to cut and fill the steam vat. The fire is started in the morning, and the cutting is commenced at the same time; as fast as the chopped stuff is made it is shovelled down into the vat, wet sufficiently as successive portions are deposited, and trodden down compactly. Two hundred gallons of water are required for the contents of the vat, which is in the basement, and of brick, six feet square inside, and eight feet high. Mr. B. would line this vat with sheet iron, so as to give a higher pressure of steam. A large side door allows the cooked food to be shovelled out and fed to the animals, the stalls of which face the vat as a common centre. Three or four tons of coal are sufficient to do the cooking for the winter, besides which, the whole expense is the labor of the two men who do the cutting, which is equal to eight hours per week. An important saving, both in labor and fuel, is effected by not cooking every day, as but little more is needed for the larger quantity of steam.

The Management of Mr. Avery's 50 Acre Dairy Farm.

The farm on which these animals are kent and fed, contains only 50 acres. About 10 acres are in pasture, where the cows are turned after milking in the morning, and allowed to remain until 11 o'clock, when they are again brought to the stable and fed with green clover or corn fodder, as the case may be; the window-shutters being closed, so as to darken the stable and keep out flies. About 4 acres are down with

The following are the number of acres for

ach crop on the 50 acres :—	
Pasture, 10	acres.
Meadow, 20	66
Fodder corn,4	66
Clover, 3	66
Cabbage,3	66
Roots, 3	66
Tobacco, 4	"
Buildings, &c., 3	"

No grain is raised, but meal is bought for feeding with steamed fodder, with the proceeds of the sale of cabbage and tobacco, and the income of the place is derived from the milk and the sale of Ayrshire cattle, which is the only breed raised, and of which there are about fifty head, of all ages; twenty or twenty-five are cows

and the rest younger animals of various ag es, besides 20 Cotswold sheep and 40 horses. One of the Ayrshire cows, from the excellence of the food given, gave its weight in

milk in 25 days.

Having noticed the mode of feeding practiced by Mr. Bennie, we will now pass

Method of Treating Milk and Making Butter

Practiced by Mr. Crozier, who feeds on the same principle, but on a larger scale. Mr. Crozier, from the excellent food given his animals, is enabled to average a pound of butter for each of his animals per day. This he sells for 70 cents per pound, whichis found to be more profitable than making cheese or disposing of the milk in any other way; the milk yielding at the rate of 10 cents per quart in but-ter, the sour-milk and buttermilk for pigs more than paying for the man-ufacture of the butter.

The milk is treated as follows: — It is first strained into deep cans, 20 inches deep and 8 inches in diameter, and set in cold water to take out the animal heat, it is then strained into cans 4 inches deep, and 15 inches in diameter at the top, which are filled for 2 inches deep with milk. Before the pans receive the milk they are rinsed in cold water to prevent the milk adher-

ing to them. The cream is taken off every 24 hours, from each milking at a time, and put into an oak churn or barrel, holding 40 gal-At each skimming a little salt is added to the cream, and stirred thoroughly with a stick. The butter is never allowed to come in less than 50 minutes, which is accomplished by means of a brake on the horse-power which controls its ve-locity, and causes slower churning. If it is done sooner, there is a loss in quantity and quality. When the butter is just ready to gather, one gallon of water to forty of cream is added, which assists in separating the milk by making it more liquid. It is then put into the butter worker, one pound of salt is added to each twenty-five pounds of butter, and also half a teacupful of sugar. No water

is ever used for wasting it, which would carry off the sugar as well as its perfect flavor; the hand never touches it in working, a sponge and cloth are used for absorbing the sponge and cloth are used for absorbing the buttermilk when pressed to the outside. When the operation of working is finished, it is made into cakes or balls of one pound each, handsomely printed with a mould; each handsomely printed with a mould; each cake is encased in damp muslin, and one hundred of these packed in an elliptical case, 2 feet long and 20 inches wide, with successive shelves to hold the cakes, with a space for ice at each end; each of these cases sell for \$70. Such golden butter we have not often seen; it is eagerly bought at this high price, and customers who do not want. high price, and customers who do not want poor butter say they "can't get half enough." The skimmed milk, with some cream still remaining with it, is fed to the calves—and such calves! The young Jersey's were pic-

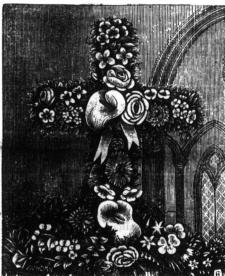


THE BASKET OF FLOWERS.

tures of beauty, and their eyes and faces look like young fawns in color. A very fine sight was that of nineteen Jersey milk cows twisting their heads, all in a row, through the stanchions into the manger in the open ally, for their fresh steamed food, which they de vour with great eagerness.

Vick's Chromos.

The Cross of Fowers is a choice work of art, and will be given to those who gain prizes, and prefer it to either of the others. Personally we do not like this quite so well as some of the others, and shall only send it to those selecting this one expressly. It is a handsome picture and size 19x24.



VICK'S CHROMOS.

The Hlppopotamus.

The name of this enormous and apparently unwieldy animal, by which he is known to us, is Hippopotamus, or Greek for River Horse. Had the Greek travellers been better acquainted with the appearance of this animal, they might have called it River Cow or River Hog. It is only when his head is half submerged that we can cor-

has been the head of that household, and the male has assumed a very submissive demeanor.

Spring Wheat.

The remarks made in this journal last month under the above heading have drawn forth many communications.— Several gentlemen have kindly given us information of several kinds of wheat that have done well in their sections. One says the Baltic has done best with him; another praises the Club wheat and considers it a new variety; some prefer the Rio Grande, which appears to be most like the McCarling or Red River wheat. The Scotch, Fife or Glasgow wheat are liked by many. They are all the same variety, only known under different names in different localities.

One gentleman says he has a new variety from California that is surpassing every other variety; another has some he got from a Russian vessel, which he ex-pects great results from, and another has some procured from Mexico. None of these new varieties have yet been sufficiently grown or tested to know if they are the same that we have, or will do any better. If any of you have a sufficient quantity to offer to the public, even in small quantities, of any kinds that are really new and answer better than the old varieties, they would be of great value, but up to the present time we are not sure that any new variety is in existence that is better than the old.

One gentleman sends us a head of bearded spring wheat; it is bearded much like the Siberian. He states that it has far surpassed any other variety in his neighborhood. The grain appears much shorter than that of the Rio Grande wheat. We do not think much of its appearance. He calls it the Red Fair wheat.

To speak plain we have lost both money and reputa-tion by trying spring wheats on our farm. and by procuring stocks, we would rather others had given a trial and reported to us, still if we could be sure of a good variety, we would pay a good price for it.

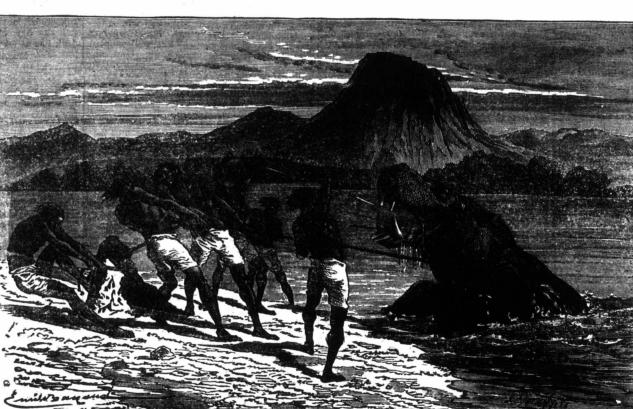
The Farrow wheat has done better than any other variety in this part of the coun-; on our farm east season, it yielded better than any other variety we had, but, though it yielded the best, it is a poor, miserable sample to send out for seed; still, if any want to try it they can be supplied.

In this section spring wheats do not answer as well as in many other sections to the north and east; in this part of the country the fall or winter wheats are much more profitable. In many sections the spring wheat is do-ing better than in If it did not we fear that many

this. farmers would be hungry during the spring season. It is our belief that our spring wheat will not pay the expense we have been at with it, considering time, &c. labor and trouble.

We purpose procuring any varieties that we hear of and have hopes of being of advantage to the country. In the next paper we hope to be able to give you the

offer of any new varieties that may be procurable, but we shall only send them



THE HIPPOPOTAMUS.

The Basket of Flowers.

This is not quite as large as Vick's former Chromos. We have shown it to really good judges of art, it is pronounced by them to be the best that he has yet published, in regard to artistic skill. We shall give them and other choice works of art to persons that get up clubs for our paper or write-prize articles. We shall give one each month on some subject pertaining to agri-cultural interest. Every one that sees them cannot fail to be highly pleased with them. Five new subscribers at \$1, or four new subscribers with your own name, gain one of the Chromos.

rectly call him a River Horse. Once we see his nose and mouth we are apt to call him a River Cow; but when he is once well out of water, and we see his heavy head and short legs, we would say immediately that he was more like an over fat hog than either cow or horse. The hippopotamus has four equal toes on each foot, enclosed in hoofs.

They have two, a male and a female, at the Zoological Gardens in London, England. A short time since a young one was born, which was the first hippopotamus born in England. The male for a long time tried to kill the little fellow, but the mother fought boldly for her child, and taught him to fight also, and between them they thrashed him unmercifully. Ever since Mrs. Hippoptamus

Two Durham cows, Rosetta and Rose Ann, reared by Mr. Jas. Cowen, of Galt, were sold by Mr. G. L. Harrison, of Morley, N. Y., for \$8,000 cach.

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e for it. he Farrow wheat done better than other variety in part of the counon our farm t season, it yielded ter than any other iety we had, but, ugh it yielded the t, it is a poor, misble sample to send for seed; still, if want to try it they be supplied.

thissection spring eats do not answer well as in many othsections to the north east; in this part the country the fall winter wheats are ch more profitable. many sections the ing wheat is do-better than in we fear that many ungry during the our belief that our pay the expense we

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nsidering time, &c.

a and Rose Ann, reared were sold by Mr. G. L. or \$8,000 each.

This cut is from the first photograph ever made in these yards from live Texan steers, and is to the life. The genus— Texan steer and Texan cow boy-though dissimilar in some respects, have the same nervous temperament, and the steer is as liable to "turn up" and let you have it as the cow boy is to draw his "weepon" and also let you have it.

Texas Cattle.

In the thorough-going, thorough-bred Texan steer you have the exact reverse of the meek, lymphatic native; he is wiry, quick, alert, and, what is the best | filthy butter put on the market indicates feature, his flesh is cheaper than that of his cousin, the native.

MATTHEWS, KINGSBERY, & Co, Kansas City, Mo.

Our readers have heard of the Texan cattle, but comparatively few have seen any of them. To give you some idea about them we have procured the above cut from Messrs. Matthews, Kingsbery & Co., of Kansas City, U. S. We give their own remarks above in regard to the cut and the cattle. The term "cow boy" we presume to be the term used to denominate the owners or herdsmen, and is doubtless a common name in that part of the country, as "lumbermen" or "choppers" are here. We presume the are here. meaning is that one is as likely to give you his dirk or a shot from his revolver as the steer might be to raise his handsome horn or leg. The natives spoken of we presume to mean the

We are surprised that these awkward,

ill-shaped animals would furnish flesh cheaper than better-bred animals.

their wild nattheir wild life and their wild country better than our feather bed pampered Durhams would, still it is our impression that cattle with less horn, bone and may sunplant them on their own native gounds. The change, if it ever does take place, wou'd take a long time, per-haps nearly a

century.
The Durham bulls that have been introduced among even the natives have made but little heading as yet to improve that class; in fact, some large stock men have told us that the Durham bulls have no chance with the native stock They pine away

and die, shortly or are soon killed by be able to turn out as good an article as they will save \$200 in the manufacture alone, them. The business done by dealers in those who are skilled in the business, and next year. The drawing of the milk will

Texan cattle is enormous. Messrs. Matthews, Kingsbery & Co. sold during the last nine months of 1873 thirty-two thousand, seven hundred and forty-three head of cattle, a goodly number for one firm to ship.

F CARPENTERS.—A specimen copy of American Builder sent free. Full of plans and working drawings. Send your address to Chas. A. Lakey, Publisher. Bex 1745 New York City.

The co-operative system of manufacturing cheese and butter on a large scale is very superior to the home making principle. It gives better facilities for the general use of mproved modes of making, it gives a chance for the employment of science, and causes more of a uniformity of the article put on the market; consequently it brings a higher price. This system has not been applied to butter making in Canada, but has been in the United States, and the result has been very gratifying. The quantity of miserable,

THE CO-OPERATIVE SYSTEM OF MANUFACTURING CHEESE AND BUTTER. So much is allowed, usually 2½ cents per pound. For the information of those who purpose going into the business I will give a brief sketch of the

West Nissouri Cheese Company,

Kindly furnished to me by James McLeod, Esq., Deputy-Reeve of the Township, who is one of the directors of the above company. The capital, \$4,500, was borrowed, payable in 3 instalments, so that those who subscribed for stock did not have to pay anything down. This was divided into 450 shares of \$10 each. There are 65 stock-holders and 85 who send milk so that holders and 85 who send milk, so that

nearly all of those who send the milk are

TEXAS CATTLE,

until the co-operative system is adopted, as been struck, as all the cheese is not sold, in cheese. It cannot be expected that where but it is expected to be about 10 per cent. milk is manufactured into those articles on

native cattle or common stock of the that a reform is needed in that line. But interested in the profits accruing from the we need not look for a change in quality manufacture. The dividend has not yet been struck, as all the cheese is not sold, which is not bad for the first year. The cheaper than better-bred animals.

We have no idea of introducing this stock to our country; it is probable that the introducing this stock to our country; it is probable that the introducing that the introducing this pursuits (usually agriculture) as well, would the introducing the introduci

factory has a capacity for manufacturing the

milk of 800 cows.

The officers consist of a president, secre tary, treasurer and 7 directors, elected annually by the patrons. An executive committee of three is also appointed to effect sales, but this is not usually done without consulting the directors.

Ayr Agricultural Works.

Mr. John Watson, who has gained the honors at the International Exhibition, has done a good service to the country by showing that Canadians can manufac-ture implements as well as the inhabitants

dements as well as the inhabitants of other countries. We have procured many agricultural implements from him as well as other manufacturers, and we must in justice to Mr. Watson say, that his implements and machinery have been better constructed and contain better material than any others pur-chased by us. The implements we have had and supplied from his manufactory have always given satisfaction, namely, his root cutters and chaff cutters. He has taken more pains to

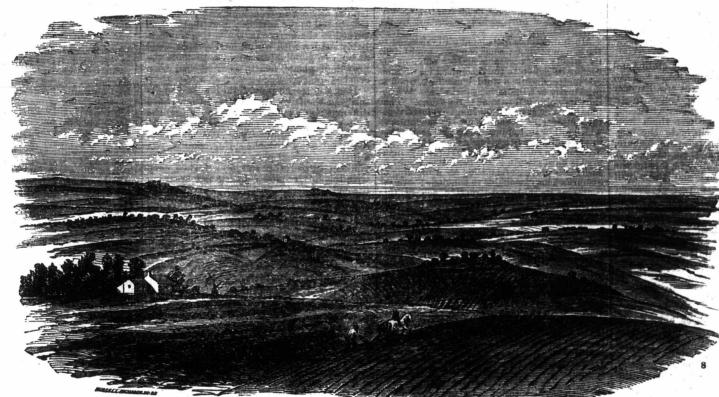
satisfy his customers, or persons who have procured his implements, than any other manu-facturer we have heard of. We have known him to send his agents a long distance and put machinery to rights at his own expense, even when the implements have been put out of gear by improper usage.

There is a very great difference in the value of machines or implements. If they are properly constructed and contain good material, the cost of carriage is nothing in comparison to having a superior implement

Nabraska Scenery.

The above illustration gives a good idea of the peculiar roll of the prairie lands, and

shows how the pioneers of the West are gra-dually taking possession of the ground, and ma-king good farms, where but a few years since the Indian and the buffalo were the only inhabitants. Partsof Nebraska farming land, and vield immense crops of corn, which is there the main dependance. The great trouble is the distance their. corn has to be shipped before it reaches a good market. So that, although it may command a good price at the seaboard, the Nebraska farmer receives but a small proportion the amount, fully two-thirds of the price going to pay for carriage and commission.



PRAIRIE, TEN MILES EAST FROM LINCOLN, NEB.

whose whole time is taken up with it.

When the factory system first came into use the factory was erected by a capitalist who usually manufactured the cheese for so which much per pound, but sometimes he bought the milk. The system of farmers forming a company among themselves for manufacturing their own milk, is now conceded to be more satisfactory, as all the profits of

not cost as much per pound, as they will not have to go over so large a territory for a load. There are two buildings, one in which the cheese is made, 30x42. upper part is used as a dwelling for those employed. The other is a drying house, 30x50, and has 3 flats. They are frame, and cost \$2,250. Adjoining the former is an engine and tank house, 20 feet square. The manufacturing go to themselves, consequently they have more of an interest in it. wagons, which cost about \$1,600. This

HIDE-BOUND TREES.

Trees that have long stems exposed to hot suns or drying wind, become what gardners call "hide bound." That is, the old bark becomes indurated-cannot expand, and the tree suffers much in consequence. Suchan evil is usually indicated by grey lichens, which feed on the decaying bark. In these case a washing of weak lye or of lime-water is very useful; indeed, where the bark is healthy is beneficial thus to wash the trees, as many eggs of insects are thereby destroyed.

TO MANAGE HEN MANURE. Now that the cold weather is approaching and farmers shut up their hens more than

GRICULTURAL

shut up their hens more than in warm weather, a few hints on the best way to manufacture hen guano or compost may be appropriate. The first thing is to provide proper reservoirs for the manure.—Old barrels are just the thing, but strong They will soon decay goods-boxes will do. They will soon decay and be useless unless protected with oil and gas tar. Coating them inside and out with light crude petroleum will fill the pores with the oil, and make them as good as cedar for durability; but if the contents are likely to be moist, gas tar inside will be better. The number of these barrels must correspond with the number of hens. Then, if the weather is dry enough before freezing up to secure a quantity of road dust, fill all but one with the road dust, which is the very best absorbent you can get, and if dry, the barrels may stand anywhere under shelter without the freezing of the contents. If dry earth or dust cannot be obtained, the next best is finely pulverized soil which will, of course, contain a good deal of moisture and must be kept in barrels or boxes in the cellar, so as not to freeze.

If you can procure a quantity of charcoal dust, it may be mixed with dry coal ashes, and the mixture will make a good absorbent. Dry sawdust will do, but is not so good .-When road dust or soil is used, the more clay it contains the better it will be as an absorbent, and the less in quantity will be

needed. Now, having your barrels all ready, the rest of the operation is simple and easy. All you have to do is to place a stratum, say an inch or two, in the bottom of the one empty barrel and then throw in the cleanings of the hen-house, then another stratum and another layer of cleanings. The thinner each layer of the two is, the more perfectly they will become diffused together in stand The precise quantity of each is not very essential—only you must have enough absorbent to hold all the volatile parts of the hen manure, of which you may usually judge by the odor, which may be corrected by adding more of the absorbent. Proceed in this way with each successive layer .-Next spring your barrels will be filled with a very powerful and most valuable man

You may add to its value by pounding and cracking up fine all the refuse bones you can find, by means of a stone-mason's hammer or an old axe—placing the bones to be broken on a solid flat stone, and encircling them with a wide hoop to keep them from flying off when struck. Sprinkle the frag-ments of bone among the layers of manure, which will cut and work them down. part of the broken bones may be left for the hens to eat with their food, and these will be manufactured in a more perfect manner into bone guano.

By a little care and timely attention you will secure a supply of manure the value and quantity of which will surprise those who first make the trial. All you will have to do in spring will be to pulverize and work over the mass, so as to be evenly and finely applied .- Country Gentleman.

BOOKS AND PAPERS ON THE FARM.

Book farming has often been held up to dicule. While it is true that farming from a knowledge gained from books, without practical experience, has generally failed of success, it is also true that the best succes in farming is never attained without the knowledge which may be gained from books and papers. Practical experience, accurate observation and close reasoning must go with such knowledge, and the two must go together in order to make the best success.— The manufacturer, the merchant, in short the successful man in any business is he who with good judgment gains a knowledge of the operations and experience of others engaged in the same similar lines of business, and profits thereby. Such knowledge is chiefly and most readily gained from books and papers.

The successful farmer is the reading one.

in which we live. It has been said that 'an agricultural community without papers and books adapted to its varied interests, is like a ship at sea without compass or rudder.'-Every one who has had an opportunity to observe various portions of our country must surely have noticed the wide contrast often seen in the condition of communities not very widely separated from each other, and also that the greatest degree of prosperity is always found accompanying the greatest degree of intelligence. In the reading community will always be found more money, better houses, richer lands, better tilled farms—worth more per acre, and in every respect a better social condition than will be found in the community where books and papers are not generally and freely read.

An enterprising, intelligent, reading farmer who settles in a backward, non-reading community soon raises the value of his own land, and also to an extent the value of his neighbor's land. He attracts the attention of other enterprising farmers to the neighborhood. A farmer cannot afford to do without books and papers adapted to his varied interests, and more than that he cannot afford to allow his neighbors to do with out them, but should use his influence in all suitable ways for their improvement in this respect, inasmuch as the advancement of the mass is the advancement of the individual. Dr. L. D. Morse, in St. Louis Journal.

LIME IN SOILS.

Lime is very abundant in nature, being found in all fertile soils; indeed, as it enters into the composition of every kind of plant, we may safely conclude that it is necessary to

It is an oxide of the metal calcium, posses sing basic properties; having a great affinity for moisture and carbonic acid, on exposure to the atmosphere it rapidly becomes a hydrate, and finally carbonate of lime, in which state it principally exists in soils, though it is also found as sulphate and phosphate. From the earliest time lime either as carbonate or oxide From the earliest time lime either as carbonate or oxide has formed an important dressing for all kinds of land; whenever new land is brought into cultivation, or old pastures broken up, quicklime should be applied, whether the soil be stiff elay or light sand. We are better acquainted with the action of quicklime than of the carbonate, owing to its having engaged more attention from the chemist; but it is reasonable to suppose that the ac ion is similar in both cases, only much more rapid and effective in the former, and therefore its application is to be preferred. As much less is required. the expense of burning is compensated by the saving in labour.

Much difference of opinion still exists as to the action of lime; some chemists would limit its effects to vegetable matter only, of ers confine its action to the decomposition of miseral matters, while a third class look upon it principally as a manuring substance. We be-lieve its value is due to all three causes. That lime has a most beneficial effect on inert vege-table matter is clear, from the advantages which follow its application to peaty soil; that inert vegetable matter exists in soils that have been long in cultivation and frequently manured is most certain; and that lime would in such cases prove as fertilizing as a dre sing of manure seems reasonable to conclude; but of course as its effect is destructive and in this sense dependent upon the presence of vegetable matter, it can never be substituted for

manure. Its action consists in reducing to an available form those substances which have not been already absorbed by plants on account of their insoluble condition. This, it is now generally believed, is effected by the gradual reduction of the humus into its ultimate products, carbonic acid aud water, and possibly amnonia or nitric acid; the nitrogen of the atm sphere uniting with the hydrogen set free in its nascent state. During this process it is probable that various organic acids are formed, passing rapidly one into another without entering into

plants as such. Lime removes the acidity often found in vegetable soils, either by destroying the or combining with it to form an organic salt. —
Were the action of lime restricted to vegetable matter only, it could not fail to prove a most valuable application, but its relation to mineral matters in the soil is perhaps more important still. In most stiff soils the alkalies are found united with silica and alumina in certain proportions, mostly insoluble, aid, the efore, useless. Rain-water containing the efore, useless. Rain-water containing acid might gradually dissolve out portions suf ficient for a natural condition, but inadequate to the artificial requirements of cultivation. Lime appears to possess the power of setting free the alkalies and magnesia from their in soluble condition, probably replacing them, and It is only by reading that he can keep sufficiently posted up with the times, and be prepared to cope with the spirit of the age some means not yet clearly understood, some tario; the settlements around Fort these substances are added to the soil and west of the White House Plains, where proportion of the farmers have come from the spirit of the age some means not yet clearly understood, some tario; the seed was put in as usual and what seems rather extra rdinary is that when

possesses the property of fixing them as insoluble compounds, causing their union when those very substances from which it had previously displaced them. Any attempt at explanation of these remarkable changes would be out of place here; but should the present discoveries be confirmed by further investiga-tion, a most important fact must follow, viz. tion, a most important fact must follow, viz., the advantage of repeated applications of small quantities of lime, and the wastefulness of the old system of heavy dressings. Lime enters into the composition of most crops, and the quantity required for this purpose isbut small, and the natural supply in most soils so abundant, that we can hardly attribute the effects of its application to this cause

effects of its application to this cause.

Fom all these facts we should expect to find limestone soils a very fertile class, and when the other essential elements of fertility are present, such is the case. We are not certain that lime as carbonate acts in the same manner as in the caustic state; that its application to soiis light and heavy, mineral and peaty, has been faund beneficial is undoubted. Its influence may partly be ascribed to physical causes making stiff clays more workable, sands more absorbent, and giving firmness to peaty soils.

- Michigan Farmer,

AN INCH A YEAR.

A Minnesota farmer gives, in the St. Paul Pioneer, his experience of plowing a field for wheat one inch deeper every year, The first year he plowed the land four inches deep, and harvested seven bushels of wheat to the acre. The next season he plowed one inch deeper and took off twenty bushels per acre. Continuing to plow one inch deeper the next year, he harvested thirty-one and a half bushels. He says

in conclusion: Last fall I did not go down for the extra inch. I feared if I kept on until I got down 15 or 20 inches, the straw would grow 18 or 20 feet high, and that won't stand the storms of

Minnesota; but if we want long straw and heavy wheat we must plow deep. One inch deeper every year is plenty, until the proper depth is reached, and if this rule is followed

strictly our farms will be in good condition many years hence." SUBSOILING LAND.

For the thousandth time, almost, we are asked by a correspondent if we believe in subsoiling land, he stating that he "turned over some stiff clay loam, twelve inches deep, last spring, and his crop upon it was vastly inferior to that on the land that had not been plowed more than four inches deep. But, good friend, you did not subsoil your land at all. You trench plowed it—turned the subsoil to the surface; and that subsoil turned to the surface in the spring was probably sodden with water, heavy, sour, and as unfit to germinate seed and promote the growth of plants, nearly as if it had been crushed quartz.

Had you trench plowed the land as you describe in the fall, the result might have been different; yet it might not have realized the first season all you anticipated from your But had you enterprise and industry. really subsoiled it in the spring, that is, run a lifting or subsoil plow in the furrows after you had turned the soil four inches deep with the surface plow; lifting and breaking the soil, without inverting it or throwing it to the surface, to the depth named, we know, so far as one can know of similar actual experience, that the result would have been far different, and you would never have questioned the utility and profit of subsoiling such soils. -Ex.

PROFESSOR BELL'S EXPLORATION IN THE NORTH

Prof. Bell travelled west a distance equa to about four times the breadth of Manitoba and also visited the great plains between the north and south branches of the Saskatchewan, and the touchwood Hills. He speaks in glowing terms of the Agricultural Capabilities

of the Province of Manitoba and the country

westward to Fort Ellice, and also the regions lying to the north of the Qu'Appelle river. The district of the south to the Qu'Appelle and South S skatchewan is not so fertile, nor does the climate appear to be so favorable for most crops. The best farmers in Manitoba are of the

opini n that if every one sowed as usual in the years threatened with grassh ppers, the loss to each would be slight; whereas, according to the present custom, if only one man say in a parish, has a crop planted, a l the grasshop-pers or black birds in the neighborhood flock to this spot and completely devour it. summer the grasshopper plague was confined to the old settlements around Fort Garry, west of the White House Plains, where a large proportion of the farmers have come from OnA Splendid Harvest

of both grain and green crops was obtained. In the neighborhood of Prairie Portage, spring wheat, whi h is the only kind yet cultivated, yielded from 30 to 45 bushels per acre, barley averaged about 50, and oats 75 bushels. The soil is so fertile. mellow and deep that beets, carrots and mangle wurtzels grow to an enor-length and size. Potatoes were an immense crop and for both size and quality Prof. Bell says he never saw them equalled in any other part of the Dominion. For the last two years Mr. Mc Kenzie has raised between 200 and 300 bushels of onions on a small garden patch only a few rods square.

The Cattle of Manitoba, Mr. Bell says, are far superior to

the horse, the original stock of the former having been brought from Scotland by Lord Selkirk's followers, and the latter from Lower Selkirk's followers, and the latter from Lower Canada. The native breed of horses are, how-ever, well-suited to the wants of the Country. Mr. Bell's horses were driven from 25 to 30 miles, with loaded carts, over the unbeaten prairie every day, except Sundays, and improved in condition, although the only food they got was the grass they picked up at night and during an hour or two's rest in the middle of the day. All visitors who pay any attention to these things, are struck with the superiority of the cattle and the low prices at which at they may be bought, compared with the horses. The prairie grass of the north is admitted to be more nutritious than that further south, and horses turned out to winter will fatten upon it, whereas they cannot sub-sist at all in Dakota and Minnesota. In such a great region, where the natural hay and pas-turage are practically unlimited, and where grains and root crops flourish so well, and where experience has shown that horses thrive with. out care, there appears to be no reason why the finest breeds should not be raised in great numbers. Mr. Bell thinks our North West numbers. Mr. Bell thinks our North Territory is destine to be the great horse-producing region of the continent. Sheep are lso found to do well in Manitoba, especially where the prairie is of a rolling character. The country is comparatively free from wolves, which follow the buffalo and are therefore now

Any attempts which have been made towards the

Improvement

of the live stock or crops have been within the last few years and have met with very flourishing condition, and the annual exhibitions which have been held in the beginning of Oc-tober, the last two years, have been highly creditable to the new province; the specimens of garden produce of all kinds, as well as of staple crop³, proving beyond doubt the fertility of the soil and the excellence of the climate.

NOTES FROM COLUMBIA CO., WIS.

Editor Western Rural: - Another year of drouth has recorded its effects on our agricultural products, producing the following effects in this section. Spring-wheat is considerably injured for want of rain to check the ravage of the chinch-bug from time of being in the drought state till matured.

Corn on light so on well-manured and clayey and warm, moist soils, in most instances, it is splendid. There are fields of white Dent that will average two good ears to stalk, there being from one to

oats sown on rich, moist soil as they ought to be, yield firty to fifty bushels per acre.

Rye good. Buckwheat a failure. Peachblo... potatoes on rich, clayey or mucky loams, and well tended yielded a fair croq, but as the were not planted thus, the crop was a failuret Early Rose partially came to the rescue, by yielding considerably on light soils, and quite

heavily on heavy soils.

The early cold rains gave the sorghum pots too shallow lateraly growth, so that when the dry weather had set in, the stalks were too weak to bear development to accomodate itself to weak to pear development to accommodate itself to the change by sending down roots for moisture, hence one of the most promising crops for years, was shriveled and nearly ruined. Hops only about one fourth of an average

Wheat is ninety, cents; rye, fifty-six cents; cern forty cents; buckwheat, \$1-00; pork \$ 3.65 to \$4 per c vt beef, (dressed.) four to five cents; on foot three cents; live hogs, three cents; apples,\$ 3.20 to\$ 4.50 per barrel; hops, thirty-

I agree with a remark I overheard that wheat will be worth \$1.50 per bushel before next June, and dressed pork five cents a pound before the last of March coming.

We had a young Winter commencing Oct. 26, that passed off by only reminding us, with

14° above zero, that we must be prepared, for Old Boreas was marching on.—Correspondence Western Rural.

Two dessert spoonfuls of pulverized sulphur mixed with soft food and give to fowls two or three times a month is highly commended by some poultry bre ders as promotive of good health and freedom from vermin.

NEW BRUNS The Colon

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in discussing the Province wise of par There are in the Prov than the wh Choice bree have left the and their o chance to co New Kinc talk to stra

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have left their impress upon the present stock, and their owners would have an excellent

chance to compare notes. The residence of New Kincardineshire and Hellerup could

talk to strangers of their rise and progress,

and not a few visitors would take away with

them a fuller appreciation of the abounding

natural resources of our provincial North.

And bye and bye when the Intercolonial

road is completed. Chatham may expect its turn. With a railroad will commence

an active development of the great resour-

ces of Northumberland. The travellerthrough

the northern Countries is struck with the regular and even ploughing for which the farmers there are famous, and the Napan district has already gained for itself enconiums in this and other name of the state of the s

iums in this and other respects, and when the time comes for the Board of Agriculture

to gather together the various industrial re-

sources of the North Shore people by the banks of the Miramichi, there will be much

to admire and a more willing appreciation

according to a portion of New Brunswick

that has thus far labored under many dis-

AGRICULTURE IN GREAT BRITAIN.

New York. By John R. Dodge.

From an address before the Rural Club of

England, Scotland and Wales, known to

gather has Great Britain, a manufacturing

and commercial country, in which but six per-cent, of the population are actually em-ployed in agriculture, furnish an example of

the cleanest culture, the most rational pro-

cesses, the most extensive use of money in

permanent improvements and in fertilization.

and the highest rate of production known

to the industry of Europe and of the world. The total area of Great Britain is 56,964, 260 acres, of which England comprised 32, 590,

397—the whole scarcely equal to the area of two of the Western States of average size. The population to be supported, 26 millions,

is one in rather more than two acres; in England one to 1½ acres are yet little more half of the total area, 31,000,000 acres is

under cultivation, nearly 24,000,000 of which is in England proper. A key to agricultural prosperity is found in the fact that not ex-

ceeding one-third of the occupied area is allotted to exhaustive crops as the cereals,

while two thirds are given to restorative crops, as roots, clover and grasses in rotation, and permanent pasture. The proportions

last season were, for the whole country, 30-

9 per cent in grain crops, 11.6 in green crops,

14.5 in clover and grasses, and 40.6 in per-

of British agriculture; the growing of wheat

is the consideration of next importance.

Both cattle and sheep are well known to ex-

cell all others in meat production, attaining

greater weight in a given time than continental animals. The official average of net weight of course of British cattle of all ages

is 600 pounds; of cattle imported, 500 pounds;

of British sheep and lamb, 60 pounds; of im-

ported, 50 pounds. The present tendency

is to the increase of live stock, and the di-

mumutin of the live grain area. There has been a decrease, since 1850, in the breadth of

wheat, oats peas, and beans, and an increase

of barley, roots clover and permanent pasture, the reduction in "white crops," which now average, 7,500,000 acres, exceeds 1,250,000

acres; wheat now occupying a little more

than 3,000,000, or about one-sixth of our wheat area, although the product sometimes exceeds one-third of ours. The

decrease has been about ten per cent. in

twenty years, not in product but in acreage,

the yield having increased 1½ bushels, and five bushels in 100 years, being now 28 bushels, the largest national average. The supremacy of turnips has therefore not weak-

ened in the least, and the importance of

sheep which suffered some decline during the area of low prices for wool in 1867, is

The production of meats is the first object

manent pasture.

was obtained. Portage, spring yet cultivated, er acre, barley bushels. The eep that beets, to an enore an immense lity Prof. Bell l in any other e last two years een 200 and 300 den patch only

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per bushel before pork five cents a rch coming. commencing Oct. eminding us, with must be prepared, ng on.—Correspon-

pulverized sulphur ve to fowls two or ly commended by promotive of good

NEW BRUNSWICK AS A FARMING COUNTRY. each in England, £14 in Scotland, and £10 in Ireland; that one-third of the English The Colonial Farmer. Frederickton N.B. sheep and one-fourth of the Scottish are anin discussing the question of the locality of the Provincial Exhibition, speaks in this wise of parts of districts of the province: nually sold at about 35s. each. The tendency has since been to still higher prices. Not only is the proportion of stock large, both to area and population, but the extra size of animals and extra feeding contribute both quantity and quality to home resources of fertilization, and afford a valid reason for There are but few finer farming districts in the Province, or even in the Dominion, than the whole region around Woodstock. Choice breeds of cattle and sheep have been introduced from time to time, which must

enlarged production.

DRAINING. One of the most serious drawbacks under which our agriculture labors is the insufficient capital employed in it. No other in dustry is carried on in such a hand-to-mouth manner as is our farming. It is very much as though the present commerce of the country were carried on upon rafts, or the old-fashioned galleys propelled with oars, instead of the modern clipper or the costly steamer of huge proportions; or by means of the ancient caravan instead of the modern railroads. Such a system is not conducted to profit in these days, and our farmang is con-fessedly not so profitable as the other indust. ries. Our plan is not yet that of producing the greatest effect from the least expenditure of material, but, on the contrary, it is that of making up by quantity what we lack of quality. Our average yields of crops are very low; we therefore cultivate more ground. The consequence is we expend twice or three times the labor that is really needed to produce the required result. This unfortunate system has covered the Southern States with abandoned "old fields," for there has been pursued to a greater extent than to the north and west, but even here its effects are seen in fields half covered with crops which struggle for existence against

much adversity.

But the misfortune of the affair is that we cannot remedy this evil without commencing at the very bottom, and that our farmers are very loth to do. They cannot be made to see that a field of ten acres should and may bear a crop equal to that now grown upon twenty acres by the expenditure of an increased amount of labor at the first, or in other words, by the investment of more capital. It is difficult to convince them that by expending twenty days' labor upon a piece of ground, in draining for instance, an annual saving of ten days labor is gained, not upon this particular piece, but upon another piece which need not then be cultivated because the drained piece is increased in producing capability fifty per cent. That one drained acre will produce as much as one and a half or two, or perhaps three acres undrained. But it is a well-known-fact, it has been beed exemplified thousands of times without one single failure, and if we can by this effort induce any of our readers to try for himself the result of an experiment upon oue single acre, we are assured that he will repeat the process to the utmost of his

means. There are some lands so admirably under drained by natural that artificial methods are not needed. But the great majority of lands absolutely require this improvement for the complete development of their fertility; and as to the rest, it is doubtful if the greater part would not be improved by it to a sufficient extent to make the outlay needed a judicious one. But to indicate those lands which absolutely need drainage, we may mention the following kinds:—All clay lands of whatever character; all lands with clay subsoil; all lands with compact gravel beneath them, and generally, all upon the surface of which water will remain for twentyour hours. It is very evident that their fare few lands that are not included in this

The purpose of drainage is to remove the water held in suspension in the soil, not the moisture' but the superfluous water. means whereby this is done is to dig ditches of such a depth and at such a distance apart that this objectionable water may rapidly find its way into them. The effect of the operation is to lower the surface of saturation—called by civil engineers the water table—to such a point that the roots of plants are not brought into contact with the stagnant water, and their growth thereby arres ted. The disappearance of the water from the stratum of soil above the drains leaves innumerable vacancies and interstices which now steadily advancing. There are now about 28,000,000 sheep to 30,000,000 acres of productive area. It was recently assumed, on good grounds, that one-fourth of the cattle were annually sold at the rate of £16 nitrogen and carbonic acid, the first are instantly occupied by the atmosphere,

the soil is the most important and effective aid to agriculture. Among other effects that of the consequent hastening of the growing season in spring is not to be over. looked. The departure of the frost from the ground leaves it in a sodden condition, in heavy farm operations are impossible, and many weary days of waiting and watching are spent by the farmer before he can put in his plough or his seed, Then in many cases favourable opportunities of preparing the ground and sowing and planting are lost, and the summer season is shortened by several days. Then, too, the tender germs of the sprouted seed, if indeed the seed ever sprout, is destroyed by the ungenial cold and wet, drowned in fact, and replanting is made necessary. The ill effects of laterplantting we need not enumerate, but they are all felt in these cases to their fullest extent. In addition to this, the season is also equally shortened at the other end, and the growth of fall farm crops is arrested by the early sa-turation of the soil by the fall rains. In this condition of weakness and suspended animation the frosts arrive and the young plants are "heated" out of the soil and cast wrecked and ruined upon the surface Thus both spring and fall are shortened, and the season in which growth may occur and work is done is curtailed at both the begin. ning and the ending. The effect of draining is to obviate all this and render it impossible. The promise of seed time and harvest is only fulfilled to the letter to the farmer whose land is drained, all others enjoy it but with limitations. The seasons may come round, but it is only when he is fully able to seize upon their opportunities that the farmer can read all their promises. There has been enough pointed out in this article to enforce the need and the advantage of draining, and on a further occasion we propose to enter upon the methods and cost of doing it—N. Y. Times.

ENGLISH PRIZE FARMING.

It is not from English farmers who merely rent their farms that we hear the complaint that their business is not profitable, but from the owners of American farms; yet these English farmers each every year pay large sums for rent, and still larger sums for permanent improvements upon the land, from which they derive bnt a temporary benefit. At the same time we own our lands, and in our estimate of profit the interest on their cost rarely enters into the calculation as a charge upon the receipts; yet the complaint is general that our farming does not pay. Possibly there may be something in our want of good management, and a comparison with the methods followed by English farmers who have been competitors for the prize of \$500 offered by the English Royal Agricultural Society, might help to point out the weak spot. The farm which was awarded the prize was one occupied by Mr. W. G. Walgate, of 400 acres, of which 120 are in grass. rotation is one of five years, viz: turnips or other roots, grass grain (wheat oats or barley), clover, wheat and oats, or peas and beans. The slock consists of 160 heavy long-wool sheep, or as many more as may be needed to consume the roots; a large number of pigs, many of which are purchased for fattening, and not reared upon the farm; 40 bullocks for fattening, and 12 horses. The labor costs \$8 per acre. All the manure made goes to the root crops, with 600 pounds of bone dust and 400 pounds of superphosphate per acre in addition. The consumption of oil cake and other purchased feed is immense; the bullocks eating 6 pounds a day while grazing, with 7 pounds of meal per day added when finally fed on turnips; the manure is therefore very rich. The wheat is sown in drills 9 inches apart, and 8 to 10 pecks per acre is sown. This crop is horse-hoed, also handweeded. The clover fields are sown with 14 pounds of white and 7 pounds of red clover seed per acre, with a little Ridgegrass (Narrow-leaved Plantain) mixed. This farm is said to have been evidently under profitable management, and on no other farm was there such an excellent lot of stock in the fields. Mr. Walgate has been a tenant of his farm for 25 years, and had built the greater por B. X. in Cultivator.

of which renders particles of the solid subsoil, and perpares and fits them for plant food, while the latter directly furnish the most important elements thereof. While stagnant water is present in the soil these absolutely necessary agents of plant nutrition are forbidden to enter, nor, could they enter into it, would they be otherwise than inert and inactive. This aeration of the soil is the most important and effective initiation was a magnificant wheat field. nificient wheat field.

nificient wheat field.

Now in comparing the condition and management of these farms with that of the general run of our farms, there are a few leading points of difference. They are the root culture, liberal feeding of cattle and production oi rich manure, clean cultivation of even the wheat crop. Heavy manuring at the commencement of the rotation with two head arous in succession beaus with two hoed crops in succession, beans (which takes place of our corn) and turnips, and a clover crop between two grain crops. An abundance of labor is rendered necessary by this system of management. It is not necessary to point wherein we fall short in any respect; it speaks for itself. There is nothing here impossible of achievement by any American farmer-American Agriculture

THE THEORY OF FARMING.

I am well aware that farmers, as a class are opposed to theories, for the reason that many theories cannot be practised by a large majority

The theory that I have is an old one, and slso one that can be practised by every farmer, poor as well as rich. I will divide it into two heads; First-

raising grain. For corn, manure a sod early in the spring, plow just before planting, and the cut worm will work on the sod instead of the corn. Never pasture corn ground or the cut-worms will work on the corn.
Plant no more corn than you can work well,

Plant no more corn than you can work well, or you will lose in the eud.

The corn should be followed by cats, and by wheat. Top dress with well rotted manuer for, wheat, and the next spring, seed down to clover and tim thy. By following this we we will be sure of good crops and the land will be getting richer.

Second — In record to raising stock, keep no.

be getting richer.

Second.—In regard to raising stock, keep no more than you can keep right, and keep the very best stock. Many farmers patronize the chapest stallion whether he is the best or not, and the same way with other stock. This is certainly wrong. It just costs as much to keep poor stock as good stock, and good can be sold at any time and always at an advantage, while poor stock is hard to sell and; is generally disposed of at a loss. Never pasture. I know farmers that have always pastured, will be hard to convince that it is not the true way of farming. of farming.

They argue that stock does better and are less truble. It has been proved that stock does just as well, if not betterlto be kept up the year round. I admit it is less trouble to pasture, but without trouble and hard work, and good management, we can never enrich our farms and become successful farmers. Stock can be kept on a great deal less when kept up. But the great point is manure. Those that have never tried soiling, have but a faint idea of the amount of maure that can be made by keeping stock up; and with manure we can always have good crops and good crops only, pay.—Cor. FarmJournal.

CHANGING SOILS PERMANENTLY.

Every farmer and gardener knows that manure does not last a great many years in the soil, and that he has to manure again: and that a farm or garden in fine condition, if not fed with fertilizers, will run out after a while. But I have tried one way of improving the soil that is premanent, and the improvement, I calculate, will last a hundred years at least. My soil is heavy, too heavy for gardening, and I have made it lighter by drawing on sand in winter, from a knoll com-posed mostly of sand. When the horses and hired man had little else to do, I had them hitched to the sled, and covered a part of my garden with a stratum of sand two or three inches thick. In a year or two, when it became well mixed through the soil, I should like you to have seen the crops that grew there! I measured a crop of carrots at the rate of 1 200 bushels per acre. This was nearly twenty years ago, and is now the best part of the garden. It don't exhaust. The sand stays there— it cannot evaporate. It would be too much to draw sand for a farm, yet I think it will pay well on some particular spots for root crops. If the sand is handy two men and a team will cover ten square rods in a day, costing say sixty dollars per acre, and well worth it on a small scale. Have not some of your readers sand knolls should like you to have seen the crops that Have not some of your readers sand knolls that they could get at for winter drawing!



Uncle Tom's Family Picture is finished at last and will be sent off to those who subscribed for it, and now Mr Weld says that he will send one of them to

every one of my nephews or nieces who will send in two new subscribers to the FARMERS' ADVOCATE. This is a very good offer, and I want all of you to try to avail yourselves

The prize for the best collection of forfeits is awarded to Nina M. Knapp, of Melbourne, P. Q. She sent in a very fine collection, also the description of "A Merry Evening in the Province of Quebec," which you can see in another column. Nina well deserves the prize, and if she ever comes up my way I want her to visit me and I will get together a lot of young folks and show her what pleasant even-ings we can pass in Ontario. She need not ings we can pass in Ontario. She need no think, however, that I will miss it as "Archie

Rose Widdifield says she has not forgotten me, although it is so long since she wrote. As Rose sends in a lot of new subscribers to the ADVOCATE, I forgive her.

Willie A. Rutherford sends the following

174. -My first is in pike but not in trout, My next is in nose but not in trout,
My next is in nose but not in snout,
My thi d is in young but not in o d,
My f arth is in wet but not in co'd,
My fifth is in heart but not in soul, My sixth is in saucer but not in bowl, My last is in fast but not in slow. My whole is a part of the State of

175. A room has eight corners, and there is a cat in each corner. Seven cats before each cat, and a cat on every cat's tail. Tell me how many cats there are in the room. MICHAEL STEELE, Avonbank.

Quebec is ahead! I have a ready told yo about Nina; now here is another Quebec niece who can write a good letter. of that I do not appreciate my old nieses and nephews in Ontario, but I mean in new ones.

Stanstead, P. Q., Dec. 20, 1873. My Dear Uncle Tom .-

I take it for grant d that ou'll adopt me. You see how sorry I shall be if you don't. I have been your niece in spirit for some time. and now I want to be acknow edged as one of "the amily." I'd like to see that picture, that family group. I'd have liked to send you my picture, but I don't think you'd want such a little homely pug as me in it, would you? I'm 13. Please excuse me for not being older; I can't help it. I'd like to send you some for feits if I wasn't so stupid. You know I can't promise to be a very useful niece to you, cause folks say I haven't much complication in me

no, I mean application.

Please don't de pise me because I live in the
Lower Province, but please just speak to me
in your nice column. If you don't I'll be a very hard child to manage at home, and ma will won ler "what's got into the child," cause I shall have the blues awful and I will sigh and say sadly—"disapreshated merit." I am as ever, your O very fac off niece,
Cora Hibbard.

P. S.—Pa likes the Advocate so much. P.S. No. 2.— Are you any relation to "Uncle Tom's Cabin?" That's a conundrum. P. S. No. 3. I guess my big sister cou'd write you some games; she knows lots. I'll

P. S. No. 4.-As for forfeits my big brother

says going to Rome is the best forfeit, but he's a humbug, ain't he? How tired you must be of me. I will now close. C. H. I hand Cora over to Hattie Haviland, of Ingersoll. I wan't Hattie to send me an answer to this letter of her cousin away down

Lizzie Forbes sent a very nice collection of forfeits, and a pleasant letter along with

176.—Why is a talkative man like a pane of lass? Amelia Carr, Compton, P. Q. Willie E. Flewelling, Barneth, sends a new geographical puzzle which I may use some time.

177.—What is the difference between a summer dress in winter and an extracted tooth? 178.—Why do women talk less in February than in any other month?

MAGGIE C. MILLER.

-My 1, 2, 3 is a beverage,
My 2, 3, 4 is part of the head,
My 2, 3, 1 we all do.
My 4, 3, 1 is a quadruped.
My whole is a drop of water.
C. J. ATKINSON.

When is a nutmeg like a prison win-180. LIZZIE ELKINGTON, dow?

181.—Why are 20 hundred weights of coal like a cracked brained mortal? NELLIE V. McGANNON. Emma A. and Francis Nelson, of Ottawa, send answers to last month's puzzles and some

182.—Take away my first letter, take away my second letter, take away all my letters and I am still the same. EMMA J. GILL, Medonte.

A MERRY EVENING IN THE PROVINCE OF QUEBEC.

Dear Uncle Tom,-

new ones.

I thought you would like to hear about a party I attended the other night. It was a lovely evening, and as our sleighs dashed along over the snow, the merry bells appeared to enter into our fun and echo back our thoughts of fun and frolic.

We arrived at last at the old homestead of Farmer Brown. After having divested ourselves of hats, caps and shawls, we were ushered into a large parlor nearly filled with old and young, all showing by their bright and amiling countenances that they were bent on fun and plenty of it. After a little music and friendly chatting, Mr. Brown suggested round games, and you may be sure we all entered heartily into the idea.

We first played "Mil-ler," then "Blind-man's Buff "and when we were pretty nearly out of breath, Hattie proposed Autchen Furniture.' suppose, Uncle Tom, you know what that is, but for the benefit of my cousins I will describe it.

Hattie, calling herself cook, asked each one what he or she would be. Joe he or she would be. Joe was vater; Susie, fire; Bob was poker; Charlie, fryingpan; E la, pot; I was gridiron; Old Mr. Brown, spoon, and old Mrs. Brown, strainer. Hattie called out "water, water, water, "three times, and as Joe did not answer "water" before she was through. she was through,

he had to pay a forfeit
and stand up and take her place. Then he
called out "poker, poker, poker." Bob was
too busy watching Ella and Charlie, who, to Bob's chagrin, were seated close to one another; so, as poker did not answer in time, he was obliged to pay and take his turn. Bob shouted "frying pan, frying pan, frying pan," but it was such a long word and Charlie was on the watch, and said "frying pan" before Bub, was through so Bob had to the fore Bob was through, so Bob had to try again. He determined not to fail this time, so he called out "change, kitchen furniture when everyone had to change seats and he had a chance to try for one. Then there was a which everyone had to change seats and he had a chance to try for one. Then there was a rush. Off went Ella for the rocking-chair, which Mrs. Brown had vacated, and off went Bob and Charlie for the seat alongside. Mischievous Ella dragged it away just as Charlie was going to sit down, and Bob gained the coveted position and was for the moment happy.

happy.

Charlie, who was up, commenced "poker, poker, poker, but before he had fairly started it, Bob was rep ating it and thus held his position.

All the rest of us entered into the fun of the thing, and just as soon as we were called up we would go to the other side of the room. just as if we were going to call spoon, or strainer, or fire, and suddenly would say "poker, poker, poker," and so poor poker would have to start.

When we had secured enough forfeits, Deacon Jones wrs chosen 'udge, and he really looked like on as he sat in the centre of the room. He gave gravity to the proceedings, for his weight is about 200 pounds.

The good old Deacon could not at first think of any forfeits but "Going to Rome," and a "Kiss in the Corner," and I believe he wanted to go and perform the operation himself, but after a while he got warmed up a little and told 4rchie to "make a bob-sled" with Alice and put four pins in it; but Archie did not know how to do it, so Ned jumped up to show him how. He got down on one knee with Alice on the other, telling Archie all the time to look how it was done. Then all at once, when he was not looking, Ned put the four pins on Alice's lips. So Archie got cheated out of his bob sled by not knowing how it was done, but I guess he will know next time, don't you? What do you think the next forfeit was?

A kiss Yankee fashion; so Maggie got up and pretended she was going to kiss Fred, but she ran away and kissed Harry instead, which so exasperated Fred that he caught her and was determined not to be fooled, but I think he had a pretty hard time of it, as he disappeared soon after to comb his hair and arrange his necktie, his ears looking much the color of

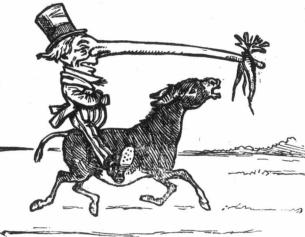
Louisa now proposed "Going to Jerusalem" which so astonished old Aunt Jerusha that she opened her eyes and put on her spectacles, saying she would like to see Jerusalem, as she

saying she would like to see out the had heard it was a pretty place.

We arranged the chairs, and Ada, going to lively piece. We all the piano, struck up a lively piece. We all marched round the chairs, when all at once the music stopped and each one scrambled for a seat. When we looked to see who was going to Jerusalem, there stood Aunt Jerusha as large as life. Dear old lady! she laughed until the tears ran down her face. "Sakes alive!" said she, "how quick that 'air thing did stop."

did stop."

After that we played "Fish, Flesh and Fowl." Maude could think of nothing to say but "Rooster," no matter whether it was fish or what, and George kept saying "Lobster" for fowl; and poor Pob was trying to think of turbot, but he was too late, so he had to get up after all from that dearly bought seat beside El'a. I felt like saying to him what Arthur did when they were at school in the class reading. The teacher did not notice when he came to the word "Philosophy" and could not pronounce it; Bob nudged Arthur to tell him, but Arthur was not quit clear about the him, but Arthur was not quit clear about the word either, so he said "Skip it, Bob." But Bob, thinking that was the word, went on reading "Skip-it-bob"—which, of course,



That man NOSE too much for his donkey.

nearly sent the children into fi's of laughter. I must not forget to tell you what a mis-take Mrs. Smith made at the party, when her daughter, Jennie, brought her beau to intro-duce him. His name was Augustus Riley, but Mrs. Smith did not hear quite as well as she used to, so when Jennie said "Mother, this is Mr. Augustus Riley," the old lady said "Bustus Bi/ey! what a funny name."

I need scarcely tell you that there were a great many taken with sudden coughs and were obliged to use their handkerchiefs freely, their faces al the time looking very red. Now, Uncle Tom, I have written you such

a lengthy epistle that I will not finish about the party, but will write again next month. Your loving niece,
NINA.

Melbourne, P. Q.

Uncle Tom's Scrap Book.

[The names under the clippings show which of my nieces or nephews sent them in.]

DEACON DODD AND BETSY ANN.

Deacon Dodd once feelingly said
About his Betsy, long since dead,
"If ever an angel loved a man,
That angel, sir, was Betsy Ann;
If I happened to scold her, she was so meek"
(Which the deacon did seven times a week) "She'd clap her apron up to her eye, And never say nothin', but only cry." But, ladies, perhaps you'd like to be told That Deacon Dodd, like other men, Waited a year and married again; But he married a most inveterate scold,

And now 'tis the dracon's turn to be meek And he gets well rasped from week to week: But rather than "open his head" he'd burst, He wishes the second was with the first! But, as she's as tough as a hickory-limb, No doubt she'll live to say of him: If ever a saint the footstool trod, That man-that saint-was Deacon Dodd."

A Dutchman thus describes an accident:-"Vonce a long while ago, I went into mine abble orchard to climb a bear tree, to get

some beeches to make vrow a blum pudding mit; and ven I gets on de topemost branch, I fall from the lowermost limb mit one leg on both sides of de vence, and like to stove mine outsides in."

NELLIE V. McGANNON.

As I went into the garden I saw five brave ma ds sitting on five broad beds, braiding broad braits. Said I to the five brave maids sitting on five broad beds, braiding broad braids, "braid broad braids, brave maids."

I saw Esau kissing Kate. The fact is, we all three saw; for I saw Esau, he saw me, and she saw I saw Esau.

THE MAN WE LIKE TO SEE.

Good morning, Mr. Editor, how is the folks to-day For next year's paper I thought I'd come and

Pay, And Jones is goin' to take it, and this is his money here; I shut down on lendin' it to him, and then

coaxed him to try it a year.
And here's a few little items that happened last week in our town,
I thought they'd look good in the paper, an' so I just jotted 'em down; And here's a basket of pears my wife picked

expressly for you, And a sma'l bunch of flowers from Jennie, she thought she must send something too. You're doin' the politics bully, as all of our

family agree. You must keep your old goose quill a floppin,
an' I won't be takin' your time,
I have things of my own I must tend to, good
day, sir, I believe I will climb.

The editor sat in has sanctum, and brought down his fist with a thump,

"God bless that old farmer." he muttered, "he's a regular jolly old trump!"

And 'tis thus in our noble profession, and thus it will ever be still, There are some who appreciate its labor, and

some who perhaps never will.

HATTIE HAVILAND.

DON'T BE AFRAID.

Don't be afraid of a little fun at home, good Don't be afraid of a little fun at home, good people! Don't shut up your house lest the sun should fade your carpets; and your hearts, lest a hearty laugh shake down some of the musty old cobwebs there! If you want to ruin your sons, let them think that all mirth and social enjoyment must be left on the threshold without, when they come home at the proper is progreded as only night. When once a home is regarded as only a place to eat, drink and sleep in, the work is begun that ends in gambling houses, and reck-less degradation. Young people must have fun and relaxation somewhere; if they do not find it at their own hearthstones it will be sought at other, and prehaps less profitable places. Therefore, let the fire burn brightly at night, and make the homestead delightful with all those little arts that parents so perfectly understand. Don't repress the bouyant spirits of your children; half an hour of merriment round the lamp and fire light of a homogeneous perfectly understand. blots out the remembrance of many a care and annovance during the day, and the best safe-guard they can take with them into the world is the unseen influence of a bright little domestic sanctum.

"AND NOW KISS ME." A very pretty and exceedingly modest young lady, the other morning stepped into a well-kn wn music store to make some purchases, kn wn music store to make some purchases, and was waited upon by an equally modest clerk. Throwing back her veil, the lady said "I want Rock Me to Sleep." Procuring the music, the young gentleman laid it before her. "Now," said the young lady, "I want the W ndering Refugee." The clerk bowed, and this was also produced. "And now," exclaimed the purchase smith a leavithing smile. this was also produced. And now, exclaimed the purchaser, with a bewitching smile, "Kiss Me." The unfortunate youth gazed in mute astoni hment. "Wh—what did you say Miss?" he at length found words to ask. "Kiss Me!" ', I ca—can't do it," he gasped in agony; I never kissed a young lady in my life." The veil instantly dropped, and the would be purchaser, hurriedly laying the music on the counter, took a hasty departure. The clerk only recovered after a somewhat spirited explanation with the proprietor, but hereafter, the new composition, "Kiss Me," will be conspicuously posted at the entrance of the establishment.

What relation is a loaf of bread to a locomotive? Its mother. Why? Because bread is a necessity and a locomotive an invention, and we all know that neccesity is the mother of invention.

"Woman is a delusion Madam!" exclaimed a crusty old batchelor to a witty young lady. "And man is always hngging some delusion or another," was the quick retort.

Feb

Take

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Cut u

with son

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with a mixed well, v pieces roll out last tim Bake in secret o that sp must no a knife. One c

plenty o Omle dissolve milk, sea it well t butter of is nicely

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Cut a steep it i bread in half doze together and mill

> table-spo maing m

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boil two butter, o

Take wheat or sour mil molasses It is exce IE V. McGANNON.

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NINA.

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IKE TO SEE.

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goose quill a-floppin, your time, I must tend to, good will climb.

nctum, and brought thump,
ner." he muttered,
y old trump!" profession, and thus

eciate its labor, and never will. HATTIE HAVILAND.

FRAID. le fun at home, good our house lest the sun

s; and your hearts, down some of the re! If you want to think that all mirth must be left on the they come home at e is regarded as only leep in, the work is ing houses, and reckpeople must have here; if they do not rthstones it will be haps less profitable e fire burn brightly nomestead delightful hat parents so perrepress the bouyant half an hour of mer d fire light of a hom e of many a care and y, and the best safe-them into the world a bright little domes-

CISS ME." edingly modest young stepped into a well-ake some purchases, an equally modest er veil, the lady said eep." Procuring the nan laid it before her. lady, "I want the he clerk bowed, and . "And now," exth a bewitching smile, unate youth gazed in Wh—what did you found words to ask an't do it," he gasped a young lady in my ly dropped, and the iedly laying the music asty departure. The r a somewhat spirited prietor, but hereafter, Kiss Me," will be conentrance of the estab-

f of bread to a loco-Vhy? Because bread motive an invention, eccesity is the mother

Madam !" exclaimed a witty young lady. ging some delusion or retort. INNIE MAY'S

Feb., 1874

DEPARTMENT.

I again thank my correspondents for taking so much trouble in writing to

Minnie May's Cook Book.

CHICKEN PIE.

Take one-half pint of sour milk, the same quantity of sour cream, a little salt, two teaspoonfuls saleratus, flour, and mix the same as for biscuit. Roll out a part of it and lay it in a six-quart pan; then take a piece of butter the size of a butternut and roll it into the remaining crust. Have your chickens (two old ones or three young ones) boiled until they are done; season them with salt, pepper and butter, lay them nicely into the pan, put a few slices of crust with them, pour over your gravy, cover, and bake two hours. No more this time, HATTIE HAVILAND.

CHICKEN SOUP.

Cut up the chickens and put on to boil with some pieces of bacon, parsley, thyme, pepper and salt; make your dumplings of two eggs well beaten, with a spoonful of melted butter and a small bowl of flour.—
When well mixed they may be dropped in the soup while boiling. After the soup is the soup while boiling. After the soup is done, add one pint of milk and let it boil well for a few minutes; then dish.

CARRIE J. EVANS.

TART CRUST.

Take six even cups of flour, one cup of Take six even cups of flour, one cup of cold lard and one cup of butter, chopped with a chopping knife until very fine, then mixed with just enough ice water to roll out well, which do until you can't see any pieces of shortening. Fold up small and roll out, then fold small and roll again; the last time roll from the end and cut out.-Bake in a very hot oven. The oven is the secret of nice tarts. There is another thing that spoils them—using your hands; you must not put your hands into them, but use a knife.

C. J. E.

PLAIN CAKE FOR SQUARE PANS.

One cup butter, one cup syrup, three cups flour, half a cup sweet milk, five eggs one spoon cream-of-tartar, half a spoon of soda, plenty of spice. Bake in a square pan.

BREAKFAST DISHES.

Omlet-One dozen eggs well beaten, dissolve half a cup of flour in a pint of sweet milk, season well with salt and pepper, beat it well together, pour in a flat pan in which butter or lard is frying; when the under side is nicely browned, turn it carefully in slices; eat as quick as done as it looses by standing.

EGG BREAD.

Cut a loaf in thin slices, as for table use, steep it in a plate of salt and water have a pan ready with lard frying in it, place the bread in the lard and fry one hour; beat half dozen eggs, and one pint of sweet milk together; place several spoonfuls of the egg and milk over and re-fry until the egg is

MILK TOAST.

Toast to a light brown thin slices of bread, boil two quarts sweet milk, one ounce of butter, one-fourth of a pounds of sugar, one table-spoonful of fine salt; steep the bread in the milk, place on deep plates, and the remaing milk on the toast; eat while hot.

BROWN BREAD.

Take equal quantities of Indian meal and wheat or rye flour, mix it quite soft with sour milk or butter-milk, and one cup of molasses for two small loaves, and saleratus. It is excellent eaten warm, for dinner.

CREAM CAKE.

four cups of sugar, three of flour, one of butter, one of sour cream, five eggs, one teaspoonful of soda dissolved in the cream; fruit if desired, though it is good without, and will keep a long time.

Dear Minnie May,—

I am very much interested in your column, and I thought I would send you a couple of

SNOW BALL CAKE.

Take one cup of sugar, one cup of butter, and the whites of three eggs; one teaspoon of soda, and enough flour to make a paste.

GINGER SNAPS.

One cup of molasses, half a cup of sugar, half a cup of butter, half a cup of lard, one teaspoon soda dissolved in warm water, and two tablespoons of ginger. The butter and lard should be melted. MARTHA GILL.

Minnie May's Flower Garden.

THE MIGNONETTE.

Sow a pinch of seed in the centre of as many 3-inch pots as there are plants re-When the young plants are strong enough, thin them by degrees to one plant in a pot, and that must be the strongest.— Train that up to a stake to the heighth required, pinch out all side shoots at the heads of bloom, but do not divest the stem of its leaves until the plant has attained its full heighth. To form a head, leave about three shoots at the top, and pinch them in from time to time.

TRAINING PETUNIAS.

A writer in The Garden says that a fine effect is obtained by his method of training petunias. He procures a number of hazel rods, each about two feet long, bends them like croquet hoops, and drives both ends into the bed, placing them at suitable intervals all over it. On these he ties and trains his petunias, which blossom more abundantly than rapid under this treatment. We have than usual under this treatment. We have seen petunias successfully treated as if they were Sweet Pea vines and trained on a slanting trellis.

DESTROYING PLANT LICE.

Tobacco smoke is one of the best things for this purpose. Cover your plants with a box or barrel and fill with tobacco smoke.— The next best thing is a thorough drenching with strong tobacco water, say 1 of a pound of tobacco to one gallon of boiling water.—Soap suds have been used with good effect.

Minnie May's Scrap Bag.

HOW THE HAIR SHOULD BE CARED FOR The hair should be thoroughly washed with warm water and Castile soap at least once a month. The color of the water after the first rinsing, will expose the necessity of this hair-bath. To wash and dry the head in a thorough manner without pulling out the hair or causing discomfort to its possessor, is an art. Soda or borax, which is so generally used in washing the hair, is highly injurious. To preserve the hair in good condition, it should be brushed every night until it is soft and glossy. Rubbing the scalp with a little bay water or weak spirits of any kind will keep it white and

free from dandruff.
"False" or ornamental hair should be carefully kept to be endurable. The habit of some persons of laying their coils upon the bureau, or hanging them on the gas-fixture at the side of the glass, on removing them from their heads at night, is extremely untidy, as they become dusty and uncleanly from this exposure. Switches can be kept in good order for a long time, if well brushed, and placed in boxes when not in use.

HOW TO START A FIRE.

Many persons have often noticed the extreme difficulty encountered in lighting the fire in a stove, especially on a still, damp morning. The stove won't draw; even vigorous blowing will not suffice; and then, when it does start, it is with a sort of explosion or outward rush of air which fills the room with smoke and glass, oftentimes puffing the unpleasant fumes in the face of the operator. The trouble is caused by

the difficulty encountered in overcoming the enertia of the long column of air in the pipe or chimney by the small column of air that can be forced up through the interstices of can be forced up through the interstices of wood and coal, at the bottom of which the fire is kindled. All this may be remedied by simply putting a few shavings or bits of paper on the top of the wood or coal, and first lighting that; it immediately bursts into a blaze, because the air has perfectly free access to it from all sides, the heated air forces its way into the chimney, and establishes there an upward current. The establishes there an upward current. match can then be applied to the kindling under the fuel, which will readily light, and if dry, burst into a brisk flame.

Melbourne, P.Q., Maple Cottage, January 1st, 1874,

My Dear Minnie May,-

I hope you and all your correspondents had a merry Christmas, and that you will have a very happy new year, and many of them. One of my friends made one of your toilet tidies, and I liked it much, and I think I shall make one. Here is a very pretty antimaccasser :- Cast on 18 stitches, knit garter fashion twice across; then knit across once, putting the thread over five times in every stitch; then take of without knitting six tape from left hand needle, and draw them through the three which crosses them; then knit the six as they stand crossed; then take of six more, do as the first, &c. After going across this way, knit across twice as before, and so on. It is quickly done, and pretty made of red and white, fingering five strips of the required length sewn together, with a tassel on the end of each.

NINA M. KNAPP.

Paris, Dec. 19, 1873.

Dear Minnie May,-I will send you a descriptive pattern of a nice collarette. Let our young folks try it and see if they won't like it, for it takes well around here.

BERLIN WOOL COLLARETTE.

Take the shade you like best, and cast on five stitches for the middle portion. Now knit first row plain; second row, knit one plain, pass the wool over the needles once or twice (according to the length you like the stitch, but once looks the best) for the next three, and knit the last one plain; third row, knit two plain, then slip two loops off the left hand needle, if you passed over twice, but only one loop if you passed over once; do this three times, and knit last stitch plain; fourth row, same as second; fifth row, same as third. Crochet an edge of five chain, and single crochet stitch at proper distances all around the collarette, but let the wool be of another color; after which, dot the middle part with the same shade as the edge, leaving the dots $\frac{1}{2}$ an inch apart. Use a wool needle for the last step in the work. The clouded wool, edged with white or scarlet looks well. Make the middle $\frac{1}{2}$ a vard long. Your friend.

A SECRET FOR LADIES.

LIZZIE ELKINGTON.

Oatmeal is good for something besides food. Young ladies who desire white hands will please harken. It is only necessary to sleep in a pair of boxing gloves, and for a bath oatmeal is excellent. If economically inclined, and country bred, it can be fed to the horses and cattle as an oatmeal mash. after being used. That will be, hereafter, one of the "advantages of the country." Oatmeal contains a small amount of oil that is good for the skin. To make the hands soft and white, one of the best things is to wear at night large mittens of cloth filled with wet bran or oatmeal, and tied closely at the wrist. A lady who had the whitest, softest hands in the country, confessed that she had a great deal of house-work to do, and kept them white as any idler's by wearing bran mittens every night. The pastes and poultices for the face owe most of their efficiency to their moisture, which dissolves the old coarse skin, and to their protection from the air, which allows the new skin to become tender and delicate. Oatmeal paste is as efficacious as anything, though less agreeable than the paste made with the white of egg, alum and rose water. The alum astringes the flesh and makes it firm, while the egg keeps it sufficiently soft, and the rose water perfumes the mixture

BREAKFAST.—EPPS'S COCOA.—GRATEFUL AND COMFORTING.—"By a thorough knowledge of the construction and nutrition, and by a careful application of the fine properties of well selected occoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctor's bills."—Civil Service Gasette. Made simply with Bolling Water or milk. Each packet is labelled—"James Epps & Co., Homosopathic Chemists, London." Also, makers of Epps's Milky coccoa (Cocoa and Condensed Milk.) 72-1-

Market Notes.

THE PRODUCE TRADE.

The only change to note to-day in the Liverpool markets was an advance of 9d per quarter in corn. It was stated on 'Change that, according to private advices, white wheat was 1d lower; but our dispatches up to 6 p.m., make no mention of the fact. In New York flour and wheat were heavy and lower. In the west there was not much change, but the tendency was downward. In the local flour market there was scarcely any demand, the scarcity of ocean freights checking business almost entirely. No sales were reported, and to induce transactions holders would probably have to make an abstement of 5c all round. In wheat there was little doing. White was inactive, but No. 2 would command \$1.26 to \$1.27 in store, holders asking \$1.28. Spring was enquired for, with buyers at \$1.19 f.o. c. Five cars sold at \$1.18 in store. Barley was in demand, with sales of three cars No. 2;at \$1.23 in store. No. 1 is worth \$1.28 to \$1.30. Peas were steady. A car of uninspected sold at 66c, delivered. In oats there was no business to report.

Flour 28s to 29s 6d. Red wheat 12s 3d to 12s 10d; red winter 12s 4d to 12s 8d; white 13s 7d to 13s 10d; club 14s to 14s 2d. Corn 42s 9d. Barley 3s 6d. Oats 3s 4d. Peas 4s 6d. Pork 67s 6d. Lard 42s 6d. Beef 85s. Bacon 39s 6d to 40s 6d. Tallow 38s 3d. Cheese

TORONTO MARKETS.

White wheat has been quiet, with only small sales of No. 2 reported, at \$1.26 in store, No. 1 is nominally worth \$1.32 to \$1.33, but there have been no transactions reported. Treadwell has sold at \$1.23 to \$1.27. For spring there has been a fair enquiry at \$1.18 to \$1.19, with \$1.20 paid, we believe, in some instances. At the close the market was easier, and sellers would probably have to meet buyers at least half way in order to induce business. Peas—The only reported sales during the week were at 66c for No. 1, at which they are still saleable. Barley—The market has been very firm, and with light receipts and a steady shipping demand prices have advanced. No sales are reported of No. 1, but No. 2 has at \$1.28 sold on the track and in store, and that price would still be freely paid. Sales in New York to-day were at \$1.90. Oats—Have been enquired for, and have sold at \$7c to \$3c; 10,000 bushels to arrive, changing hands at the lower rates. Toronto, Jan. 21.

LONDON MARKETS.

London, Ont., Jan. 24. Our readers will bear in mind that the prices are no longer given of the bushel, but of the cental or 100 lbs.

100 lbs.

White wheat, per cental, \$1 95 to \$2 08; red winter wheat \$1 85 to \$1 95; spring wheat \$1 90 to \$1 93.

Barley \$2 50 to 2 85. Peas \$1 to \$1 05. Oats \$4 02 to \$1 03.

Buckwheat \$1 to \$1 05. Corn \$1 05 to \$1 15.

Hay \$15 to \$16. Potatoes, per bag, \$1 10 to \$1 20.

Turnips, per bush, 20c to 25c. Clover seed \$5 to \$6 25.

Timothy seed \$6. Fleece wool 80c to 35c. Keg butter 20c \$6 25c; roll butter 22c to 25c. Beef, per 100 lbs., \$3 to 4.50. Pork \$6 50 to 7 12. Mutton, by the quarter, 5c to 6c.

CATTLE MARKET.

Beeves.—The supply at this market has again fallen off somewhat, but the demand was not pressing; and prices are for the most part unchanged. We continue to quote first-class at \$4.50 to \$4.75; second-class, \$4; and third-class, \$3 to \$8.50. Of the sales we note the following:—One car of steers, averaging 1,200 lbs, at \$35; the highest price paid for a car load; two cars averaging 1,150 lbs, at \$41; one car, averaging 1,000 lbs, at \$33; one car of cows, averaging 1,100 lbs, at \$36; one car of oxen, averaging 1,400 lbs, at \$62; one car of bulls, averaging 1,500 lbs, at \$45. A portion of the foregoing was re-sold for shipment east, Sheep.—There was a good many arriving during the past week, but no difficulty was experienced in disposing of them at \$7 to \$8 for first-class, \$5 to \$6 for second-class, and \$3 to \$4 for third-class.

Wool.—The market has been very quiet during the past week. No sales whatever are reported, but figure buyers are offered in round lots at 28c, at which the same and the same provided the same provided the same provided the same provided that the same provided the same provided the same provided that the same provided the same provided that the same provided that the same provided the same provided that the same provided the same provided that the same provided that

MONTREAL MARKETS.

Flour.—Inactive, and rates virtually nominal in bsence of any but retail transactions for local use. Grain.—No business to note.

Provisions.—Steady, with fair consumptive demand

Ashes.—Steady; all offerings finding sale at full late rates,

NEW YORK PRODUCE MARKET,

New York, Jan., 21, bbls; sales, 10,000 bbls. at \$5 70 to \$6 15 for super State and western; \$6 60 to \$7 25 for common to choice

State and western; \$6 60 to \$7 25 for common to choice extra western,
Bye Flour—Steady,
Wheat, dull, in buyers' favor; receipts, 104,000 bush; sales, 29,000 bush, at \$1 58 to \$1 59 for No. 2 Chicago; \$1 59 to \$1 60 for No. 2 Milwankee,
Corn, filmer, receipts, 28,000 bush; sales, 82,000 bush at 86c to 91c for new western mixed afloat,
Barley—Scarce and advancing; receipts, 3,000 bush; sales, 9,000 bush; prime Canada western, \$1 90 in store,
Oats; rather more steady; receipts, 39,000 bush; sales,
28,000 bush, at 61c for mixed western; 61½c for white western,

25,000 Dusn, as out to swestern.

Fork.—Firm, at \$16 for new mess.
Lard.— Firm, at \$1.2c for steam.

Butter.—32c to 47c for State and Pennsylvania.
Cbeese—9 1-2c to 15c for common to prime.

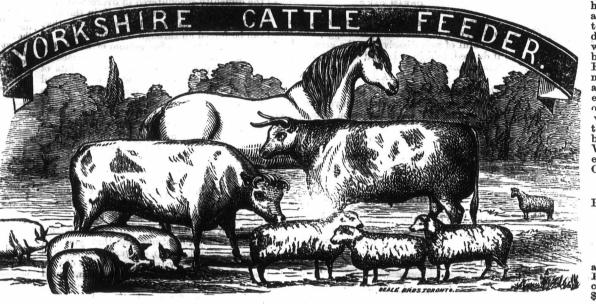
TESTIMONIALS FROM THE HON. G. BROWN and others.

Bow Park, Brantford, 7th July, 1873: Messrs. Hugh Miller & Co., My Dear Sirs.—Your Yorkshire Cattle Feeder is all and more than it is represented to be; a table spoonful daily works marvels; it sharpens the appetite, helps digestion, and gives a healthy tone to the whole system. Yours truly, George Brown. GEORGE BROWN.

Bangor, Pickering, April, 1872: Hugh Miller & Co.—I have used your Yorkshire Cattle Feeder to cattle that I was anxious to make up quickly. It had the desired ef-fect, and is the best thing I ever used. I strongly recommend far-mers to use it. SIMON BEATTIE.

Landsing, March 29th, 1872:
Hugh Miller & Co., Toronto, Sirs.

— After using your Yorkshire Cattle Feeder this winter for my stallions, I must say that it is a first-class article, not only as a Feeder, but as a regulator of the system. I



have not had occasion to use any other medicine for my horses any other medicine for my horses to keep them healthy Independent of its feeding properties, which I think cannot be creelled by any other so-called Cattle-Feed, I shouldadvise all horsemen to use it as a regulator, as I believe it to be safe and efficient. I hope farmers and others will give it a trial; they will find it a great saving to them in fodder and doctor's bills. I am, yours respectfully, WM. LONG, Importer and Dealer in Fntire Horses Landsing O., Ont., Yonge St.

Prepared in Canada only by HUGH MILLER & CO., Agricultural Chemists

167 King St. East, Toronto. A full supply kept on hand at the Canadian Agricultural Emporium, London, Ont. 25 cent packagescontain I pound. \$1poxes of 5 pounds.



FOUNDRY MARKHAM BELL

|-Yoke & Wheel... 28 Bells Warranted for one Year.

There are about 1800 of the above bells now in use and giving the best of satisfaction, costing only one-third the amount of ordinary bells, and are all warranted one year. Encourage home manufacture and purchase a warranted article. Farmers! throw aside those dinner horns, which cause the isdies to get swelled necks by blowing. JONES & Oo., Markham P. O., Ont. W. Weld, Agent, London

AGRICULTURAL

INVESTMENT SOCIETY AND SAVINGS BANK.

OFFICE, DUNDAS STREET WEST. (Late Huron & Erie Office.)

The conditions of the Act amalgamating "Free-hold and Union" with the above Society have been complied with, and the following officers elected:—

President—Alexander Anderson, Esq., M. D. .

Vice-President—Wm. Glass, Esq., (Sheriff Co., Middlesex): Inspecting Director—Richard Bayly, Esq.; Solicitor—David Glass, Esq. Board of Directors—Richard Tooley, Esq., M. P. P.; Lieut. Col. James Moffatt; George Birrell, Esq.; A. T. Chipman, Esq.; John Wright, Esq. (of Wright & Durand; Adam Murray, Esq.; Jehn Mills, Esq.; D. Regan, Esq.; James Owrey, Esq.

BORROWERS Will be dealt with liberally, and money advanced with the least expense and delay possible.

THE SAVINGS BANK Is now open, and money will be received on deposit, in large and small sums, and interest allowed at the rate of 5 to 6 per cent., as arranged for.

JNO. A. ROE,
Sec. & Treas.

London, April 30, 1873. |6-tf

London, April 30, 1873.

CANADA LIFE ASSURANCE COMPANY.—

Established 1847. Assets including Capital Stock, 24 Millions. Cash Income about \$10,000 per week. Sums assured over \$11,000,000. Over \$900,000 have been paid to the representatives of deceased policy holders since the formation of the Company. The following are among the advantages offered:—Low rates of Premium; Canadian Management and Canadian Investments; Undoubted Security; Policies absolutely secured to Widows and Children; Policies non-forfeitable; Policies indisputable after 5 years in force; Policies issued on with profit system receive three-fourths of the profits of the Company; Policies purchased or exchanged or loans granted thereon. Premiums may be paid yearly, half-yearly or quarterly, and 30 days of grace allowed for payments of all premiums. Tables of rates for the various systems of assurance may be obtained at any of the Company's offices or agencies. A. G. Rams v. Manager and Secretary. R. Hills, Assistant Secretary.

Hamilton, July 3, 1873.

DE TOOD per day. Agents wanted! All

\$5 TO 20 per day. Agents wanted! All sex, young or old, make more money at work for us in their spare moments, or all the time, than at anything else. Particulars free. Address G. STINSON & CO., Portland, Maine.

Now for BARGAINS

STRIKING CLOCK

London, Feb., 1873,

BELL & CO., GUELPH, ONT.



PRIZE MEDAL

Organs Cabinet

AND MELODEONS. Sole Proprietors and Manufacturers 'of

THE ORGANETTE, Containing Scribner's Patent Qualifying Tubes

AWARDED THE ONLY MEDAL! Ever given to makers of Reed Instruments at Pro-vincial Exhibitions, besides Diplomas and First Prizes at other Exhibitions too numerous to specify

CAUTION !

As we have purchased the sole right of manue facturing Scribner's Patent Qualifying Tubes, for the Dominion of Canada, we hereby caution all parties from purchasing them elsewhere, as they will be liable to prosecution. We have copyrighted the name of the

"ORGANETTE,"

COSSITT'S

GUELPH - - ONT. Manufactures all kinds of Agricultural Imple-

CANADIAN SIFTER FANNING MILLS,

PARIS STRAW CUTTERS, LITTLE GIANT STRAW CUTTERS, ONE HORSE SEED DRILLS, HAND SEED DRILLS, ONE HORSE PLOUGHS, TURNIP CUTTERS,

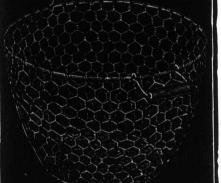
&c., &c. The attention of farmers and others is called to his superior HORSE TURNIP SEED DRILL, all of iron, sows two rows, and runs the cannister with an endless chain instead of friction wheels, there an endless chain instead of friction wheels, there are this bla to alin and miss sowing; and by an endless chain instead of friction wheels, there fore is not liable to slip and miss sowing; and by raising a lever the sowing can be stopped at any time, thus preventing the waste of seed when turning at the end of drills. Orders from a distance carefully attended to and satisfaction guaranced.

LEVI COSSITT,

4 tf Nelson Crescent, Guelph.

Great Sale at Chisholm & Co's. WHOLE WINTER STOCK REDUCED.

Now for BARGAINS



Burlington Wire Basket Works,

Sole Proprietors and Manufacturers of CROOKER'S PATENT VEGETABLE AND ROOT BASKET,

MARKET and CLOTHES BASKETS. Whole-sale Manufacturers of Fancy, Flower and Hanging Baskets. Any style made to order.

CROOKER BROS. & CO., Wellington Square, Ont

CETTING UP CLUBS.

Great Saving to Consumers.

DARTIES inquire how to get up CLUBS. Our answer is—You should send for Price List, and a Club Ferm will accompany it, with full directions, making a large saving to consumers and remunerating to Club organizers. Send for it at

MILLER'S CREAT TEA WAREHOUSE, 52 and 54, Front Street East, Toronto, Ontario-Local Agents Wanted.

Toronto, April 26, 1872.

MOLSONS BANK

Paid-up Capital\$1,000,000

THE LONDON BRANCHOF MOLSONS BANK Dundas Street, one door west of the New Ar

And all the principal Cities and Towns in Ontario and Quebec.
Offers unusual facilities to those engaged in the Geals liberally with merchants and manufac

turers.
Discounts for the Farming community.
Buys and Sells Sterling Exchange, New York
Exchange, Greenbacks, &c, at very close rates.
Makes Advances on United States Currency and
Securities on reasonable terms.

SAVINGS BANK DEPARTMENT

Affords opportunity for safe and remunerative investments of accumulative savings.

JOSEPH JEFFERY.

London, Sept. 14, 1870.

ASSURANCE ASSOCIATION OF CANADA.

THE

HEAD OFFICE, - LONDON, ONT. Licensed by the Dominion Government.

CAPITAL 1ST JAN., 1871.

\$ 231, 242

Cash and Cash Items, \$72,289 55.

THIS COMPANY continues to grow in the public confidence. On 1st January, 1871, it had in force 34,528 POLICIES,

Having, during the year 1870, issued the immense number of 12,319 Policies. Intending insurers will note-

Ist—That this is the only Fire Mutual in Canada that has shown its ability to comply with the law of the Dominion, and deposit a portion of its surplus funds for the security of its members,—\$25,000 having been so deposited.

ting seen so deposited.

2nd—That being purely Mutual, all the assetsand profits belong solely to the members, and accumulate for their sole benefit, and are not paid away in the shape of dividends to shareholders as in the case of proprietary companies.

3rd—That nothing more hazardous than farm property and isolated dwelling houses are insured by this Company, and that it has no branch for theinsurance of more dangerous property, nor has it any connection with any other company whatsoever.

4th—That all honest losses are settled and paid for without any unnecessary delay.

5th—The rates of this Company are as low as those of any well established Company, and lower than those of a great many.

6th—That nearly four hundred thousand dollars have been distributed by this Company in satisfaction of losses to the farmers of Canada during the last ten years.

last ten years.

The That the "Agricultural" has never made a second call on their members for payments on their premium notes.

Farmers, patronize your own Canadian Company that has done good service amongst you. Address the Secretary, London, Ont., or apply to any of the Agents.

TYTLER & ROSE, Family Grocers & Seedsmen.

TIMOTHY and CLOVER SEED; all KINDS of FIELD SEED, TURNIP, MANGEL, &c. &c., imported direct by themselves, and of the very best quality.—LAND PLASTER.

TYTLER & ROSE,

WINE MERCHANTS AND SEEDSMEN, DUNDAS-STREET. London, April, 1872.

F. H. MITCHELL, M. D., C. M., Graduate of McGill University, Montreal, Physician, Surgeon, Office: Gothic Hall, Dundas Street, London, 71-12-y

J. H. WILSON, VETERINARY SURGEON.

Graduate of the Toronto Veterinary College.

Office—New Arcade. between Dundas street and Market Square. Residence—Richmond street, opposite the old Nunnery.

J. S. S Sheep ar JOHN ship, Bre

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R. S. C Sheep ar Townshi

G. WI Sheep. GEO. Breeder J. BI in Canad good Ho

H. E. Cattle, S shire Pig N. BE Horns, E DAWS Breeders J. PIN cattle. WALT hort Ho

JOHN Heavy D JOSEI of Short RICHA wold, Le

J. FEA TEORG U Short and Berl JAME

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BRODI

shire Piga die, Rura Woodville W. HO J. MII Breeder o Berkshire

R. LE G. MOR JOHN S of Short-I Sheep, and the Prince of his Cal 1871.

F. W. S and Breed Cotswold JAMES Breeder o Essex Pig

> A FIRS FOR SAL Catalogue:

JOHN EI Breeder o

WM. AS Down S PETER Co l in Canada only by H MILLER & CO., Agricultural Chemists Ling St. East, Toronto. supply kept on hand canadian Agricultural m. London Ont. 25 agescontain I pound. of 5 pounds.

Yonge St.

ASSOCIATION VADA.

LONDON, ONT. minion Government. JAN., 1871.

ms, \$72,289 55. ues to grow in the public ary, 1871, it had in force

DLICIES. 70, issued the immense

Fire Mutual in Canada to comply with the law of a portion of its surplus members,—\$25,000 hav-Mutual, all the assetsand

members, and accumu-nd are not paid away in shareholders as in the nies. azardous than farm proaxardous than tarm pro-g houses are insured by has no branch for the in-property, nor has it any company whatsoever. ses are settled and paid ry delay.

Company are as low as ed Company, and lower indred thousand dollars his Company in satisfac-s of Canada during the cural" has never made a ers for payments on their

ze your own Canadian ood service amongst you. London, Ont., or apply to

& ROSE, s & Seedsmen.

R SEED; all KINDS of NIP, MANGEL, &c. &c., lves, and of the very best & ROSE,

STREET.

SAND SEEDSMEN,

D., C. M., Graduate of sity, Montreal, Surgeon, &c. Dundas Street, London, 71-12-y

ILSON, Y SURGEON,

to Veterinary College. ween Dundas street and dence—Richmond street, ery.

Cards inserted in this list for one dollar a ne per year if paid in advance; \$1.50 ifin arrears

Feb., 1874

BREEDERS DIRECTORY. WILLIAM TASTER, Breeder of Durham Cattle and Cotswold and Leicester Sheep. 5-y

R. S. O'NEIL, breeder of Lincoln and Leicester Sheep and Short Horn Cattle. Birr P. O., London Township. 1y

J. S. SMITH, McGillivray, Breeder of Leicester Sheep and Durham Cattle, Ailsa Craig.

JOHN EEDY, Granton P. O., London Township, Breeder of Leicester and Cotswold Sheep. G. WELDRICK, Thornhill, Breeder of Cotswold

GEO. JARDINE. Hamilton, Importer and Breeder of Ayrshire Cattle and Leicester Sheep. 11 J. BILLINGER, Richmond Hill. Ont., dealer in Canadian Bred Stallions. Best prices given for good Horses, and some first-class Horses for sale.

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H. E. IRVING, Hamilton, Breeder of Galloway Cattle, Southdown and Leicester Sheep and Berk-shire Pigs. N. BETHELL, Thorold, Ont., Breeder of Short Horns, Berkshire and Yorkshire Pigs, Southdown and Leicester Sheep.

DAWS & CO, Lachine, P. Q, Importers and Breeders of Ayrshire Cattle. 8-ly J. PINKHAM, Westminster, Breeder of Devon

WALTER RAIKES, Barrie, P. O., Breeder of hort Horns and Berkshire Pigs. 72-1-y JOHN CRAWFORD, Malvern P.O., Breeder of Heavy Draught Horses and Cotswold Sheep. 1-y

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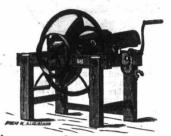
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