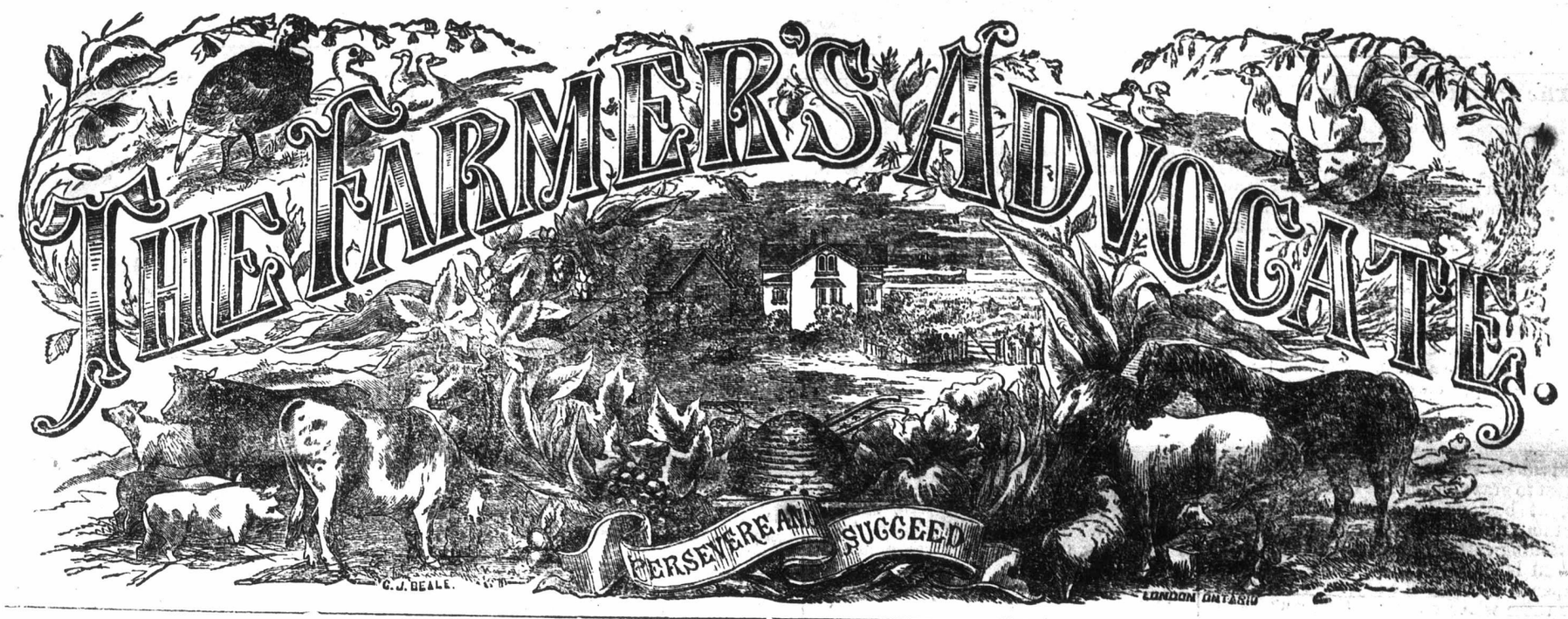

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The Mimico Farm.

This question will probably be the most important one to farmers that will be before the Legislature at the approaching Session. The site purchased is reported as unsuitable for the purpose; a committee has been appointed to select one more suitable near Guelph.

Whitby and Woodstock have been examined with the view of selecting a site better adapted to the purpose.

If it is carried on as originally contemplated, it must cost an immense sum of money, and whether the expense already incurred will ever result beneficially, remains to be seen.

There are Agricultural Colleges and Experimental Farms existing now in various parts of the world; Germany is in an advanced state as regards such.

It is our opinion that far more good would result if the Government would allow private individuals to join their capital and carry out such improvements as the country might require. Not only would the results be better, but an enterprise of this description, under the management of a joint stock company, would be carried on without a yearly amount of taxation. In fact, it would be to their advantage to do everything well, and at the same time economically. The Government ought, and probably would give assistance to a company of this sort, and if the farming community (not the favored few) are to be benefitted, it must be through the press.

Information is needed. Agricultural papers were considered sources for furnishing such to the farming community, but it is extremely strange that the same Government that put the most oppressive tax on agricultural publications, should attempt to establish an Agricultural College. As we happen to be somewhat acquainted with the objects and intentions of the late Government in imposing the extortionate rate of postage on agricultural papers, and their reasons and intentions for the establishment of the Mimico Farm, we cannot condemn in too strong terms the steps that have been taken. The postage was put on to check certain agricultural papers, and the Mimico Farm was to check the Canadian Agricultural Emporium; the *Ontario Farmer* was to have been supported and other papers obliterated; the Mimico Farm was to afford a good fat berth for a certain individual in this city.

It is a mere farce to pretend that the Mimico Farm was intended for the good of farmers'; that is a shallow pretence; it would have been the greatest injustice and burden the farmers ever suffered.

We know on what subject we are speaking, and despite our challenge that appeared in this paper long since, not a single supporter of the Mimico Farm has ventured to meet us on the platform to refute our statements regarding it and the Western Fair. We look on the act of the late Minister of Agriculture in obtaining the grant for the purchase of the Mimico Farm, as the blackest stain he can have on his character, as he had promised to aid the Agricultural Emporium in any way that laid in his power.

The scheme was started to benefit certain parties, and not the farmers. No farmer ever asked for it. If the question were put to the farmers themselves :—Shall the Government carry out the Farm, or shall it be left to private enterprise ?—ninety-nine out of a hundred would favor the latter.

The question yet remains to be answered: will the present Government carry out the plans stolen by their predecessors for political purposes, or will they legislate for the interests of agriculturists ? The question may arise: in what way could more good be done ? we should reply, by encouraging the spread of agricultural information, the encouragement of farmers' clubs, and the spread of agricultural books; by allowing farmers to establish their experimental, test and sale farms by joint capital, which the law at present prevents.

The present Minister of Agriculture is a farmer, and we are impressed with the opinion that he will do what he thinks best for the country. We have our own opinion in regard to this farm, but if the past and present Governments deem the expenditure judicious, we have only to submit to the powers that be. We believe it has been from the effects of our writings that the plan has been taken up, although we may differ in the mode of putting it into operation.

Agricultural Societies.

The annual meetings will take place on the 3d week of this month for the election of officers and other business. We regret to say that in the majority of the Societies but very little more is done than the election of officers; so little attention is paid, that scarcely enough farmers attend the meetings even for that purpose. It appears to be one of those things that is everybody's business, and almost left to nobody. The meetings are so small that sometimes they scarcely deserve the name.

Now there are many subjects that might be discussed at these gatherings, pertaining to the management of the Exhibitions. The establishment of Farmers' Clubs is a subject that might receive more attention, and as unity is strength and knowledge is power, members of these clubs have far greater opportunities for obtaining and disseminating knowledge than single individuals can have. Librairies might be added.

If there are any improvements that you could suggest, the annual meeting is the most suitable place for having discussions about them. In electing your officers, select those who are in favor of open discussion in preference to those who hurry over the appointment of officers and then walk away. If you desire Drain Tile manufactories to be established in your localities, you might offer some inducement to those who would invest in the undertaking.

If you are not ashamed of the poor agricultural papers published in Canada, when compared to those published on the other side, you ought to be, and you should at once lend your aid to remedy the evil. If you think agricultural information is of any value, and it should be distributed over the country through the medim of an agricultural journal published monthly, semi-monthly, or weekly, and that a proper staff of editors could select valuable information from the various agricultural works published, and from the reports of the Experimental, Educational and Test Farms in the United States and other countries; if you think that such a publication should not be made subservient to either political party or sect, would it not be well to assist in forming a company and elect managers to carry out such an undertaking. If one person attempts to do this, no matter how guarded he may be, it will most assuredly be termed a party paper by some.

We, as farmers meeting for agricultural purposes should know only one party—the agricultural party.

If you think such a publication would be of service, you might express yourself to that effect, or, if, in your opinion, the postage on agricultural periodicals should not exceed that on common newspapers, you could apply for its alteration.

If you consider it necessary that the Government should establish an Educational and Test Farm, your voice might strengthen them; and, on the other hand, if you think the cost would be more than the institution would be worth, or that it would be a mere shelving place for politicians and a political lever, or that it could be better carried out by a company, you might use your influence against it.

We have no doubt that if the Societies were to call the attention of the Government to these facts, but that the grievances, if any, would be removed.

Read the Club Prize List in this paper and encourage the young folks to obtain some of them. The chromos are beautiful. There are prizes for the useful, and those wishing to make money.

The Profits of Soiling Cattle.

In advocating the soiling of cattle we are not bringing forward something new, nor writing in favor of a mere theory. The system has been long tried and found to be attended with great profits. Nor do we merely speak from the experience of others. We speak from our own experience, an experience of many years. And yet soiling is so little known here as a system, that when, talking lately of the advantages of more thorough culture of the soil and more liberal manuring, we spoke of soiling cattle as a means of increasing the manure heap, we were asked what is meant by soiling cattle. We had to explain the rudiments of the system, as the feeding in the house or yard with green crops raised and cut for the purpose, instead of leaving them to graze on the roads and commons, or, at best, on the pasture of the fields, without any additional food.

Soiling cattle necessarily involves additional labor, and consequently additional expense. This is the objection made to it by those who are not practically acquainted with the profits, or who have not given it due consideration. If, by stating what has been our experience in soiling, and pointing out its practibility and its advantages, we induce some to make a trial of it even partially, much will have been done towards its more general introduction.

One of the greatest benefits of soiling is that in order to carry it out effectually there must be an entire change in the cropping of the farm. It will be necessary to do away with that exhaustive method of sowing after grain in uninterrupted sucession, till every element of fertility essential to the growth of cereals having been drawn from the soil, it is left *to rest.* In the soiling system there is a regular rotation of crops, such as instead of impoverishing, will enrich the soil. The system adopted may be a four course, a five course, or a six course system, as the farmer deems most judicious under the circumstances, but to farm well there must be some system. In some counties in Ireland the produce of the soil was surprising, from following the four course system, but it is perhaps best adapted to small farms. I for many years followed the six course rotation; having one-sixth of the farm under well manured root crops, one-six clover and rye grass for soiling and hay, one-sixth pasture, one-sixth other crops for soiling, and two-sixth cereals. This may be described as a mixed system, partly pasture, and partly soiling. Horned stock were fed some hours every day in the yard; horses altogether in the stable; swine on vetches, clover, cabbages, &c., till the time came for finishing them off for the butcher.

Another advantage of soiling is that there will be a large increase of manure. Instead of being scattered over the roads or commons, or lying in the pasture fields, wasting to fertilizing elements by exposure to the atmosphere, it will be in the manure heap, with the refuse from the racks, the weeds, &c. Abundance of manure is one of the elments of successful farming. There is truth in the old Scotch saying, "Where there is muck there is luck."

A third advantage of soiling is:—The cattle will be in better condition than if fed on oridinary pasture. Having a sufficiency of the best and most suitable food given to them they will be always in better order than if left to pick up short and often coarse, unsuitable herbage and weeds as best they can. Add to this that the supply of good and abundant food will produce more milk, butter and cheese.

One of the greatest profits from soiling is in the economy of the land. One-half acre of land per head will produce a sufficiency of food for cows. This we know from experience. Our farmers will be able to estimate what area of ordinary pasture land per head is required for cows to gather their subsistance from, and thus, comparing one system with the other, ascertain what will be the economy of land.

The query naturally arises; What crops are we to sow for soiling if we adopt this system? This query I now proceed to answer, first observing the greatest difficulty has always been in having green food for soiling early enough in the season, and in this climate the difficulty must be greater than where the winters are shorter, and vegetation not retarded to so late a period. But this obstacle can be surmounted. The first crop ready for soiling in the milder climates is winter vetches or tares. Here we cannot expect them. For your earliest crop for soiling sow fall rye in August or or September. We have had it mown for soiling in good time to be succeeded by a crop of potatoes. In Britain our rotation for soiling was tares, spring vetches, clover and ryegrass, annual or perennial, oats and peas, cabbages and rape. Then followed the root crop.

Let your crops for soiling be in succession, as follows: 1. Fall Rye, sown in September. 2. Oats, sown early in April. 3. Oats, sown later in the same month. 4. Oats and peas mixed, sown early in May. 5. Corn sown in drills about the middle of the same month. 6. Corn sown towards the end of the same month. 7. Another sowing of corn the first week in June. 8 and 9. Two sowings of barley, one in the middle of June, the other the first week in July. For some of these you may substitute millet or Hungarian grass, and you may use in addition some of your clover crop green. This succession of crops will bring you on until you begin to use the tops of your mangolds, turnips, carrots and sugar beets. The roots, with hay, straw, &c., will bring your farm stock well through the winter.

As soon as your early soiling crops are used, let there be no delay in manuring and ploughing the ground on which they grew, and sow other crops in their stead; so you will raise two crops instead of one; and your land will be free from weeds and in good condition. As we take it for granted that you have made no preparations in autumn for soiling, we would say commence with the second crop in the above rotation, sowing for the purpose oats as early in April as you can. You may pursue, as I nave done, a mixed course, making soiling an auxiliary to our pasture. You will find its profits in the condition of your farm stock, in your dairy, in the increased fertility of your farm.

This is the season when good farmers lay their plans for the culture of their farms for the ensuing year. Resolve to make trial of a systematic rotation of crops, and of, at least in part, soiling your cattle. Let this be included in your plan of farming for 1873.—Asst Ed.

Free Trade.

In another part of our paper will be seen a communication from Dr. Brown.—The doctor's aim appears to be free trade, and it would be good enough if we could obtain it, but our legislators have but but little power when treating on this subject. The Americans have the power in their hands.

Perhaps some plan might be brought forward that would answer both countries. We might pay them a certain sum and submit to the same external duties that they impose. Almost any plan would be preferable to the numerous pilfering and expensive custom officers that have to be maintained on both sides of the lines.

The doctor's opinion in regard to the agriculturist being unrepresented by the press, we think too true. The two political parties strive for power; money has power, and, undoubtedly, farmers have not as much of that commodity as railway men, manufacturers, brewers, distillers, lumbermen and stock brokers. The time is fast approaching, however, when the interests of the farmer will be more closely looked after.

We hope the doctor and numerous other farmers (for the doctor is a farmer) will unite and join the company as soon as the prospectus is before the country, and make the Farmers' Advocate a weekly paper, and of such interest and importance as will not put our Canadian farmers under the necessity of taking so many American agricultural publications, or at least have a paper equal to any on the other side.

The doctor has thrown out two or three valuable hints. We hope others will express themselves should they differ with the doctor. His aim and desire appears to be for the interest of the farmer. Answer his question; who will speak next?

Prizes at Agricultural Exhibitions.

We all believe that we live in the most advanced age of improvement. Progress is rapidly made in mechanism, arts and sciences.

Let us farmers ask ourselves what advancement has been made during the past ten years in our public agricultural affairs. It appears to us that the grand progressive schemes have been brought about by our ancestors, and we are merely rusting in the track already laid down by them.—We should be progressive and not content to stand still; we must either be retrograding or advancing.

Just look over the Prize Lists of our Exhibitions, whether stock, seed, art exhibition, or ploughing match, and where are our improvements? True, there are improvements in implements, stock and arts, but what about seeds? and what is more important? Nothing, except it be agricultural information.

One of our most enterprising subscribers called at our office and said he had gained many money prizes at exhibitions, but he would much rather have a library of agricultural books, useful ornaments, instruments of science, or works of art. He had gold medals which he thought much more about than the money, as he conld keep and bequeath them to his descendants as trophies of honor, while the money would only be expended. He considered that by the distribution of agricultural books and publications much u-eful and valuable information would be circulated throughout the country that would, perhaps, do as much good as the exhibitions themselves, thus doubling the utility of the exhibitions. He would suggest the division of the prize money, and the payment of the prizes part in cash and part in publications.

It is our impression that this suggestion should be considered by the several Boards of Agriculture both in Ontario and Quebec.

Information Wanted.

A letter was received from Yorkville P. O., containing $1, but no name was sent. Another letter containing money has been received from G. Featherstone, but no post office address is to be found on the letter or in it. Another letter containing $1, has been received, but neither name or place to be found. We have also received a paid letter from Montreal, containing a carefully folded piece of brown paper and nothing more.

In writing please always be careful and give the correct P. O. to which your paper is mailed.

Copy of Resolution Adopted Nov. 8th, 1872.

"It was moved by Mr. Denison, seconded by Hon. O. Blake, and resolved,—That it is with feelings of unfeigned regret this Board has learned of the death of one of its members, John Snell, Esq., who died at his residence, Willow Lodge, near Brampton, on Friday, the 1st of November, 1872.

"Mr. Snell's name was quite a household word with Canadian farmers, and, indeed, he was well known throughout this Continent as a breeper and importer of thoiough-bred Durhams and Galway cattle, Leicester and Cotswold sheep, and improved Berkshire pigs. Few men have done more for their brother farmers than Mr. Snell, who laid the foundation of his fortune by his own strong arm and willing heart.

"And that a copy of this resolution be forwarded to his family."

Turnips.

A FIVE DOLLAR PRIZE.

A real, practical, energetic farmer has placed at our disposal the sum of $5, to be awarded to the person who will send in the best essay on the Cultivation of the Turnip, the letters to be published in this paper.

The donor does not wish his name published, but it will be made known to the successful writer. The article to be written plainly and pointedly; unintelligible expressions are to be avoided, in fact, it is to be the plain practice that every farmer can understand.

We will allow a column and a half, if required, although the length need not exceed half a column, and if the writer can condense more information into it than another can in a column and a half, all the better for him. Should the article require more than a column and a half, it will be continued in the following issue. The article *must* be original. Young men, try and get this prize.

Communication.

We are in receipt of a letter signed "A Practical Farmer," dated E. Gwillembury, and bearing the post-mark Kingston. We for once break our rule not to notice any anonymous communication.

The writer complains of our opposing the Ontario Government's measure to import improved farm stock. This argument is based on the ungrounded assumption that the "importers and breeders have formed a regular monopoly so that it is beyond the means of the poorer class of farmers to become possessors of well-bred stock." There is not, nor can there be, in this business a monopoly. Everything connected with it—the purchasing—the selling by open, unrestricted sale—renders a monopoly in it impossible. American breeders find it to be their interest to make heavy purchases at the stock sales of Canadian importers and breeders. American writers admit that in Canada improved stock can be purchased on most advantageous terms.

The charge of monopoly is not only without foundation, it is unjust to the stock importers and stock breeders of the Dominion—men who have done so much for the prosperity of the country.

As from the nature of the business and its attendants circumstances there can be no monopoly; then the argument of the writer falls to the ground, a baseless fiction. The Farmers Advocate is not conducted in the "interests of a few breeders," or of any class, but of the farmers, and of the country at large. We write not in opposition to those in power, nor in slavish advocacy of them. Our is a less ambitious aim—to promote the interests of agriculture, and the prosperity of the country.—Asst Ed.

The "Ontario Teacher."

We take pleasure in announcing that Messrs. Ross & McColl, of Strathroy, are about to issue a publication under the above heading; the prospectus is before us. From the staff of contributors and from the known ability of Mr. Ross as a School Inspector, and Mr. McColl as a writer, we feel satisfied that the work will be a valuable and useful one, particularly for teachers. They should send for a specimen copy.

SHROPSHIRE SHEEP.

A correspondent of the Irish Farmer's Gazette says of the Shropshire breed of sheep: "I beg to give the results of my experience. 1st, they will rear two and sometimes three lambs better than a new Leicester one. 2nd, their lambs are much hardier. 3rd, when fat, the mutton is worth 1d. per lb. more than the Leicesters, as there is always plenty of lean of a superior quality with the fat; and my rams cut from 9 to 11¼ lbs. wool each. I put 90 Shropshire ewes to the ram last season, 8 of which brought me 3 lambs each, 4 brought 4 each, and one brought me five lambs; all live, healthy lambs; very few brought single lambs.

Agricultural.

Address by W. D. Wilson, at a Meeting of the N. E. Iowa Agricultural Society, abridged:—

The position of the farmer is a very high one; all labor rests on his; the first farmer was the first man. All true nobility rests upon the possession of the land, and has been so recognized from the beginning.

He emphatically represents the necessities, and continuous hard labor. Without him, man could not exist, but his rule is that the earth shall feed and clothe him and his family, and to obtain a surplus for the subsistence of others. In all, he is dependent upon his industry, skill and the seasons, and then has to wait for his crops to grow. A failure to prepare, plant and sow at the most propitious times is liable to bring him to want and to produce a food famine. His trusts are therefore very grave, and whilst they are in their proper execution, the most ennobling God ever gave to man, he too frequently esteems the labor to produce the bread and meat he was commanded to obtain from the earth by the sweat of his face, a curse instead of a blessing.

From whence are principally obtained our statesmen, our jurists, our legislators, our merchant princes, our engineers, our working men and women of the cities but from the farm? The industry and physical energy that secures success are obtained on the farm. The cities' energies are recruited from the country. Let the farm fail to produce both men and women, the energies of the world fail. As on the mother is dependent almost the whole future of the child, so on the farm is dependent the future of the world. For all the cares and drudgery of farm life the farmer has his compensatory advantages. He is permanent—or should and can be—and thus finds security and competency, none to molest him or make him afraid, if he is true to himself.

[The lecturer, after dwelling for some time on the resources at the command of the farmer, thus proceeds to enquire, does he fully develope those resources?]

Such is his commanding position, and such are a portion of his facilities for improving it, but what does the farmer do for all this in return? For while the world is dependent upon him he is dependent upon his exertions and his intelligence in co-operating with nature. Absolutely nothing when compared with what he might do. On the contrary, he robs and impoverishes his rich inheritance and scatters abroad over the earth by drawing from its coffers and never restoring. Whilst all nature works for him, he does little or nothing for nature. The ingredients that are especially the life of the wheat plant are sent abroad never to return, and the means that are at hand to restore these important elements, such as the growth of clover and other grasses, are almost entirely neglected.

[A portion of the lecture is given to the question: What should the farmer raise for the market? There is no doubt that here too, as in the States, more attention should be paid to raising and fattening stock than has hitherto been given to this very important subject.]

That our system of farming is in many respects, radically wrong, cannot admit of a doubt. What is the object of farming should be seriously considered by all who cultivate the soil. Mainly, and almost wholly, it is to supply the human family with those articles of food, and raw material which are most needed by mankind, and which, as a consequence of that need, bring the highest prices Therefore a farmer should study to ascertain which are the articles most in demand, and to which he can best adapt his acres, so as to supply any part of that demand and to obtain the highest profit. If he does this, his reward will be ten-fold; he will have the satisfaction of having done to the community the greatest good possible, which will satisfy him as having performed a high moral duty. He will also have the satisfaction of having produced and sold those articles that paid the best, and that will tickle his pocket, one of the most sensitive parts of our moral faculties, especially in these days. Philanthrophy and self interest agree in this case.

But these are not the only benefits the farmer derives by supplying the articles that are in greatest demand; for, very generally, these articles are precisely those whose productions least exhaust his land, and they are generally such as have the greatest concentrated value. That which is produced by and from cattle, sheep, hogs, horses, &c., is embraced in the concentrated productions. Whilst wheat does not receive, on an average, a price that will pay for its average cost of production, corn commands more than double its cost of production when judiciously fed to stock.

[We will make another brief extract in which the lecturer enters into a calculation of what additional profit might be made on the farm by improvement of stock and more careful husbandry. We may ourselves often profit by the lessons taught to others.]

We will not dwell further on this point, but look a little into what might be done more than is done on the farm with a trifling additional expense, and the saving of what is produced.

We have been inquiring for years in regard to the following points in the management of a farm, and we feel that we place the figures below rather than above the real facts:

There is an average wasted annually off every farm of what is produced	$75.00
What could be produced in addition to the general productions of the farm	75.00
Improvement of stock, by a small expenditure	75.00
Improper feeding of stock and bad shelter	75.00
Loss from improvident damage to farm tools	25.00

The above presents an average loss on each farm in the above items of $325.00; but suppose we take only the average of two hundred dollars, and as we have not less than 200,000 farmers in the State, it gives the startling aggregate of forty millions of dollars! that might be saved the State by using proper economy and with a small additional cost only in breeding animals not exceeding an average of $25 to each farmer.

IS FARMING IN THE WESTERN STATES PROFITABLE?

As the great dependence of the American farmer for remuneration for his expenditure of money and time on the land is on the nett prices he receives for his grain, the following article from the Chicago *Tribune* is conclusive proof that farming in that country cannot bring in much profit:—

It is becoming a serious question what is to be done with the grain products of the country. During the last sixty days, there has been a general advance in the rates of freights all over the country, and the effect is crushing upon those who produce the lower-priced varieties of grain.—This advance has not affected the wheat-growers so much, because there is comparatively very little wheat going forward. This is, however, accidental. As an illustration, let us give some figures.—The cost of moving corn from a point one hundred miles distant from Chicago, by the way of the lakes and the Erie Canal, including the intermediate charges, to New York, is 41½ cents. This does not include any charge or profit in that city. The price of corn in New York is 65 cts. Allowing three cents per bushel to cover profits and expenses in New York, there is left to the producer just 21 cents per bushel for his corn. In oats, the case is even worse. It costs to deliver oats from a point like distant from Chicago, in the boat at New York, 31 cents per bushel.—Oats are selling in New York at 40 to 44 cents. If 2 cents per bushel be allowed for expenses and profits in New York, there is left to the producer six to ten cts. per bushel for his oats at the place of growth.

Of course, there is a limit beyond which wheat, corn, and oats cannot be transported, except at a cost equalling or exceeding the value of the article. The rate of freight on oats has almost reached that point now. They may be still further advanced until they prohibit the transportation of corn, and even of wheat. The present freight charges to New York are nearly double the average rates of last year, and the advance in freights is of necessity taken from the price of the grain in the hands of the producer.

The rise in domestic freights is in sympathy with the advance in ocean freights, but the oppression upon the producers is none the less severe. It consumes their product. It is no longer a case of sending one bushel to pay the freight on another; that operation no longer pays. The producer, if freights go any higher, or the price of grain should fall in Liverpool, will have to send some money along, in addition to the corn, to pay the freight on the latter.

REDUCING BONES.

In the discussion of wheat culture, at the late Agricultural Convention in Newport, N. H., Mr. Pattee, of Warner, gave a formula for reducing bones, as follows:—

Place them in a large kettle, mixed with ashes and about one peck of lime to a barrel of bones. Cover with water and boil. In twenty-four hours all the bones, with the exception, perhaps, of the hard shinbones, will become so much softened as to be easily pulverized by hand. They will not be in particles of bone, but in a pasty condition, and in excellent form to mix with muck, loam or ashes. By boiling the shinbones ten or twelve hours longer, they will also become soft. This is an easy and cheap method of reducing bones. If the farmer will set aside a cask for the reception of bones in some convenient place, and throw all that are found on the farm into it, especially if one or two dead horses come into his possession, he will be likely to find a valuable collection at the end of the year, which would prove a valuable adjunct to the manure-heap.

SUTTON'S NEW GIANT HYBRID COW CLOVER.

Messrs. Sutton & Sons, Reading, have sent us a specimen of their new Giant Hybrid Cow Clover, which has already given two cuttings this year, the sample sent being of the third cutting. The specimen we have received is nearly thirty inches in height, and appears to be very succulent. Messrs. Sutton state that it has been produced by a cross between the common red clover and cow-grass, and has been found to succeed well on soils that will not grow the common red clover. It appears, therefore, well deserving of a trial.—*Irish Farmers' Gazette.*

MR. MECHI ON THE ENGLISH HARVEST.

Mr. Mechi, the great scientific farmer, sums up the results of the English harvest in the London *Times*. He says he is no alarmist, but he believes that England will have to pay for foreign corn, in quantity and price, £15,000,000 to £20,000,000 sterling more than in a good wheat season.

CORN FOR SOILING.—An American paper says a dairy, whose butter is excelled by no other in the Philadelphia market, pretty much sustained 58 cows on sowed corn from the middle of last July to the middle of October, and that too from the product of three acres. It was estimated that no less than ninety tons of food were taken from the three acres.

OLD PASTURES OR NEW.

There are two opinions about pastures. One is that it is more profitable to feed only newly seeded land, using it not more than two years before plowing it up for a reseeding; and the other to let it remain for many years, allowing the surface to become fully occupied by the native grasses, these being supposed to be the best adapted to develop its power of production.

If we consider this question according to the general practice of farming communities in this country, we can not hesitate to decide that the greatest profit will follow the first named method, for there is no disputing the proposition that timothy, red-top, orchard grass, and red clover, newly sown on a well prepared and well manured soil, will produce much more forage (and of a highly nutritious kind) than will a close turf of blue grass, white clover, etc., which has for many years had full possession of the ground, and has had no artificial stimulation. The difference in amount will be much more than enough to repay the cost of breaking up, manuring and seeding.

It is not now a question whether the cows will do better on one kind of pasture than on the other, only which will produce the largest money profit. If a single cow were allowed to roam over ten acres of short old pasture, picking up her whole living in white clover and the tender sprouts of blue grass, there is no denying that she would give more milk, more butter, and more cheese than she would if feeding, however abundantly, on the coarser grasses of an artificial pasture. But our purpose in farming is not to get the largest possible yield from our cows, but to get the largest possible yield from our land. The cows are only implements for converting the products of the field into the saleable products of the dairy.

An average first-class cow coming in in May, will make 200 lbs. of butter in the season on good natural pasture, but she will require at least three acres of land for her exclusive use, At 30c. per lb. the season's produce will be $60—or $20 per acre. On a good artificial pasture she may give only 180 lbs., worth $54, but she will be fully supported by the produce of a single acre. Supposing that one-third of the produce is consumed by the interest on the extra number of cows, and by the cost of keeping up the pastures—which is surely a very liberal allowance—we shall have $36 instead of $20 as the return per acre. in addition to this, we shall make ourselves much more independent of variations of the seasons, for a well worked rich medow is far less injured by excessive drouth than any natural pasture on the same soil could be. This, of itself, will often equal the drawback we have allowed for extra cost.

To put the proposition in another form, we may expect, from the foregoing calculation, as large a cash profit from ten acres of artificial as from eighteen acres of natural pasture, and there would be far less risk from unusual drouth It is not proposed, of course, that rough or waste lands should be used for artificial pastures (they would not repay the cost), only that such fields as are susceptible of profitable subjection should not be left wild.

How nearly natural pastures may be made equal to artificial ones by the use of the harrow and liberal top-dressings is a proposition not considered above. The cost would generally be less than that of reseeding, and the result equally good. In any case, no pasture—old or new—should ever be over stocked.—*American Agriculturist.*

QUANTITY OF ROOTS FOR STOCK.

An intelligent farmer in Ireland gives the following as the respective quantities of roots consumed by the different classes of stock on his premises:—

"Stall-fed, 7½ to 8 tons per head; store cattle, 4 to 6 tons per head; fattening sheep, 15 to 17 cwt. per head; other sheep, 10 to 13 cwt. per head."

FROM CONTINENTAL CORRESPONDENCE OF PRAIRIE FARMER.

In several parts of France, Lot, Tarn, etc., several rich deposits of phosphates have been found. It is English speculators that buy up and work the beds, the French hesitating to invest though patriotically appealed to to do so. There is an eviden desire in France to find in phosphates and vitrates a substitute for guano; during the last twelve months there was a remarkable increase in the sale of commercial manures. In the neighbourhood of Nantes the trade was peculiar. There the farmers have had a prejudice that no manure was good which had not a "black look." It was there that phosphates from their color became unfashionable, and turf was artfully reduced to powder, and, thanks to its color, met a ready sale as animal black. At present the most barefaced frauds are committed in Nantes. The coarse sand of the Loire is reduced, by powerful machines, to powder and mixed with phosphates, or Britany contributes its schist, which on being reduced to powder, is elegantly made up in bags, labelled, and returned to the Bretons as pure phosphate!

With the view of checking frauds in manures, as well as to secure a diminution of price, several local farming societies have formed themselves into companies to purchase their industrial manures *en bloc* The price of these manures has, since the war, augmented some 25 per cent. One pound of nitrogen, as now estimated, costs one franc and a half; formerly the price was a little over one franc. Then the loss of live stock by the war and the plague, and the diminished supply of manure, may be judged by the figures that ,1869, France employed but 12,000 tons of superphosphates, whilst in 1871 she used 6,000 tons.

Lucerne is in this country regarded as the "Providential forage" plant, and exhibits a marvellous development when irrigated—a process that France has much neglected. It is acknowledged that artificial grasses can be more profitably replaced by lucerne. In Saxony this latter plant works wonders on light soils, when plowed in green as a preparation for a grain crop. French farmers adopt the same plan; they sow about twelve pounds of lucerne per acre with the barley in February, plowing down the lucerne after the harvest, as preparation for winter wheat.

TOP-DRESSING MEADOWS.

A writer in the New York *Times* says: Lands that are natural for grass, such as are most of our river bottoms and clay uplands, need no plow to keep up their fertility. By top-dressing they can be kept light and productive indefinitely.—We have seen upland meadows that had not been plowed for half a century, and the quantity and quality of grass they produced are rarely excelled. The quality especially was excellent.

We are confident that, with proper treatment, the quality of hay raised on old meadows improves from year to year. It becomes finer, and there is a greater variety. Let the land, after it has produced two crops of grass, be top-dressed in the fall, and instead of the grass running out, as it is inclined to do when let alone, severely, it is wonderful to see what a variety of new grasses come in.—The turf thickens, and instead of two varieties of grass, we get half a dozen, and in the course of a few years a dozen; and even two dozen have been counted growing on the same square rod.

FARMING IN THE WEST.—A Kansas farmer asks the question: Does it pay to raise oats? To solve the question he enters into a minute calculation of a debit and credit account of ten acres of oats, and arrives at the conclusion that it does not pay. The crop of ten acres would cost $95, not including rent, taxes or the board of laborers employed, while the oats raised—400 bushels—40 bushels per acre, would, at Western prices (20 cts. per bushel, realize only $80. Such is farming in Kansas.

PRACTICAL LESSONS IN FEEDING HOGS.

Some years ago, when I was just beginning to farm, I was desirous of knowing the best way of fattening hogs, and I determined to try the different plans, and also to ascertain how much pork a barrel of corn would make. I made a floored pen and covered it in; weighed three hogs and put them in the pen. I also weighed three of the same size and put them in a dry lot—average weight one hundred and seventy-five pounds. I fed six barrels of corn to the six hogs. They were forty days eating the corn, with a plenty of salt and water. The average gain was seventy-five pounds. The hogs in the lot gained the most. One that was fattened in the lot gained eighty-eight pounds. One in pen gained eighty-four pounds; the other four not so thrifty.

These hogs were about fourteen months old when slaughtered. I put them up to the 25th of October. There was a great deal of sleet and snow during the month of November, which gave the hogs in the pen an advantage they would not have had if the weather had been favorable; they were each fed on the same quantity of grain. It also shows that one bushel of corn will make fifteen pounds of pork, and that the six barrels of corn made eleven dollars and twenty-five cents worth of pork, at two and a half cents per pound, and that the farmer gets twelve and one-half cents for his labor of feeding per bushel. Hogs will fatten faster in September and October than they will in colder weather.

Another very important question or inquiry suggests itself from the foregoing, and that is:—What is it worth to raise hogs to the average weight of one hundred and seventy-five pounds? It may be difficult to determine the exact value of the grass, clover and grain fields that the hogs feed on while growing to the gross weight of one hundred and seventy-five pounds, but with these assistants I can raise a hog to weigh one hundred and seventy-five pounds and over, with one barrel of corn. It will be seen from these estimates that two barrels of corn, with the advantage of grass, clover and grain fields, will produce about two hundred pounds of net pork to two hundred and fifty pounds gross.

Hogs do best in large fields with plenty of water, and the farmer who cuts up his corn in the months of September and October, and hauls it out on his fields, will be amply paid for his labor, in the improvement of his land, from the stalks and manure of hogs. It is a great saving of labor to turn the hogs in the field when the quantity of hogs and the size of the field suit.—*Cor. Ohio Farmer.*

OX-TEAMS VS. HORSES.

In this go-ahead age it is a dismal sight to see an able-bodied man toiling along the road at the slow pace of a pair of oxen, and we have probably had as much to say as any one in favor of the substitution of the faster horse or mule team.

We are bound to confess, however, that the picture has another side which is worthy of careful consideration. Ox-teams are slow, it is true, but, they are effective, cheap, and convenient. Horses are a necessity for regular road work and for many operations on the farm, but it is almost indispensible to have for occasions considerably more team force than is needed regularly. If the extra work of plowing, harvesting and hauling manure is done by horses, we make up our minds to have them more than half the year eating off their heads in idleness, and to be in constant danger from loss from the thousand ills that horse-flesh is heir to. To state the case in a nutshell, an idle horse is idle capital, invested in an extra hazardous risk, without insurance, and consuming itself month after month.

Oxen, on the other hand, if properly treated, are a tolerably safe storehouse of working power. When not at work they are laying on flesh, which is worth so much per pound in the ready market, if we choose to sell, or which may be taken out again in the form of hard work whenever we may call upon it. In case of accident we may realize the full amount of our investment at the hands of the nearest butcher. An idle ox is active capital, the investment is safe and well insured, and his fodder is pretty certain to get paid for, either in flesh or in work.

The difference in returns in the two cases is a most important one, and the extra cost of teamster in the use of the slower animals is probably well compensated for by the saving in saddlery bills. And, after all, the question of speed is of less consequence than we often imagine it to be. We have lately had and opportunity to witness two teams in use in our neighborhood, one of horses and one oxen, both engaged in similar work (mainly on the road), and we have come to the conclusion, against our preconceived notions, that "slow and steady wins the race." The oxen seem to do more work in a week than the horses. They are three pairs of young cattle, growing thriftily, and so paying a profit on their work when not overworked—costing less to buy and less to feed than a single pair of horses. When they are needed for work, they are taken up and fed enough grain to keep them hearty. When their work is finished they are turned out to "eat, sleep and grow fat." When each pair have got their growth they are sold to the butcher, and a part of the price replaces them with younger ones.

Starting our farming life with a prejudice against the use of ox-teams, we have been induced gradually to substitute them for horses, until now we have only enough of the latter for our road work, and depend on oxen for all emergencies. In work and in flesh we get a full equivalent for all the food they consume, and we save the heavy cost of keeping idle horses, the risk of a total loss of value by accident or death, and the certainty of depreciation by reason of old age.—*Exchange.*

CARRYING ALL THE PARTS IN FARMING.

Rotation in farming is understood as an established necessity. This with respecte to the crops; and the dairy is also included. This even where the land is most favorable for grain—where it may readily be worked and the soil is rich. In this case many farms do without sheep, sheep being put on a hilly and less accessible land. Sheep are probably here the most benefit. But they will add to the income and benefit of any farm. All the branches, at least as a general thing, should be prosecuted. This, for one thing, to meet all the market. If one or more fails the other may succeed, some one or more products will always succeed, either in growth, be affected by the season or otherwise, or in the market. It is seldom, if ever, that all the products fail, both in productiveness and price. Wool and mutton, and sheep in consequence, have been a loss to the general farmer for years till now recently. The fruit crop the present year is in the same condition; so are potatoes; so are some other products. Thus the products of the farm is fluctuating, and this yearly to a greater or less extent. To prosecute one or a few branches alone is very risky; ruin is too often the result. With the dairy this has less force; yet for the past few years there has been loss; loss with inferior and less properly managed heads. What was a discouragement; now it begins to look up again. Thus changes are constantly occurring. We need not point out the folly of being governed by these changes; and yet this is done. There are two ways to take advantage of the changes. One is to carry all the branches (where climate and soil will admit); the other is to thoroughly prosecute what is done—better culture, better stock, better treatment. During all the time of the low price of wool and loss in sheep, there were those who made it pay. They had good lambs and a near market, and secured good fleeces from their well-kept flocks, and their mutton being of a good quality, commended a fair price; the whole put together showing a fair profit on the outlay; and when the times changed and wool and mutton were in high demand, they met their golden opportunity; they did not need to buy and then run the risk of a fall in the price. So with all kinds of produce of the farm. The best always finds a sale; and if largely produced, on judicious outlay, cannot help but remunerate when a good market is readily accessible. Cattle and sheep should be kept as well as the other usual stock of the farm. Poultry on a small scale can be made to pay well. But there must be good breeds and good treatment; haphazard will not do. What farmer cannot have a place set apart for fifty or a hundred hens! And if no more than a dozen sheep are kept—the best kind, carefully fed and attended to, each sheep averaging its lamb or more, and often first quality as as to size and condition, and the amount and quality of wool to correspond—who can not see that here is a nice little income with a fair precentage of profit? You can make much or little out of a sheep. You thus have your lambs to sell, your wool, your eggs, a porker or two, a good surplus of butter from a few cows—you have your oats, your wheat, your corn, your clover and corn stalks to feed, and your timothy to sell; you have some clover seed to dispose of, some apples, may be some other fruit, grapes, berries, vegetables; you raise a calf or two, you thus have a chance for a perfect rotation, extended or varied at pleasure. Your clover enriches your soil; so do your pasture and meadow properly managed, your corn improves your land. In a word you have an interest in the market of every farm product, and you cannot fail to get a high price for some of them every year, and a loss on no one with proper attention. Do what you do in the best way, then will you ride at the top of the wave.

HOW CLOVER IMPROVES THE SOIL.

Professor Voelcher, the eminent agriculturist, thus explains how clover improves the fertility of the soil:—All who are practically acquainted with the subject must have seen that the best crops of wheat are produced by being preceded by crops of clover grown from seed. I have come to the conclusion that the very best preparation, the very best manure, is a good crop of clover. * * * A vast amount of mineral manure is brought within reach of the corn crop, which otherwise would remain in a lock up condition of the soil. The clover plants take nitrogen from the atmosphere, and manufacture it into their own substance, which, on decomposition of the clover roots and leaves, produces abundance of ammonia. In reality, the growing of the clover is equivalent, to a great extent, to manuring with Peruvian guano; and in this paper of mine I show you that you obtain a a larger quantity of manure than in the largest dose of Peruvian guano which a farmer would ever think of applying. * * * It is only by carefully investigating subjects like the one under consideration that positive proofs are given, showing the correctness of intelligent observers in the field.

AGRICULTURAL SCHOOLS.

For some years the government of the United States have been trying the experiment of State Agricultural Colleges; with what success the following extract from the *American Agriculturist* informs us:—The general failure of the efforts to make Agricultural Colleges what they were designed to be, seems to have turned the ideas of private parties towards attempting something which may take the place intended for them, or at least do their work. We understand that Thomas Judd, a wealthy farmer of Illinois, has about completed arrangements for opening an Industrial Agricultural College, in which practical and scientific studies shall be open to young men and women. A farm of 100 acres will be attached to the college. Competition is said to be the life of business, it may also help our agricultural colleges.

PRODUCE OF WHEAT—WHY DO WE PLOUGH —DEEP PLOUGHING—WIDTH OF LANDS.

This is peculiarly a wheat growing country, and reference to the culture of this cereal may be well. Even should the average yield per acre be taken at fifteen bushels, this would not be one-third the amount that ought to be produced upon soils now used for wheat growing purposes; for it is well known that often fifty or more bushels have been grown upon an acre of land. Now, would it not be interesting to look at some of the facts of the cultivation of wheat especially, because if the amount grown upon particular soils could be produced upon lands generally throughout the Province, the national wealth of the country would be materially increased.

The first question is:—Why should the soil be ploughed for wheat? First, so that the roots of plants may travel in search of food. Second, that by thorough mechanical admixture, the chemical changes that go on in the soil can do so with greater facility. Third, that the rains in penetrating downward may increase its temperature, give off their fertilizing gases, carry the soluble materials evenly through the mass, and thus render it most homogeneous, rather than by their mechanical action, washing the most soluble and consequently most valuable constituents; to the lowlands.

2nd:—To what depth should the soil be ploughed? We cannot name the exact depth; for in soils mechanically and chemically correct we find that the greatest amount of disturbance which can be brought about by any of the modes of culture of the present day, is favorable to the most prolific growth, and this can easily be understood, in part at least, when it is remembered that the roots of plants travel freely in search of food in deeply disintegrated soils. The wheat plant has two classes of roots—seminal or seed roots, which go directly downward, and coronal or crown roots, which travel in rather an oblique direction. It would thus seem, from the natural configuration of the plant, that both these classes of roots have different functions to perform—that the crown roots are destined to take food from upper portions of the soil, while the office of the others is to go directly downwards in search of food. Now if the soil be not deeply ploughed, or if the sub soil be of a sour an impervious character, the seed roots cannot fulfil their office, and the organism of the plant must suffer.

It is often asked:—Whether should the "lands," when fall ploughing clayey soil for spring wheat, be narrow or wide?—The common width of lands in some parts of the country is ten or twelve feet. Now, if the frequent freezings and thawings of winter have a beneficial effect upon clayey soil, the change produced will be in proportion to the the extent of surface presented, and therefore narrow ridges are preferable to wide ones, and this is especially true if the soil be prevaded by stagnant surface water; for there will be more channals for its escape. Such "lands" will be ready for use earlier in spring, not only for the reason that less water will be present, but because there will be a greater amount of surface presented to the action of the sun's heat. If convenient, the ridges should run east and west rather than north and south, so that all their parts may be equally benefited by solar heat.—*Lectures on Agriculture, by Mr. J. Payne Lowe.*

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WHITE MUSTARD.

So far, I am delighted with my white-mustard experiment. We had an oat stubble on which the clover and grass seed had failed. The field is back of the Deacon's farm, and for want of a good outlet through his land I am unable to drain it properly. Until this is done, it is throwing time and money away to try to raise grain crops. How to get it into grass was the problem I had to solve this spring. My English friend, Mr. Metcalfe, suggested *mustard*. It was a new idea to me. We plowed three times—in other words summer fallowed it. Then, in July, we sowed it with white mustard, and at the same time seeded it down with clover and timothy. The clover is a good catch, and if it stands the winter the experiment will be a decided success. The mustard proves a far more valuable crop than I expected. It has given me more food than I know what to do with. I am feeding it out *ad libitum* to all my stock except horses. The Merino sheep at first did not seem to like it, but after a few days ate it with avidity. The Cotswolds seemed to know what it was, and fully appreciated their privileges. The pigs literally devour it. Even the little, growing ones, that I feed as high as I know how, eat considerable of it, and it seems to enable them to digest their other food more perfectly. I have not seen any voided grain since we commenced to feed the green mustard. My breeding sows get little else than mustard, and thrive well on it. Of course it will not fatten a pig alone, but it is unquestionably a useful auxiliary food. I have over ninety pigs, little and big, and find the mustard a great saving to the corn crib. We have been feeding the mustard (Oct. 21st) to the cows for a few days, and so far it has not affected the taste of the milk. The cows eat it greedily, and if it does not affect the milk I shall certainly try mustard as a soiling crop next year.

You can sow the mustard at any time in the spring after all danger of frost is past, and in two months it will be ready to feed off or mow for soiling. The land may be sown again, and a second crop obtained in September, October, and as late into November as severe frosts keep off

It seems to me that in sections where wheat is not grown, and where land has to be seeded with oats, mustard might be grown with great advantage. Two crops might be grown in a season. The first crop might be plowed under for manure, or fed off on the land, as thought best. The second crop should be seeded down with timothy and clover. I am assured that the few English farmers who have tried it find it one of the best crops to seed with, say in July—getting a large crop of hay the next season. A little artificial manure, such as superphosphate, or even plaster, has a wonderful effect on mustard, and in such a case it is just the crop for poor land that is in good mechanical condition.

THE NECESSITY OF BETTER FARMING.

Mr. Harris, in his interesting papers in the *American Agriculturist*, "Walks and Talks," writes thus in his last paper:—

"I want it understood that my faith in good farming, and my respect for good farmers, grows stronger and stronger every year. I still believe in summer fallowing on clay land, and am satisfied that fall fallowing is a good thing. I believe that weeds can be killed, and I am making considerable headway against them. My corn is the best, and my corn stable the cleanest I have ever had—better and cleaner than the Deacon's. I think we plough too much land, and do not plough our land enough. We *must* have cleaner land. We must raise large crops, or their is no profit in farming. We must keep better stock and feed more liberally. We must make more manure. And we must take care of what we do make."

WINTER PROSPECTS FOR STOCK RAISERS IN TEXAS.

The stock feeders in Texas are in dread that there will be a great loss of stock in that State this winter. The drouth has been protracted to an unprecedented extent, and the only hope for a winterage for the cattle are the cedar brakes and mountains.

CHAPPED HANDS.

A cut lemon kept on the wash-stand and rubbed over the hands daily, after washing, and not wiped off for some minutes, is an excellent remedy for chapped hands.

Horticultural.

TO GET LARGE ONIONS.

A writer upon onion culture says the best way to get large onions is to tramp and roll bed firmly; the seed is then sown on the compact surface, and covered with a rich compost the usual depth.

BIRD MANURE.

The manure of birds is richer than that of animals, as the solid and liquid excrements are mixe together; it is particularly rich in nitrogen and the phosphates. Three or four hundred weight of the manure of pigeons, fowls, turkeys, etc., are of equal value with from fourteen to eighteen loads of animal's manure.

PLANTS GROWING IN WINDOWS.

Thousands who try to grow plants in pots tubs or boxes, fail, mostly because they let the pots be exposed to the hot sun. Now we never see the roots—that is, the part which draws nutriment from the soil—fully exposed to the sun in a state of nature, and this should teach window gardeners to shade the pots and boxes in which their plants grow. Another cause of failure is allowing the leaves (being in reality the lungs of the plant) to get dirty; it is imperative that they should be kept clean. I have often been asked why plants did not do well in windows, and it is often difficult to answer without seeing the plants, but the general failures occur from the causes above named, for it stands to reason that if half the roots of the plant are burned off repeatedly and the leaves are killed with dust, sickness will be the result. It is easy to clean off the dust by taking a little brush or broom and dipping it in water and dirting over the leaves of the plant two or three times in a week. Try it, ladies.—*Prairie Farmer.*

HEDGEROW FRUITS.

The planting of fruit trees in hedgerows has been frequently recommended in these pages, but as yet it has not been carried out to any considerable extent. The other day, when in the North Riding of Yorkshire, I had an opportunity of seeing what can be done in this direction, for the hedgerows of the farm of a very enterprising agriculturist are mostly planted with apple, pear and plum trees, which now yield a very good return.

The fields are large, and the hedges which intersect them are chiefly formed of white thorn, and kept down to about four feet, and do not exceed two feet in width. The fruit trees are planted in the hedges at a distance of about 50 feet apart, and though they have now rather large heads, they do not materially interfere with the crops. They certainly do less injury than the old pollard oaks and elms so common to hedgerows, are quite as picturesque, and, moreover, yield a profitable return. This year the crops of both apples and pears have been exceedingly light, but I can well understand by the appearance of the trees that in the majority of the seasons they bear heavy crops.

It is worthy of mention that the choicer kinds only, which can be kept until midwinter when fruit generally fetches a fair price, have been planted. The fears entertained by some people, when the subject was mooted a few years since, that it would encourage dishonest habits amongst the boys of the village, by placing them under temptations they would be unable to resist, have turned out to be groundless. Of course, now and then a few apples and pears are taken by the boys, but my friend assured me that the loss during the season was not worth mentioning. In fact, I was assured that the losses from the hedgerow trees were not greater than from those in the orchards.—*The Gardener's Magazine.*

ELASTIC VARNISH FOR LADIES SHOES.

Three pounds of rain water are placed in a pot over the fire, and when well boiling there are added 4 oz. white pulverized wax, 1 oz. clear, transparent glue in small pieces, 2 oz. pulverized gum senegal, 2 oz. white soap scraped fine, two oz. brown pulverized sugar; the ingredients are placed in one by one, and every time stirred up; it is well to take the pot from the fire every time a substance is added, to prevent boiling over; when all is added the pot is removed from the fire; when sufficiently cool 3 oz. alcohol are added, and finally 5 oz. fine Frankfort black, well incorporated by continual stirring. This varnish is put on the leather with a brush and is very valuable for boots and shoes, as it can be afterwards polished with a large brush like ordinary shoe-blacking, shows a high polish, and does not soil the clothing.—*Manufacturer and Builder.*

TO STOP A LEAK.

Beat yellow soap and whiting with a little water, into a thick paste. Rub this over the part where the leakage is, and it will be instantly stopped.

Poultry Yard.

THE CHICKEN CHOLERA.

This disease is spreading among the poultry in many of the States, and it is not confined to any class of fowls. From the Iowa *Homestead* we give the symptoms of the disease and a remedy:—

"The first symptoms noticeable are: the comb and gills turn purple, and an inclination to sleep ensues, and, on being disturbed, they arouse and look as bright as if nothing was the matter. They live but a day or two after being affected, and none recover. Some farmers have lost all of their chickens and most of their turkeys in a few days after the disease got among them, from forty to fifty dying per day.

"*Remedy:*—When I notice the fowls begin to droop and look sleepy, I give them three or four tablespoonsful of strong alum water, and repeat the same the next day. I also mix their feed with strong alum water, feeding twice a day for two or three days, afterwards once a week. Since commencing this practice I have not lost any.

"Another cure is to give as feed cooked Indian meal, red pepper, gunpowder, and turpentine, a tablespoonful each, well mixed in a day's feed of meal. Give this food every day for a week or two.

"As a preventative it is best to have the roosting place for fowls dry and clean. The place where they roost should be cleaned as often as once a week, and sprinkled with lime or wood ashes.

"Death, it is said, usually takes place in about three hours.

"Another remedy is: Take corn meal and shorts in equal parts, wet the compound, and mix with lime as strong as they will eat it. For turkeys, geese and ducks corn soaked in lime water will effect a cure."

FATTENING FOWLS.

The way they fatten fowls in England is thus told by the *Cottage Gardener*, and will apply as well here as there, substituting corn meal for oats:—

It is hopeless to attempt to fatten them while they are at liberty. They must be put up in a proper coop; and this, like most other poultry appurtenances, need not be expensive. To fatten twelve fowls, a coop may be three feet long, and eighteen inches wide, made entirely of bars. No part solid—neither top, sides nor bottom. Discretion must be used as to the size of the chickens put up.—They do not want room, indeed the closer they are the better, provided they can all stand up at the same time. Care must be taken to put up such as have been accustomed to be together, or they will fight. If one is quarrelsome it is better to remove it at once; as, like other bad examples, it soon finds imitators. A diseased chicken should not be put up.

The food should be ground oats, and may either be put in a trough or on a flat board running along on the front of the coop. It may be mixed with water or milk; it should be well soaked, forming a pulp as loose as can be, provided it does not run off the board.—They must be well fed three or four times a day, the first time as soon after daybreak as may be possible or convenient, and then at intervals of four hours. Each meal should be as much and no more than they can eat up clean. When they have done feeding the board should be wiped and some gravel may be spread; it causes them to feed and thrive.

After a fortnight of this treatment you will have good fat fowls. If, however, there are but five or six to be fattened, they must not have as much room as though they were twelve. Nothing is easier than to allow them the proper space, as it is only necessary to have two or three pieces of wood to pass through the bars and form a partition. This may also serve when fowls are at different degrees of fatness. This requires attention, or fowls will not keep fat and healthy.

As soon as the fowl is sufficiently fattened it must be killed, otherwise it will still not get fat, but will lose flesh. If fowls are intended for market, of course they must be all fattened at once; but, if for home consumption, it is better to put them up at such intervals as will suit the time when they will be required for the table.

When the time arrives for killing, whether they are meant for market or otherwise, they should be fasted without food or water for 12 or 15 hours. This enables them to be kept for some time after being killed, even in hot weather.—*Live Stock Journal.*

Good Health.

VALUE OF THE WARM BATH.

The warm bath is a grand remedy, and will often prevent the most virulent of diseases.—A person who may be in fear of having received an infection of any kind, should speedily plunge into a warm bath, suffer perspiration to ensue, and then rub dry, dressing securely to guard against cold. If the system has imbibed any infectious matter, it will certainly be removed by this process if it be resorted to before the infection has time to spread over the system; and even if some time has elapsed, the drenching perspiration that may be induced in a hot bath will be pretty sure to remove it.

A HEALTHY DRINK.

This may be made by about two teaspoonfuls of oatmeal and a tumbler of water. This is said to be the best drink laborers can use, at once nourishing, unstimulating and satisfying. This is also rapidly coming into use in largeestablishments where men work much in the heat. It has long been used in the large glass factories and iron foundries of Europe, and it is coming into use in our own country. It is common to find it in the large government works. In the Brooklyn Navy Yard it is a great favorite, two and a half lbs. of oatmeal being put into a pail of moderately cold water.

It is said to be better than any of the drinks made up with vinegar, molasses, etc., which our farmers use in the harvest field. A well-known medical writer says that "from it is obtained power to sustain the exhausting influence of perspiration." Indeed, we have seen it tried with great satisfaction, and we commend it to the attention of our hard-working friends in the harvest field.

AMERICAN DIET.

We are a greasy people, from the pork fat of New England to the hamfat of the South; we wallow in greasy food. This becomes rancid on the stomach, and superinduces what Dr. Urquhart pronounces the sum of all diseases—dyspepsia. We drink tea that would frighten a Chinaman and coffee that would serve as an antidote to opium. We pour down doses of alcoholic fluids, which eat into the coatings of our intestines, and destroy the gastric juices. We go to bed overtasked body and mind, sleep with sluggish blood in a state of stagnation, and get up only when the broad sun is staring in angrily at us through our bedroom windows.

We are reckless in our pursuit of pleasure. We strain our mental powers to their utmost tension, and end, old men and women before our time, or die, or fill a cell in an insane asylum.—*American Hearth and Home.*

[This item from our American cotemporary has some valuable hints regarding our health, The proverb is a good one: "When your neighbor's house is on fire, look to your own."]—AS'ST ED.

HOW DO WE TAKE COLD?

"By sudden changes of temperature, surely," is the answer ready upon the tongue of ninety-nine out of every hundred persons whomay read or hear the question that heads this article. But how do sudden changes of temperature give us cold? Too sudden contraction of the pores of the skin; sudden checking of the sensible or insensible perspiration, sudden change of circulation, by which the blood is thrown, from the surface inward, upon the vitals, causing congestion, etc. All these are phenomena which may, some or all of them, be connected with too sudden or too great changes of temperature, but they fall short, even when taken together, of accounting for that very ordinary, very amazing, and too often seriously injurious infliction, a bad cold.

Few of us but can count scores of instances in which we have been exposed to very sudden and very great changes of temperature, from warm to cold, without other inconveniences than an uncomfortable chill, while we can also count many instances in which we have taken very severe colds without being able to tell how or when we came by them. The slight and almost imperceptible, frequently unobserved, causes of cold have not, perhaps, been as closely traced as they should and may be. It seems not so much the change as the kind of change which gives rise to the unpleasant result. The leaving off an accustomed garment, even when the lack is not uncomfortably felt, the exposure of the feet to wet or chill, a few minutes with the head uncovered in the cool out-door air, but above all, exposure to a draft of air, especially, as is generally believed, on the back of the head or neck, are all familiar examples of which most of us have had melancholy experience.

Indeed there seems to be, especially to peculiarly sensitive constitutions, almost a certainty of cold in such currents of air. There may be no chill, not even uncomfortable coolness, and yet the symptoms of a cold manifest themselves almost as suddenly and fully as decidedly as sneezing follows the introduction of some irritating substance, snuff, for instance, into the nostrils. By immediately heeding the warning of the first premonitory sneeze, and at once changing the position of things, so as to avoid the cause, the cold may be and often is averted. But the danger is that the cause, being so slight and coupled with so little present annoyance, is apt to pass unnoticed or disregarded until too late.

We have all at some time experienced in ourselves exceptionally sensitive conditions under which it seemed impossible for us to avoid, as is said, sometimes "taking one cold on top of another:" what a gentleman not long since in the presence of the writer called a "summer cold,'" in which one seems to take the more cold the warmer he is: it is a sort of sweating cold, one of the most disagreeable if not the most dangerous classes of these inflictions. In this condition, the slighest draft sets one to sneezing, and it seems impossible to avoid constant accessions to the malady. But why? The sudden change of temperature theory will certainly not explain those cases where it is hardly possible to preserve a temperature sufficiently even to prevent taking cold, and those cases where cold is taken unconsciously. No hypothesis but that of a direct irritant acting upon the mucous surfaces of the lungs and air passages seems to suffice for the phenomena of a certain class of colds. That there is such an irritant in the air, in quantities varying according to the meteorological conditions, is well known, but all its properties and effects are not yet prehaps fully understood.

The Horse.

STABLE ECONOMY.

The Turf Field and Farm makes some good suggestions to horse owners as to stables. They should be light, dry and well ventilated. Dark stables and bad ventilation bring on blindness, glanders, farcy and other diseases. Ground floors are preferable for horses to stand upon, particularly in hot weather, but they also possess disadvantages. When horses stand on board floors their feet should be moistened frequently, to prevent fevered legs and contracted feet. Working horses which are bad feeders should be often boiled, or mashed out with scalded bran, to prevent constipation, restore the appetite and preserve the condition for future service.

HOW TO FATTEN A HORSE.

To fatten a horse that has fallen off in flesh is sometimes a tedious business—indeed, the work of months. The following suggestions to accomplish it, however, though without paternity looks to us as wise and to the purpose:—Many good horses devour large quantities of grain and hay, and still continue thin and poor; the food eaten is not properly assimilated. If the usual food has been unground grain and hay, nothing but a change will affect any desirable alteration in the appearance of the animal.

In case oatmeal cannot be obtained readily, mingle a bushel of flax-seed with a bushel of barley, one of oats and another bushel of Indian corn, and let it be ground into a fine meal. This will be a fair proportion for all his food. Or the meal, or the barley, oats and corn, in equal quantities, may first be procured and one-fourth part of oil-cake mingled with it, when the meal is sprinkled on cut food. Feed two or three quarts of the mixture two or three times daily, mingled with a peck of cut hay and straw. If the horse will eat that greedily let the quantity be gradually increased until he will eat four or six quarts at every feeding, three times a day. So long as the animal will eat this allowance, the quantity may be increased a little every day. Avoid the practice of allowing a horse to stand at a rack well filled with hay. In order to fatten a horse that has run down in flesh the groom should be very particular to feed the animal no more than he will eat up clean and lick his manger for more. — *Germantown Telegraph.*

A MODEL HORSE-STABLE.

The teams of a farmer are of so great value relatively to his business and other investments in it, that the best care and shelter which can be given them are, in the end, the cheapest. It is not necessary to build the costliest stable, but it is needful to their health and thrift to have those which are comfortable. And if this term "comfortable" is rightly understood, and can be applied with truth to the farmer's stable, then he has a good one, be it costly or cheap. In the stable the horse is at rest, and all the circumstances around him should tend to give him quiet, healthful rest. To this end the stable should not be low, dark and damp, as often is the case with basement stables. If it is low the light must be dim, and the air at times, at least, bad. If damp, though warm, the horse becomes dull, contracts colds, and shivers on exposure to the cold, outside air.

On the other hand, stables that are too open should be avoided, though we should prefer this fault to the one we have just mentioned, for the horse provides himself naturally with an increase of covering on the approach of cold weather, and this increase is usually somewhat in proportion to the cold habitually encountered. For instance, a horse turned into the open yards to winter will have a thicker coat than one in the warm stable. But when a horse is tied, it is bad treatment to let him be exposed to the air, drawing in at a score or more of wide cracks between the boards covering the stable.

The chief conditions, then, of a comfortable stable are plenty of room, including height, light, dryness, complete absence of external draft, a constant supply of fresh air, and a temperature that rarely falls below the freezing point. A really good stable always impresses an observing person with a sense of comfort and fitness.—*American Rural Home.*

Veterinary.

RHEUMATISM.

Give the following ball night and morning until the bowels are freely opened, when it is to be withheld until purgation has ceased, and then recommenced:—

Powdered colchicum, two drachms; calomel, one scruple; opium, one drachm; aloes, one drachm; powdered capsicums, half a drachm. Should this not succeed, try the following drink, which in some cases is even more effective:—

Iodide of potassium, one drachm; sulphuric ether, one ounce; cream of tartar, four drachms. Give night and morning in a pint of gruel, from a bottle. Keep horse blanketed and comfortable, and give alternately soft and dry food.

TO DESTROY BED BUGS.

There are numerous recipes for the destruction of this household pest. One of the best is the following: Scald the bedsteods, and wipe them dry; mix ordinary lamp-oil with a little quicksilver, and apply this to the cracks with a feather.

REMEDY FOR NERVOUS HEADACHE.

A well-known Kentucky minister, subject to severe spells of nervous headache, was in our office the other day, says an exchange, during one of those attacks. Major Brown, of Mexico, was present, and proposed to relieve him in five minutes, which he did most effectually. The following is the prescription:

Take a desert spoonful of common soda, such as is used in making bread, and dissolve it thoroughly in a quart of cold water. With this thoroughly shampoon the head for about five minutes, scratching the head and the back of the neck well with the finger-nails. Then rinse the head with clean, cold water. This remedy is for nervous headache, and not for those afflictions of the head arising from deranged stomachs.

Stock and Dairy.

ENGLISH SHORTHORN SALES OF 1872.

1,000 pure-bred Shorthorns have passed through Messrs. Strafford and Thornton's rings this year—thirty-six sales in all, amounting to about £105,000, which would make an average of nearly £65 per head.—These prices do not include any reserve figures. The highest averages were obtained at the Earl of Dunmore's, Messrs. Harward and Downing's, Mr. Pawlett's, and Mr. Bowly's sales, and it may fairly be estimated that some of the most fashionable tribes have advanced to more than double the sums they were sold for five years ago.—*Mark Lane Express.*

KEEP THE CATTLE GROWING.

The most successful breeders of horses, cattle, sheep or swine know from experience that although they may possess the best breeding animals, they will not be successful in producing superior stock if a continuous growth of the young animals is not kept up. In order to begin in time at this indispensable preparation for success, the brood mares, cows, ewes and sows are most carefully and suitably fed while with young, and as soon as the young animals make their appearance they are taken the greatest care of, the dams being suitably fed while suckling, and when the young ones are weaned they are not supposed to want for food or drink a single hour.

By this means a continuous and rapid growth is kept up, and the animals attain a large size and heavy weight at an early age.—When breeding animals are not properly fed and comfortably sheltered in winter, the bad effect of such treatment is not confined to their own want of condition—it is shared by their own progeny, and can never be remedied. When young stock are not fed well and comfortably sheltered in winter, their growth becomes stunted, and no subsequent amount of good treatment can repair the damage. Young animals may suffer for want of proper provender in summer and autumn, as well as in winter, and when this happens it stops continuous growth and prevents ultimate success in the object of the breeder.

OVER-FEEDING.

In the *Prairie Farmer* for October 5th, we have the following sensible observations:—

Every one knows that a man so obese as to be unable to walk, cannot be in a healthy state; yet many feeders of stock look upon the monstrously fat bulls and cows of fair-size celebrity as normal types of the bovine tribes. It requires but little argument to refute so fallacious a notion. No doubt it is desirable to encourage the breeding of those varieties of animals which exhibit the greatest disposition to fatten, and to arrive early at maturity, but the forcing of individual animals into an unnatural state of obesity, except for purely experimental purposes, is a practice which cannot be too strongly deprecated. If breeders contented themselves with handing over to the butcher their huge living blocks of fat, the matter would not, perhaps, be very serious, but it is unfortunately too often the practice to turn them to account as sires and dams. Were we to judge at a cattle show, we certainly should disqualify every extremely fat animal entered for competition among the breeding stock.—Unless parents are healthy and vigorous, their progeny are almost certain to be unhealthy and weakly; and it is inconceivable that an extremely obese bull, and an unnaturally fat cow could be progenitors of healthy offspring. We should by all means improve our live stock, but we should be careful not to overdo the thing. If we must have ponderous bulls and cows at our fat-cattle exhibitions, let us condemn to speedy immolation those unhappy victims to a most absurd fashion; but in the name of common sense, let us leave the perpetuation of the species to individuals in a normal state, whose muscles are not replaced by fat, whose hearts are not hypertrophied, and whose lungs are capable of effectively performing the functions of respiration.

PROFITS OF SOILING.

Mr. H. Sedwick, of Cornwall, Connecticut, stated at the farmers' meeting at Lowell, Massachusetts, in September, that farmers in the neighbourhood were engaged in producing milk for the New York market. Referring to the short feed of the fall of 1871, he added:—

"Our farmers all declare they will not go back to the old way of feeding stock. We cut up our straw and everything available.—Many of us have adopted the plan of steaming the food for our cattle, and we are satisfied from the experiments we have made that we save a third of our provender by steaming it. As a sample of what this manner of feeding stock will do, I will relate an instance of a young man who, a year ago this last spring, bought a farm of eighty acres of land for $11,000. The farm then kept eleven cows, four or five yearlings, and a cow or two. The young man took hold of that farm and immediately put in fourteen acres of sowed corn.—He increased the stock to twenty-five cows, and kept them on twelve acres, feeding them the sowed corn, and also cutting his oats green for food. His receipts the first year were over $3000. This year he has summered on that same farm twenty-seven cows, and he told me the other day that his twenty-seven cows would average him $100 each from the profit on milk."—*Rural Home.*

VALUE OF COOKING FOR PIGS.

It has been pretty well established by numerous experiments that a bushel of cooked Indian meal, fed to pigs of good breeds in comfortable pens, will make at least fifteen pounds of pork. Cooking seems to increase the efficiency of food for this class of animals, in a greater ratio than for any other, and is of so great value than in regions like this no good and progressive farmer can really afford to fatten his pigs on raw food. We quote the following experiments and advise farmers to study them carefully:—

In the experiments conducted at the Marine Agricultural College farm it appears that scalded meal fed blood warm did not give as good returns as raw meal fed cold. This proves, as far as it goes, the efficiency of thorough cooking. Neither scalded nor fermented food is best, but that thoroughly cooked and unfermented.

An Iowa farmer reports an experiment made in the fall of 1870, in feeding 20 hogs, about one year old. They were fed 28 days on dry shelled corn, consuming 83 bushels and gaining 837 pounds in weight, an average gain of over 10 pounds to each bushel of corn, which was thus made to return a value of 50 2 5 cents. They were afterwards fed fourteen days on meal, ground fine and fed dry, (a full supply of water being furnished) and consumed 47 bushels, gaining 553 pounds in weight, or 11¾ pounds to each bushel fed, the corn returning a value of 58¾ cents per bush. Afterwards they were fed fourteen days on 55¼ bushels of meal mixed with cold water, and made a gain of 731 pounds, or 13 1 6 lbs. to each bushel of meal, the corn returning 65 5-6 cents per bushel. They were then fed fourteen days on 46½ bushels of meal cooked, with a gain of 696 pounds in weight or very nearly 15 pounds for each bushel of meal, the corn returning 74 4 5 cents per bushel.

Experiments made at the farm of the Maine Agricultural College, November 15th, 1869, to January 15th, 1870, in feeding four Chester pigs with whole corn and with raw corn meal, showed that the feeding value of the latter was 19 4-10 per cent. greater than that of the former. From January 15th to April 18th, a trial was made with raw corn meal fed cold, and with corn meal scalded and fed blood-warm. The feeding value of the raw meal was found to be 4 7-10 per cent. greater than that of the scalded meal fed warm. During the two months ending April 18th trial was also made in comparing the feeding value of barley meal with that of corn meal; the value of the latter was found to be 17 6-10 per cent. greater than that of the former. During the month ending May 19th, raw meal was found to possess a feeding value nearly fifty per cent. greater than that of the fermented meal.

The Superintendent of the Maine Agricultural College farm reports an experiment made during the present year, commencing May 23rd, and continuing ninety days, showing the value of cooked meal as compared with that of raw meal for feeding swine, to be as 100 to 74 4-5.

CANADIAN BUTTER — HOW IMPROVED FOR SHIPMENT ABROAD.

The great bulk of butter made in Canada comes from farm dairies, and is unequal in color, flavour and texture. Some of it, of course, may be of the very finest grade; and if it were packed in such a way as to reach London as perfect in flavor as when first shipped, it doubtless would command a better price than that named in our quotations.

What is greatly needed in Canada is a better system of packing than it now has, and especially with that designed for the European markets. Butter, to keep well for any considerable time, must be excluded, as far as possible, from the air. The usual way of packing in tubs and casks will not do this in as perfect a manner as is required to ensure nice, fresh flavor. A better way is to surround the butter with brine on the plan of the White package. In this plan the tub is made very much in form of the old Welsh tub, except that it is more tapering. The staves are heavy, and heads are provided at both ends, so as to make a package that will not leak.

In packing, the tub is turned on the small end, and a sack of cotton cloth is made to fit the tub, and into this the butter is packed, until it reaches to about an inch of the groove for holding the upper head. A cloth is now laid upon the top of the butter, and the edges of the sack brought over this and neatly laid down. Then the head is put in its place and the hoops driven home. The package is now turned upon the large end, and the sack of butter drops down, leaving a space on the sides and top. Strong brine is now poured through a hole in the small end until it fills all the intervening spaces. It will float the butter. The hole is tightly corked, and the butter is pretty effectually excluded from the air. Butter put up in this way, we know from actual experiment, will keep a year in sound condition, and we believe would cross the Atlantic and open as fresh in the London market as when it left the dairy on this side.

We see no reason why Canadian butter cannot be made to take a high stand in the English markets, and command a much better price than it now obtains. We know, from our observation of Canadian dairy lands, that they have the requisites for producing good butter. What is needed most, in our opinion, is the introduction of creameries or butter factories where there shall be high skill in manufacturing, so that a uniform, fine flavored and good textured butter will be obtained.—Then, by adopting the "brine package," as we have suggested, or something similar, and shipping the lots as soon as made, or when fresh, Canadian dairymen will find no difficulty in realizing good prices.—*Moore's Rural New Yorker.*

THE SHORT HORN BREEDERS' CONVENTION.

The Convention of the Short Horn Breeders of the United States and Canada met in Indianapolis, State of Indiana, on November 27th, to take into consideration questions relating to the general interests of the breeders of the country. We give a brief report of the proceedings epitomized from the 'Prairie Farmer':—

The Convention was well attended, comprising nearly a fifth of the principal Short Horn Breeders of the country; thirteen States being represented, and some being present from Canada.

The committee chosen to report permanent officers reported the following, who were duly elected:

Dr. A. T. Stevenson, President; B. H. Campbell, Secretary; G. W. Jones, Ass't-Secretary; Vice-presidents: J. P. Fisher, Ky., A. F. Wood, Mich., J. G. Dunn, Ohio, W. W. Thrasher, Ind., S. Campbell, N. Y., Chas. E. Coffin Md., C. Babbott, Wis., J. G. Gowan, Miss., M. H. Cochrane, Canada, Hon. D. Christie, Canada W. Brown, Ill., J. H Bacon, Iowa, W. H. King, Minn., J. W. Wood, Neb., A. Wilson, Kansas, M. W. Terrell, Conn., J. Pegg, Mass., A. W. Griswold Vt., J. G. Reed, Oc., W. Page, Cal., J. M. Byers, Va., M. R. Cockrell, Tenn., D. E Davis, N. J., N. Percival, Maine, T. S. Cooper, Maine.

The President offered some remarks on the great importance of the Short Horn interests of the country, showing the greater profit to the farmer from breeding Short Horns rather than common cattle, instancing a sale made by him a few days before of a lot of Short Horn steers at $135 per head, while a lot of common stock a year older, at the same time brought only $75.

The committee on business reported—

1st, that the Convention appoint a Committee to report a constitution, &c., for a permanent organization.

2nd. to consider the matter of the exhibition of cattle at fairs, embracing the appointment of judges and their duties, together with the condition of the cattle.

3rd, the recording of pedigrees.

"Judges at Fairs." This subject occupied considerable attentfon and was fully discussed. Mr. Pickrell said the committees on cattle were not always well posted, and frequently asked to be instructed. With the general committee system decisions made are often absurd as well as unjust. Prof. Miles preferred the judging of cattle by a scale of points and would recommend 1000 as the aggregate, instead of 100, as usual. A. Waddel stated the custom of the Ohio Board of Agriculture. Mr. Baker stated the method in Iowa; the members of the Board name the most suitable at the winter meeting; this gives general satisfaction. Mr. Christie thought this matter of the appointment of judges was one of the important duties of the management of fairs, and that the selections should be made with the greatest care. On motion of Mr. Page it was recommended to Agricultural Societies to employ only experts as judges, and to pay their expenses to and from and while attending the fair as such judges.

It was resolved 'That the practice of many Societies of prohibiting consultation among judges is unfavorable to the making of correct awards, but we think that the most satisfactory results may be attained by balloting first and consulting afterwards."

Resolved "That the President and Directors of Agricultural Associations are, in the opinion of this Convention, the proper officers to appoint judges, and should be held responsible for their fitness."

"Definition of Terms." Prof. Miles, recognizing the confusion not only among breeders, but the public regarding the terms used to designate the quality of blood, offered the following terms and definitions in the form of a resolution: pure-bred, full bred, thoroughbred as synonyms referring to animals of a distinct and well defined breed, without any admixture of other blood. Cross bred—animals produced by breeding together different kinds. Grades—as the product of a cross between a pure-bred and a native. High Grades—an animal of mixed blood, in which the blood of a pure breed largely predominates.—The resolution excited a long discussion, but the question is now settled as much as the Convention has power.

"High Feeding for Fairs." On this question there was great diversity of opinion, many contending that excessively high feeding for fairs should be discouraged as tending to barrenness. Finally, the following resolution was passed by a small majority:—

"Resolved, "That in the estimation of this Convention, it is not only necessary in successfully breeding Short Horn cattle that we should secure animals of fine form, pedigree, &c., but they should be well fed and cared for; at the same time, we look upon the practice of keeping up cattle without exercise, and feeding to their utmost capacity for the purpose of show and sale as injurious to the health and usefulness as breeders."

"Permanent Organization." A constitution was reported by Committee and approved of. The following officers were elected:—President, Dr. Duncan; Vice-presidents, W. Warfield and Hon. D. Christie; Secretary, B. H. Campbel; Treasurer, J. D. Dunn; Directors R. R. Seymour, W. R. Duncan, E. G. Bedford, Marley Miles, G. Murray, Claude Matthews, S. Campbell, J. H. Bacon, C. T. Quissenberry, C. E. Coffin, Jos. Fogg, W. S. King, M. S. Cockrell G. W. Glick, E. L. Emery, W. Percival, D. S. Pratt, S. White, M. H. Cochrane, the two latter gentlemen from Canada.

The question of recording Pedigrees was next discussed—a subject on which the most lively interest was felt. The resolutions approved of on this question, and also the decision of the meeting relative to Veterinary Practice we lay over for the present.

FULL FEEDING PROFITABLE.

It is becoming a well settled fact among dairymen, that it pays to feed cows with all the food they can possibly consume through the entire milking season. To fully meet this supply, grain must, for a considerable part of the time, at least, form a part of this food. There are but two short seasons in the year when extra feed is not needed in the diet of a dairy cow; one is in the flush of feed in the summer. I have never found it profitable to feed grain to cows when there was an abundance of green pasture; to feed extra, then, is little else than substituting a costly feed for a cheaper one. More milk, it is true, can be obtained by feeding ground grain, and especially wheat bran, than by feeding grass alone, but with me, the increase has not paid the extra labor and cost. But when grass begins to fail, it pays to make up the deficiency with extra feed, no matter at what time in the season the failure begins, and to continue it to the end of the milking season.

The other season when extra feed may be omitted is while the cows are dried of their milk. For a month or two in the winter, in this latitude, good hay affords sufficient nourishment, unless the cows have gone into winter quarters in low condition. But this season should not extend to their "coming in." Feeding should commence beforehand, to give strength to endure the exhaustion of approaching labor. But high feeding at this time is not advisable, nor should it commence till the calf is a week or ten days old. After that time, if she is well, an increase of food becomes necessary. In the season of active lactation, which will then have commenced, a cow cannot possibly eat enough of ordinary hay to maintain her flesh and furnish the material for a full flow of milk, if she is what would be called a fair milker. She must at such a time be fed with some more concentrated food, or fail in her milk or flesh. This fact seems not to be sufficienty appreciated by many dairymen. The loss of flesh after cows come in, in the spring, is quite common. It is so customary, that many farmers look upon the projecting bones at this season, almost as a matter of course. This is unfortunate; but this matter is receiving more attention from the dairymen than formerly. More care is used to keep up the flesh of cows in the spring, and also the flow of milk in the decline of pasturing and early winter; it pays well to do it. There must be a wide disproportion between the price of dairy products and grain to make extra feeding at such times unprofitable. The importance of feeding liberally throughout the entire milking season is yearly becoming appreciated by dairy farmers. The amount of ground grain and mill feed used by them is now very large, and annually increasing. Some kind of ground feed is the farmer's main reliance for extra feed, and it forms the basis for so large a share of his income that it behooves him to study the most economical ways of using it. It is doubly to his interest to consume as largely as possible at home; first, to increase his direct revenue, and second, to keep up the fertility of his farm. If in any way, as by a skilful mode of feeding, or by cooking his food, he can induce his cows to consume an increased quantity and convert it into milk and flesh, he will be taking the most effectual method of enhancing his profits. And now, in these long winter evenings, is an appropriate time to study the digestive ability of his flock, that he may develop their fullest capacity for manufacturing his raw material into more valuable products.

FEEDING STOCK.

Overfeeding is as injurious as underfeeding. Probably more sickness occurs, especially among horses, from this cause than any other. In addition to this evil effect much fodder is wasted when stock are supplied with unlimited quantities. Even if it is only within their reach, they will pull it down, pick out the choice bits and waste the remainder. There is a certain amount which is just right, and either more or less than that is an evil to be guarded against. Owners of stock should watch this, as being more interested and better capable of judging than the majority of hired men. The proper supply may be measured by the appetite of the animal, which in good health will lead it to eat all that is necessary. When any is left in the manger the beast has been overfed, and when it has just enough it will eat and enjoy its allowance and lick its trough clean. It is difficult to manage this without direct occasional supervision. "Where the owner is, the crib is clean," and in his absence much waste is almost certain to occur.—*Hearth and Home.*

NATIONAL SWINE BREEDERS CONVENTION OF UNITED STATES.

This Convention held its meeting at Indianopolis, commencing Nov. 20th. The committees on the several breeds of swine presented their reports. From the report of the committee on Berkshire swine, we learn that the improved breed has been traced to a remote date, a Mr. Wallbook, of Ryham, Berkshire County, having possessed a Berkshire hog as far back as 1780, very like the swine bearing this name in modern times. The Berkshire swine, it is said, were then generally large and coarse, though the improved breed existed at that time in various districts.

The first importation of Berkshire swine to America, of which there is any record, was in 1823, by Mr. Brentnall, an English farmer, who settled in an English neighborhood in New Jersey. The second was made by Mr. Hawes, another English farmer, in 1832, and others soon followed with larger importations. All these swine were similar in size, markings and quality to the Berkshire of the present day.

Characteristics and marks of the Berkshires, as reported by the committee and adopted by the Convention.—Face, short, fine and well dished, broad between the eyes. Ears, generally almost erect, but sometimes inclining forward with advancing age, small, thin, soft and showing the veins. Jowl, full. Neck, short and thick. Shoulder, short from neck to middling, deep from back down. Back, broad and straight, or a little arched, Ribs, long and well sprung, giving rotundity to the body; short ribs of good length, giving breadth and levelness to the loin. Hips, good length from point of hips to rump. Hams, thick, round and deep, holding their thickness well back and down to the backs. Tail, small and fine; set on high up. Legs, short and fine, but straight and very strong, with hoof erect; legs set wide apart. Size, medium. Length, medium; extremes are to be avoided. Bone, fine and compact. Offal, very light. Hair, fine and soft, no bristles. Skin, pliable. Color, black, with white on feet, face and tip of tail, and an occasional splash of white on the arm, while a small spot on some other part of the body does not argue impurity of blood, yet it is to be discouraged to the end that uniformity of blood may be obtained. White upon one ear, or a bronze or copper spot on some part of the body argues no impurity, but rather a reappearance of original colours.

Size of pigs most profitable:—It was claimed that a medium size is best for packers use, as well as for all purposes. The weight most desirable is 350 pounds, or 300 to 350 pounds.—*Abriged from the Iowa Homestead.*

THE WHEN, WHY AND WHEREFORE OF CORN FODDER.

The corn plant, like all other vegetable structure, has but one object or aim in its growth, and that is to produce seed. It is engaged nearly its whole life in storing up large quantities of starch, which is to be used when the pressing occasion arrives, or the seed vessels mature, to form by some subtle mysterious changes the rich nutrient principles which are found in the seeds. As soon as this struggle is over, the corn plant, like all animals, dies a natural death. It is not necessary for the frost to strike it; it dies from simple exhaustion. The proper time to cut and feed corn stalks is during the four or five weeks which succeed inflorescence, or in other words they should not be cut until the flower is fairly developed, and the ear commences to form, and any corn that is so planted that the ear cannot form and mature is practically worthless as fodder. Farmers may learn from these facts that corn designed to be cut for fodder should be planted at two or three periods during the season; some fields quite early, others somewhat later, and still others as late as is safe. In this way when the hot, dry months of July and August are reached, and the pastures falter, a supply of fodder is secured, at a proper stage of growth to afford the largest amount of nutriment.—*Live Stock Journal.*

The Stranger.

Old folks and young folks, did you never see a stranger among you? Do you think you could ever act as barbarously as these wild animals are doing? What can be their reason for such treatment? It carries its own tale. You can enlarge on it, perhaps with profit to yourselves.

We hope in the next issue to give you some illustrations of Canadian stock. The cuts are in progress, but not ready for this issue.

THE OPINION OF AN AMERICAN JOURNALIST ON THE AGRICULTURE AND STOCK-BREEDING OF CANADA.

A late issue of the *Prairie Farmer* says: "The people of the "States" are always inclined to look upon their neighbors in the Dominion as a very slow-going people, who do not increase very fast either in numbers or evidences of progress and prosperity. Still statistics show that during the past ten years Canada has received an addition of over 40 per cent. to her population; while during thirty-three years her population has increased from half a million to two and a half millions. It is claimed, that as a rule, the emigrants to Canada are superior to those who come to this country, and that they are mainly English speaking people. Agriculture in the Dominion is in a most flourishing condition. If the yield of the leading crops there do not compare with those of the Western States, the money value of them is greater on account of the cheap water communication to the sea board. The character of the live stock all along has been improving, owing to the skill of the breeders, and the ease with which fine animals are obtained from Great Britain. The system of general education there is excellent, and is carried on much less expensively than here. The University of Toronto has the finest college edifice on the continent, if, indeed, it is not the finest in the world. The reputation of this University, as well as those of Montreal, stand very high among the great literary and scientific institutions of the world. No country, perhaps, can boast of a more moral, intelligent and law-abiding people than those found in Canada. If the cities there have not increased like our own, their growth has been a steady and substantial one. The Grand Trunk Railway, with its numerous connections, was an enterprise only eclipsed by our Pacific road, which was chiefly built by means furnished by the general government."

ROOTS AND OIL CAKE FOR SHEEP.

If growers of combing wools should raise sheep primarily to produce mutton: should attend to the breed, and keep their sheep well fed, and care for them generally; and should also try and mature them early, so as to sell the carcase—we should have wool from well-fed, young, healthy, strong, well-bred, fat sheep, which is just the wool wanted for combing and delaine purposes. Farmers cannot keep these large sheep on lean pastures, with but little to care of them, and have good wool. And the great reason combing wool sheep run out when brought from England and Canada is, that they do not get the same care and treatment they had in these countries, and are often kept on soil they are not adapted to, and are not fed sufficiently. The wool from a Leicester sheep that has been in the United States two years is generally harsher, leaner and worth much less than it would have been if the sheep had stayed in Canada or England. Now this will not always be so, for growers will yet learn that these large sheep need more to eat than the small Merino, and their food should not consist of Indian corn, but they should have some roots, mangel wurtzel and oil cake. When sheep are fed on corn they are too hot and feverish, and the wool becomes harsh and brittie, while a proper supply of roots and oil cake with other food will produce soft, sound elastic wool.

MEAL TO BE FED WITH STRAW.

When straw or hay, cut or whole, is well wetted, and finely ground meal is sprinkled on and mixed with it, the whole goes, in like manner, to the first stomach, and the action of every part of the stomach is made available for complete digestion. Not only can the dairyman derive better results from meal when fed in this way, but more of it can be consumed in a given time; because more of it can be fed with-

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out producing scouring. Meal produces scouring when more is fed than can be digested. It is imperfectly digested meal, more than anything else, that disturbs the bowels in this way. Less meal will produce scouring in cattle when fed alone than went fed mixed; evidently because, when mixed, by having the action of the first three stomachs upon it, the work is well along by the time it reaches the last division, and hence will be done not only more thoroughly, but also more easily and rapidly.

SEVENTH MEETING OF NORTH NORWICH FARMERS' CLUB.

President's Address.

The plough has been the emblem of agriculture for ages. It has always been considered as the beginner of all the work on the farm. Without it the farm, for arable culture, was useless. Being so very important, therefore, we are not surprised to find the ancients possessed of instruments analogous to the plough of the present day. Then ploughs, however, were very rude in construction, being, in some cases, a simple sharp pointed stick drawn by some beast of burden. We are surprised though, to learn that with this very rude implement, the ancients used to raise crops rivalling, if not excelling, ours, with our almost perfect plough, in this, the great day of advancement.

Within the last fifteen years the plough has undergone a wonderful series of changes as regards its form and the power applied to work it. Twenty years ago the sole object of the farmer with the plough was to turn over the ground as quickly as possible. It is not so now. The old farmer used to be able to turn over, *not plough*, two and a half acres per day, whereas, now if we plough an acre and a half in a day we call it a fair day's work. You are all, no doubt, more or less acquainted with the old fashioned plough. The old number four and premium ploughs are not easily forgotten if once seen. Those were the days when the farms were skinned; now is the day when the penalty is to be paid. After having used the old ploughs with their wide, shallow furrows, as long as they could make it pay, they introduced the narrow furrow but deep running plough. The consequence was the farmer brought up from beneath virgin soil, and his crops improved; also he could not plough so much in so short a time, and consequently he could not raise as much wheat. This caused him to rotate other crops with wheat, and thus, all things working together, the standard of Canadian farming raised.

In coming right to the point we ask why do we spend so much time, labor and money in ploughing? To answer this question we should have to go to the chemist, and even he could not answer it fully, because the soil is a very complex mixture of elements, which differ in number and kinds in different localities. Thus we might have a soil composed almost entirely of inorganic matter; another made up almost entirely of organic matter, as muck; another containing a mixture of the two; another of a sandy nature; and another of the stiffest clay.

The first great practical thing we look at in ploughing is the loosening of the soil and the admission of the air. Air is necessary in the soil, for without it seeds will not germinate. This has been proved by some experiments which were made to induce germination of seeds in other gases, which failed.

By the soil being loosened the roots of plants are permitted to descend with greater ease, consequently the plants make a more rapid and vigorous growth. Furthermore in connection with the admission of air, the vegetable matter which may be in the soil is more or less decomposed. To decompose vegetable matter naturally, you must have either free oxygen gas or else some compound which contains so much oxygen that it will readily part with some of it. All soils contain more or less iron. Now there are two rusts or oxide of iron found in the soil, one which is poisonous to plants and the other which is not. The one which is poisonous has not as much oxygen as the other, and is in the sub-soil to a greater extent than in the soil, because the air does not get to the sub-soil enough to change it into oxide or rust, which is not poisonous. Now on some farms if deep ploughing is introduced the crops are ruined for some years, just because of this poisonous oxide of iron being in the sub-soil in large quantities. Some years ago near Brantford the farmers introduced a plough they called the jointer. It was what is called a trench plough. With this plough, to which three or four horses were attached, they turned up some of the sub-soil. When harvesting came the crop was wanting. Of course they blamed the plough and its advocates for the injury, when it was their own ignorance of a principle long known and explained.

Let us now consider the requirements of common ploughing as regards style of work. It seems to be the object of every ploughman to turn a *fine* looking furrow, which is without crook, jog or any such thing. In ploughing sod if the ploughman can turn the furrow so as not to crack or crumble it, he thinks he is second to none in the country. Now, I do not mean to undervalue a straight furrow, although I do not care about the ploughman being over careful to prevent the furrow crumbling. The more it crumbles the better—it makes less work for the harrow. Supposing the furrow moderately straight, the first thing then to look at is the average depth. By this I do not mean the average depth of the length of the furrow, but of the width. Thus, suppose your man is ploughing, and for curiosity you measure the upturned edge of the furrow slice, and find it to be six inches; well you say that is deep enough. But then suppose you cut out a piece of the furrow and measure the under edge, and find it to be only four inches, what is the average depth? Simple enough. Only five inches. No wonder your man's boot heel's run over to land. I would therefore lay special stress on this point. Let the bottom of the furrow be of uniform depth. Taking the above instance as an example, it is plain that the ploughman is leaving just one-sixth of the ground untouched. In a six acre field he only turns over five acres six inches deep.

Leaving the common plough let us now look into sub-soiling. Sub-soiling is the act of loosening the sub-soil without bringing any of it to the surface. To sub soil two ploughs are required—the common plow to go ahead and turn the soil and the sub soil plough to follow after and loosen up the bottom of the furrow. Sub-soiling is a practice which is eminently beneficial if performed with caution, yet it is one which, through ignorance, has been much abused.

The first thing gained by sub-soiling is a deepening of the soil. The soil differs, as you all know, from the sub-soil by being of a darker color. This dark color is caused by the vegetable matter, which the soil always contains in greater quantities than the sub-soil. After sub soiling the roots of all the plants go deeper in the earth—perhaps down as far as the ground is loosened. Consequently when the plant dies its roots are left in the earth, part in the soil and part in the sub soil. If enough of rot is left in the sub soil the soil is deepened or assumes a dark color, and then the common plough can be run deeper. We would therefore naturally suppose that plants with long tap roots, such as red clover, would be well adapted to deepening the soil. By sub soiling the soil is enriched. However, as in the deepening of the soil, the simple act of sub-soiling does not increase the richness of the soil. It is the plant that flourishes better after sub-soiling that does the enriching. Plants are like pumps, but being a little better made than our common pumps they can pump both up and down. They pump *down* from the air, and pump *up* from the soil and sub soil. If the sub soil is loosened they send their roots down to greater depths and pump up food into its stem and leaves, and thus, if the plant dies on the ground, the soil is enriched by the matter drawn from the sub-soil.

Plants thrive better after sub-soiling. This is owing to the fact that the plant's roots encounter less opposition after sub-soiling is performed, and therefore descend to greater depths in search of food. It is well known that land, if kept open by working, is always moist. So it is with the sub-soil when loosened—it contains and holds more moisture than before it was broke up. All our nice *growing showers*, as we call them, go right down out of the scorching rays of the next day's sun. They are held by the sub-soil and fed out gradually as the plant is in need, with but little loss by evaporation. Suppose the sub-soil is not loose. Then the shower only wets the soil, because the sub-soil, in the summer, is so hard that a shower can never penetrate it. Consequently the water which falls is quickly evaporated and so much of it lost.

But, with all its benefits, sub-soiling is of comparatively little use on heavy soils, unless preceded by the drain. The sub soil plough is the great auxiliary to the drain. In playing this part it allows by the looseness given the sub-soil by it the water from above to descend through to the drain quicker thus enabling the drain to perform its work in a shorter space of time. In some places, such as very stiff clays, the drain in fact would not pay for at all unless followed by the sub-soil plough. Seeing, therefore, the beautiful harmony which exists between the drain and the sub soil plough in improving land, if they be taken up in their right order, viz., first the drain and then the sub-soiler. Let us now look at the discordance between them if that order is reversed, as well as the evil produced if the sub-soil plough be used alone. First take the sub-soil plough alone, and let a farmer use it at that season of the year which would insure its best advantages. It does its work well, and to all appearances you would see no advantage in having the land drained. But wait till the spring. At that time of the year it would seem as if all the water off the place had collected in that sub-soil; and why? Simply because you have made the dish which held to much water before to hold still more by deepening it. But this is not all, neither is it the worst evil which follows such a course. This water, being in the sub-soil, is harder to evaporate, for that is the only way by which it can get away, consequently the land remains wet for a longer period of time. Further, the original cementing materials which before hardened the sub-soil will sink to a lower level and then form another hard pan, through which water will hardly pass, besides being so low down that any future sub soiling will not break it up. The consequence is the field is worse than it was at first, as well as almost past improvement. Manures also, would be almost useless, because they will not decay in an excess of water. Such a course adopted by a farmer, and followed up with such results may well cause his evil temper to rise, and him to declaim sub-soiling to be the greatest curse ever introduced by high farming. But whose fault is it? Surely his own. The sub-soil plough is a great improver, but, like all other profitable things, if not used in its proper order is an injury. Suppose the drain is put down after sub-soiling what is the result? The drain will not be put down at least for two or three years after, consequently, during that time the same evils will follow as before mentioned. After the drain is down it does not do its work very well, because of the second hard pan formed after sub-soiling, whereas if the drain had been down before the ground was sub-soiled all the cementing materials would have passed into the drain.

In reviewing these remarks, how plainly can we see the intimate connection between the drain and the sub-soil plough. Neither one produces its compliment of good without the other. The drain alone may carry away larger amounts of water, but how much accelerated is its work if followed by the loosening action of the sub-soil plough. On the other hand how useless are all attempts by sub-soiling to *permanently* improve the farms unless preceded by the drain.

As far as my experience goes in sub-soiling I may say that I have tried it, with marked success, for the carrot. The root was a great deal longer and grew right along through dry and wet weather. I have dug down by the sides of the carrots when they were about as big as a pencil at the top, and found them a foot or eighteen inches long. However, I was careful to select a piece of ground of a very rich, deep loam. I would not in any case sub-soil extensively before draining. Still I would not mind trying a piece of nice high and dry land, especially a field which suffered greatly from drought.

For a sub-soil plough I took a common iron beam plough, took off the mould board, bolted the handles together had a draught rod attached to the landside and hitched the clevice to this rod. The draught being thus so much on the land side of the plough makes the plough follow in the tracks of the off horse.

We now pass on to the trench plough. Trenching differs only from common ploughing in depth. Where common ploughing rarely exceeds a depth of eight or ten inches trenching goes down as far as eighteen or twenty, and even thirty inches. As a practice it requires great caution. Sometimes it is the making of a farm, and at other times its ruination. If the sub-soil contains large quantities of iron it would not do to trench. If, on the other hand the sub-soil does not contain much iron, but instead some compound which would be very desirable, such as lime, plaster &c., why then trenching is just the thing. Take a farm which has been shallow ploughed or *skinned* as we call it. The crops previously have been very light. Trench plough that farm and the crops will equal if not exceed those on the best farm around. But, bear in mind, the land should be drained first.

Other things being right for trenching there are still two evils to be guarded against in trenching, and they cannot always be well managed. In the sub-soil there may exist the eggs of some insect, which, if brought up in the warmth of the sun, may prove a scourge to the farmer. There may also be the seed of some noxious weed in the sub-soil, which if brought up would prove a great nuisance, but if left below would do no harm. With regard to the insects fall ploughing may destroy them, but the weeds we cannot get over.

But it is not on every farm that enough terms can be found to sub-soil or trench either one. There is, however, a Canadian inventor who claims to have a common sub soil plough combined in such a way that one team, or at least three horses, can draw it at a depth of twelve inches. This is not very deep sub-soiling, but even at a depth of only twelve inches I cannot hardly conceive how a span of horses can do the work with any sort of ease. The only way that I can see is for farmers to combine their teams, or in other words, to change work.

After the President's speech most of the members present gave their ideas. I merely give the conclusions drawn from their remarks, as far as they agreed in opinion. Only one member advocated the fine-looking prize ploughing made by our prize ploughs. All the rest advocated the use of (on moderately heavy lands) the jointer plough for ridding the land of spear grass and other troublesome plants. Most agreed that sod, if ploughed in the spring by our nicely combing Scotch ploughs, suffered very severely from the drought. The idea seemed to be that for fall ploughing the furrow should be combed up to allow of better drainage, always ploughing up and down the incline of the field, but in spring the furrow should be laid nearly flat, in order to reduce the effects of the droughts.

Our meeting in January is to be the annual meeting, and we expect to procure a lecturer especially for the occasion. And now, Mr. Editor, I think I have done my duty this time at least. This, of course is my last letter for this year, and so in conclusion I wish you and the readers of the ADVOCATE a "Merry Christmas and a Happy New Year." Hoping to have something more in next year's volume,

I remain yours, &c.,
B. J. P.

New Durham, Ont., Dec., 1872.

THE "ROMAN BIT."

Some of our contemporaries, says the *Broad Arrow*, have called the attention of the public to the "Roman Bit," an invention patented by Count Vincenzo di Tergolina, and which, so far as we can judge of its merits from our own limited experience, is likely to prove an acquisition of considerable value to our cavalry regiments. The desirability of being able in cases of necessity to restrain the horse by pressure applied to the nose, has long been recognised, but hitherto the efforts made to apply the principle practically have met with little success. Count Vincenzo di Tergolina seems to have been completely successful in this respect, and has produced a bit which is no less humane in its application to the horses mouth than it is powerful and effective in the hands of the rider. One of its merits is that a runaway horse cannot seize the bit between his teeth, and another is that it can be exactly adapted to suit the temper of the horse, and it is at the same time so easy to handle, owing to its powerful leverage, that it reduces the strain on the horseman's hand to a minimum.

ROOT UP THE WEEDS.

Two boys, John and Will, were employed by a gentleman to keep the paths of his garden weeded. John contented himself with taking off the top of the weeds. He soon cried, "I have cleared my path;" and, having swept away the leaves he went off to play. Will was much longer at work, for he stopped to take all the weeds up by the roots, and he was well tired when he got home. But the rain came down in the night and all the next day, and, when the boys master went a few days after to look at the two paths, John's wanted weeding as much as at first, while Will's was clear and only needed a few turns of the roller to make it quite neat. So John was sent back to do his work properly, and very tired he would have been had not Will good-natureuly helped him to finish his task. Only *thorough* work is worth doing. Faults only half uprooted will appear again and again, and we shall almost despair of curing them. Will you remember this?

USEFUL OINTMENT.

A glycerine ointment of much repute for chaps and excoriations is made as follows:—½ oz spermaceti melted together with a drachm of white wax and 2 fluid ounces of oil of almonds by a moderate heat; the mixture is poured into a mortar, when a fluid ounce of glycerine is added to it and rubbed till the ingredients are thoroughly mixed and cold.

A WORD TO OUR READERS AND CORRESPONDENTS. We are obliged to lay over for our next issue several orginal articles, communications, editorial notices of our exchances, and other interesting matter. This is partially caused by the time hallowed Christmas tide occuring at the time of our getting to press. Our correspondents, we are happy to say, are increasing in number, and their communications on matters connected with agriculture are quite an interesting feature in the ADVOCATE.

The Belfast (Me.) Journal says: "Young lady clerks are increasing among the stores in this city." That's right; let them increase and multiply. It is a Bible injunction.

Orchard and Forest.

THE SPANISH CHESTNUT.

A correspondent of the *American Rural Home* advises the cultivation of this tree:—

Many trees of Spanish chestnuts in this country bear large crops annually. This season the nuts were not so large as usual, nor the price so high, but I heard of one man who sold from a single tree to the amount of $80, and I know of other trees producing from four to five bushels each. They generally sell readily in the Philadelphia market at from thirty to sixty cents a quart, according to size and season.

An acre of ground planted with Spanish chestnuts would be much more profitable than the same space planted with apple trees; nor would it be much less profitable to plant out the American chestnut, by carefully selecting those bearing large nuts. A tree here and there may be found bearing nuts almost equal in size to the Spanish. By propagating only from such, we might in time rival the latter in size. In other respects they are now superior. It is only roasted, or boiled, that the Spanish chestnut can be compared to the American. Should chestnuts become more plentiful and cheap, they might, in time, here, as in parts of France, Italy and Spain, be ground for food and make a pleasant and wholesome addition to our *materia alimentaria*. Spanish chestnuts, like our own, differ greatly in size. To grow them with certainty of large size, the best plan is to cut grafts from trees which produce the finest. They succeed perfectly if grafted on American chestnuts. They require but few years to come into bearing.

GROWING FOREST TREES.

The *White Ash* can be grown from seed planted in drills and then cultivated, thinning out by cutting or transplanting. Plant the seeds either in spring or fall. If kept over it should be wintered in sand which is slightly damped.

The *Cottonwood*, for large quantities, is best grown from cuttings. Cut in one-foot lengths and bury in moist, but not wet earth, and set out in spring.

The *Honey Locust*. Keep the pods till spring in a dry and cool place, if not convenient to plant in fall. If planted in spring, the seeds must be immersed in warm water to soften the horny shell. If planted in the fall this is not necessary, but some may not grow till the second year.

Basswood or *Linden* seed can be sown when ripe, or kept in damp sand till spring, most of which will germinate the first season.

TO MAKE GRAFTING WAX.

Grafting wax is useful in pruning to cover wounds and hence it is useful to have on hand even when not expecting to graft. The proportions of ingredients (tallow, bee wax and rosin) are one, two and three in the order named, though the London *Garden* says that, where beeswax is very expensive, one-third less will do. Stir well when made and keep in a cool place.—*Country Gentleman.*

[We will add—To keep it from sticking to the hands and fingers when mixing or applying it, keep them well greased; if you do not it will stick closer than a brother.—As'ST ED.]

RAPID GROWTH OF THE CHESTNUT.

A correspondent of the *Rural New Yorker* thus relates the growth of a chestnut seedling:—

Seven years ago, while taking down the old rail fence in front of my place, preparatory to erecting a new board one, I found several small chestnut seedlings among the shrubs, briars and weeds which the former owner had allowed to grow by the roadside, in the true shiftless farm style. The road being quite narrow, I placed the new fence three to four feet inside of the old one, and wherever a promising tree or sprout occurred in the proper place, it was preserved for a shade tree.

One little chestnut tree, not more than five or six feet high, I noticed in particular, because it had been twisted or grown in naturally among the rails, and was very crooked; but, as it stood in the exact place where a shade tree would be desirable, I carefully disentangled the stem and remarked to my workmen that it would yet be a handsome tree.

I have just measured that tree, and it is twenty-eight feet high, stem at the base thirty inches in circumference, and at six feet from the ground, twenty inches. The stem is as straight as a reed, except a slight crook near the ground. Last season it produced a few nuts, and this year the ends of the branches bend with their loads of large clusters. This tree has received no care, except pruning, the soil about its roots being covered with a tough sod. Other trees upon my place have made equally as good growth, and I only mention this one for the purpose of showing what might be accomplished in a few years, if a man will only make a beginning.

SPROUTING WHITE THORN SEEDS.

What Lindon says of growing the hawthorn:—

"When the hawthorn is to be raised from seed, the haws should not be gathered until they are dead ripe, which will be in October or November. As many haws contain more than one seed, they ought not to be put into the ground entire, but if they are to be sown immediately, they must be macerated in water until the pulp is separated from the nuts; and the latter should then be mixed with dry sand, to keep them separate and to enable the sower to scatter them equally over the surface.

"But as the seeds do not come up until the second year, a saving of ground is made by keeping them the first year in a heap mixed with a sufficient quantity of soil to prevent them from heating, and to facilitate the decomposition of the pulp. These heaps are kept in the open air and exposed to the full influence of the weather; care being taken to turn them over frequently, at least once a month, so as to equalize this influence. When the seeds are not to be prepared in a heap, they should be sown in November or December, as soon as separated from the pulp; but when they are to be separated by decomposition, in what is technically called a rot-heap, they need not be sown till the February or even the March of the second year; by which means fifteen or sixteen months' use of the soil is saved. They may be sown thinly in beds, the seeds being scattered so as to be about one inch apart every way, and covered about a quarter of an inch."

PEACH SEEDLINGS.

A correspondent of an American paper writes thus:—

"Three years ago I planted a quantity of pits from yellow peaches which we had raised from budded trees. This season about a dozen of the young trees fruited. All bore yellow peaches as large as those on the original trees, which are still bearing, and some much larger."

The 'Prairie Farmer,' referring to this communication, expresses the opinion that the peach reproduces itself more generally than is commonly supposed.

[There is no tree more easily raised than the peach tree; none grows more freely from the pits, and its succeeding growth is rapid. I have had them to bear in the time mentioned. The only labor necessary in growing them is to plant the peach stones in a seed bed, and transplant the young trees when sufficiently grown. Hundreds of them might be raised, even were the fruit not taken into consideration, to be planted for ornament and shade.—The foliage is very pretty and the trees, when in blossom, add greatly to the attractiveness of a farmer's garden, or the entrance to his house; and whatever adds to the beauty of the home and farm, increases in many ways its value.—As'ST ED.]

Recipes.

The juice of bean pods is a sure cure for warts.

An oyster shell put into a tea-kettle will prevent its being covered with scale.

Lemon juice will allay the irritation caused by the bites of mosquitoes and flies.

SHAVING FLUID.

Take of white hard soap (in shavings) ½ lb.; alcohol, 1 pint; water, ½ pint; perfume at will. Put them in a strong bottle, cork close, set it in a warm room for a short time and occasionally agitate it briskly until solution. After repose, pour off the clear portion from the dregs into clean bottles for use, and closely cork them at once.,

TO PREVENT THE INCURSIONS OF MICE.

Strew wild mint where you want to keep the mice out, and hey will never trouble you.

FOR THE LAUNDRY.

A new mode of washing linen has been introduced and adopted in Germany. The operation consists in dissolving two pounds of soap in about three gallons of water as hot as the hand can bear, and adding to this one tablespoonful of turpentine and three of liquid ammonia; the mixture must then be well stirred and the linen steeped in it for two or three hours, taking care to cover up the vessel which contains them as nearly hermetically as possible. The clothes are afterwards washed out and rinsed in the usual way. The soap and water may be reheated and used a second time, but in that case half a tablespoonful of turpentine and a tablespoonful of ammonia must be added. The process is said to cause a great economy in time labor and fuel.

When linen has been scorched, use the following remedy: Add to a quart of vinegar the juice of half a dozen large onions, about an oz. of soap rasped down, a quarter of a pound of fuller's earth, an ounce of lime, and one ounce of pearl-ash. Boil the whole until it is pretty thick, and spread some of it on the scorched part. Allow it to remain until dry, then scrape it off and wash. Two or three applications will restore the linen, unless so much scorched that the fabric is destroyed.

WAYS OF BAKING GRAHAM FLOUR.

By this time everybody knows how to make Graham "gems" by the usual method, which is simply to stir the batter just a little stiffer than gridle-cake batter, and bake quickly in a very hot oven. This thing is certain, the thinner the batter the hotter must be the oven. It is also the case that gems mixed with watch require a hotter oven than those mixed with milk.

So, if you can not have a very hot oven, either make the mixture of simple Graham flour and water quite thick, or mix the flour with milk. Skimmed milk is good enough, though new or creamy milk makes the bread more "short," of course. Have the gem-pans very hot (I set them in the oven before filling them), and then a scrap of cloth with the least bit of butter upon it, rubbed over the irons, will prevent the gems from sticking.

Housekeepers who have no gem-pans can make very nice warm Graham bread for breakfast in several ways. Make a dough of flour and sweet milk (skimmed or creamy, as you prefer or find convenient) stiff enough to roll out easily. Knead this a little, roll it an inch thick, and cut it into diamonds; or cut off strips and make it into rolls with the hand; or roll it into balls two inches in diameter, flattening them a little or not at all, as you choose; or roll the dough very thin and cut it into square crackers, pricking them well to prevent their puffing. Crackers are best with some cream in the mixing, and crackers require more kneading than diamonds and rolls, which are expected to be soft inside. Any of these kinds of bread—diamonds, rolls, balls and crackers—are baked upon the grate in the oven, which should be wiped off clean. They will not stick to it, and will bake very fast. I recommend the crackers in particular. All these breads are sweeter and better. I think (and we all think so at our house), without salt, but most people prefer salt in their crackers.—*Hearth and Home.*

Miscellaneous.

HOW TO CHOOSE YOUR WIVES.

Cobbett, in his advice to young men, insists that a wife shall not only know how things ought to be done, but how to do them. Eating and drinking come three times every day, and however little we may in the days of our health and vigor care about choice food and cookery, we very soon get tired of heavy or burnt bread and of spoiled joints of meat.

Cobbett conceived that his model wife should be able to make bread, and if he could have seen the baker's stuff that now passes by that name, he would doubtless have denounced it in vigorous terms. He traces the progress of a husband's dissatisfaction with an unskilful wife's manipulation of his food. He bears it for a time or two, but at the third time he laments inwardly, at the fifth time it must be an extraordinary honeymoon that will keep him from complaining. If the like continues for a month or two he begins to repent, and then adieu to all anticipated delight. He discovers when too late that he has not got a helpmate, but a burden.

Returning to the class for which he especially wrote, he says that it would be a very good rule to have nothing to eat in a farmer's or tradesman's house that the mistress did not know how to prepare and cook. "Never fear the toil to her; exercise is good for health, and without health there is no beauty."

Besides skill in domestic affairs, he insists strongly on good temper in a wife.—When a man is actually "engaged," as the phrase is, he cannot easily draw back without discredit, and yet it often happens that he only then begins to know anything of the woman whom he undertakes to make his wife. Temper is a very difficult thing to ascertain beforehand. Smiles are so cheap, they are so easily put on for the occasion; and frowns are, by the lover's whim, interpreted into the contrary.—Scolding is bad enough, but far better than sulks. "If you have your eyes, and look sharp, you will discover symptoms of this, if it unhappily exists."

The great practical advantage of female beauty is that it tends to keep the husband in good humor with himself—"to make him pleased with his bargain."—Beauty is, in some degree, a matter of taste; but still there are certain things that all men admire, and a husband is always pleased when he perceives that a portion at least of these things is in his own possession. Besides, a man finds out after marriage that it is not "a real angel" of whom he has got possession, and there are so many dampers of passion and incentives to cool reflection, that a good deal is wanted to keep a husband in countenance in this his altered and enlightened state.

Cobbett does not go into the question what constitutes beauty. He contents himself with warning his reader against the consequences which are likely to result from marrying a woman "whom he does not think handsome."

The marks of an industrious disposition for which a man should look in a woman are curious. He is to beware of "a lazy tongue," by which Cobbett means not a silent woman, but an indistinct speaker. Further, he quotes a proverb—"Quick at meals, quick at work." Another mark of industry is "a quick step and a somewhat heavy tread, showing that the foot comes down with hearty good will." He does not like "sauntering, soft-stepping girls," and a sauntering girl is sure to make a mawkish wife and a cold-hearted mother. It would have been interesting to hear what indications of character Cobbett would have drawn from the Grecian bend, and from that peculiar method of walking which is necessitated by the use of excessively high and narrow boot heels.

Early rising is another of Cobbett's marks of industry which it is to be feared his modern readers will have difficulty in discovering in the young ladies among whom they will have to choose. In the middle rank of life, he says, late rising in the wife is "certain ruin," while early rising preserves health and prolongs beauty.

Cobbett's favorite bill of fare for a week was to roast a leg of mutton to-day, eat it cold to-morrow, and hash it next day; and then boil a leg of mutton and proceed as before. During a year's imprisonment he had for dinner one mutton chop daily, and desired nothing more or better.

If he was really in his house that which he represents himself in his books, it appears probable that his domestic felicity must have been occasionally interrupted by his wife's displeasure at what would be called in homely language his poking his nose into the kitchen. But although we may smile at the meddling pedantry of his rules, we cannot enough admire the breadth and nobility of his principles.—Such a man as himself, he says, has no real cares; such a man has no troubles. "I have had all the numerous and indescribable delights of home and children, and at the same time all the bachelor's freedom from domestic cares." To this cause—that is, to a well-chosen wife—far more than to any other, he ascribed those labors which he certainly did not underrate.

Correspondence.

[We ask for communications and are pleased to receive them whether they are in opposition to our views or not, but we do not hold ourselves accountable for them. Freedom of the p ess is the only way to ascertain the correct views on any subject.]

THE FARMERS' ADVOCATE.

SIR,—Enclosed find my subscription to the ADVOCATE for 1873. Your paper should be placed in every farmer's family in the Dominion, and it should go free by Government grant, as it would be the best means of keeping the Treasury full.

W. ABBOTT.

Ottawa, Dec. 6th, 1872.

TURNIPS—YIELD PER ACRE.

SIR,—I send you a very easy method of computing the weight of the turnip crop :—

Where turnips are drilled about 28 inches wide and thinned to 18 inches apart in the row, the weight of an average sized turnip multiplied by 200 will give the number of bushels per acre. If the turnips are thicker or thinner than 18 inches, weigh the produce of a rod in length of a drill, divide the sum by 11, and multiply by 200 as before.

I will now give you my reason for this rule : While engaged among my turnips the other day I commenced to calculate the probable amount of the crop per acre. I supposed 4 lbs. to be the weight of an average sized turnip, and 18 inches apart gives 11 turnips to a rod in length. 28 inch drills give about 7 to a rod wide : 160 rods make an acre, which would give the following result :—4 x 11 x 7 x 160 amounts to 49,280 lbs., which, divided by 60, gives 821 bushels. This amount divided by 4, the average weight of turnips, gives a total of 205 bushels.

Testing the same rule by different weights of turnips, it invariably produced 205 and a fraction, hence I concluded that an average turnip x 205 would give the number of bushels per acre ; or, making allowance for turning lands in a field of say 200.

The more accurate way, however, is to weigh the produce of 1 rod in length, divide the sum by 11—the number of turnips in a rod, 18 inches apart—and multiply by 200, or, in close reckoning, say 205.

No definite rule can be laid down, as people vary in the width of drills and plants, but I reckon the above a good medium, and any one, though not a scholar, can reckon the weight of his own crop.

In drills 30 inches wide the number to be used would be about 190 ; and in drills 33 in. wide it would be 176. Yours truly,

JAS. ROBERTSON.

Oro, Nov. 5th, 1872.

P. S.—The youngsters are very much pleased with Uncle Tom's Column. J. R.

COMMENDATORY.

SIR,—Herewith I enclose the subscription for your most excellent paper, which is doing a great deal of good amongst the farmers of western Ontario, who are beginning to realize the consequences entailed upon them from having recklessly overcropped their lands for a long succession of years ; and as a necessity, they must now adopt the recuperative measures which your paper so judiciously recommends to their notice, such as deep culture, subsoiling, ploughing under green crops, top dressing with cheap and easily obtained materials, as swamp muck, peat incorporated with lime which has been previously slaked with strong brine or mixed with salt, all of which I have tried upon my farm near Paris with good general results, and next year I hope to give you more detailed accounts of my operations with particular results. Yours respectfully,

T. W. COLEMAN.

Paris, Ont., Nov. 29th, 1872.

THE EPIZOOTIC IN CINCINNATI.

SIR,—Not having seen a London paper for two weeks, I am ignorant as to whether the horse disease is still prevalent with you or not. If the results arising from it have affected the citizens of London as they at present affect us, I can readily sympathize in proportion with you if you think it would be of any use !

Everyone feels it—from the richest merchant to the poorest workman, and, of course, it is the latter who suffer the more. Were it not for the oxen, bulls, cows, goats and everything else they can get in harness, trade would be at a stand still, and a crisis would occur which, taking it from its starting point, has never before been experienced.

Your readers will, perhaps, be interested if I give them a slight idea as to how the Epizootic is troubling us just now, and I will also relate what has come under my own notice.

Next to bread, fire is an important staff of life (if we can call it such) and in this city, where cordwood is almost unknown, coal is used for fuel. Cincinnati, having a population of about 900,000, consumes an immense amount of it, and hundreds of horses (sometimes three to a wagon) are employed to draw it to all parts of the city. The better portion of these horses are sick ; the consequence is, the means of conveyance is limited, and to have coal conveyed to your house at present you will pay an exhorbitant price for it, nearly treble what it cost a week ago. Those who can do their own hauling are safe, but what is to become of the poor, and winter upon us?

Of the many street-car lines in the city, one, only is in operation. One company has 250 horses ailing, and the others have their portion of sick animals. These cars, as many of your readers are aware, run from one end of the city to the other in all directions. They enable a person who resides in the suburbs to reach his place of business in a short time, for the sum of five cents, and he can return home in the same manner. In fact, they have become a public necessity, and cannot well be dispensed with ; and the inconvenience caused by their temporary stoppage is not well understood by outsiders. But there is no getting over the difficulty, and people console themselves in talking about their "poor feet," and wish they were shoemakers ! This alone will tend to still more elevate the estimation of the horse in the eyes of mankind—of Cincinnati, in particular.

What has caused most anxiety amongst the citizens, since the Boston disaster, is the difficulty which would be experienced in getting the engines to a fire, the horses used for this purpose being equally stricken. By the way, these are excellent beasts, and they know their duty so well that the moment the alarm is given, they, being ready harnessed and never fastened to their stalls, prance out, fix themselves in their places before the engines, and wait impatiently till they are attended to, and then off they go, as anxious to get to the fire as their masters.

Only one fire has occurred since the horses were unable to be used, and that broke out on Sunday morning last, at 2 o'clock. Last week meetings were held for the purpose of procuring volunteers who would assist in drawing the engines to fires while the horses were unwell, and on Sunday morning, quicker than was anticipated, in a minute or so after the alarm sounded, they had enough men on hand for the purpose, and they reached the fire almost as quick as ever before. The result of this trial has made the people feel easier in regard to this important question.

The farmers seem afraid to come to town, and when they desert us what shall we do ? Yesterday morning one solitary wagon and horse stood where there should have been twenty, and the owner (the sinner) being afraid to stable his horse, no doubt, left it tied to the wagon the whole night previous, with a blanket around it. That farmer was not a Canadian.

But a few days ago a yoke of oxen drawing a wagon would attract nearly as much attention here as a circus. I believe most of the people never saw an ox before ; for a change, they see them now on all sides. I saw as many as six drawing a heavy load, and a troupe at present exhibiting here serenades the citizens daily in a four-ox wagon. They cause much sensation. Farmers are getting from $180 to $300 a yoke, and good drivers get high wages and are in demand. The oxen are shod before using ; whether this is customary with you or not I do not know. The process is simple :—The ox is driven into a stout frame work, hoisted off his feet by means of a windlass acting on a strong canvass placed under the body ; the head and feet are secured, and four men work at once, one at each foot, and the ox is relieved from his unpleasant position in a few minutes.

A milkman in endeavoring not to disappoint his customers, uses a span of goats. I saw a butcher with a genuine Durham bull in harness, and a ring in its nose, as usual. He said he was just trying the experiment ; but after half an hour's noble perseverance and gentle coaxing, combined with playfully twisting its tail and giving it the benefit of a raw-hide around the legs, he could only get it to move about 30 feet, when, as if to settle the matter definitely, the bull laid down and would not rise again until the harness was taken off. He was taken back from whence he came.

Something laughable is quite common now days ; but the funniest thing yet was a horse with a pair (it should be two pair) of wide red pants on, and a comforter round his neck. He only wanted a pair of boots to make him complete. Two gentlemen, desirous of having a drive, the only animal procurable was a cow ; they hitched her to a buggy, and, contrary to expectation, off she went like lightning, just wherever she liked. Their pleasant jaunt terminated in being knocked against a wall and the buggy partly disabled, and, shortly after they started out, one was to be seen returning with the cow, and the other with the buggy.—They think they will wait till the horses get better before they venture out again for a drive, as their confidence in cows has fled.

Many merchants are using men to draw their wagons, and there are lots here only too willing to get the situation. A sound horse at present is rare, and those who have them are reaping a harvest. I have been informed that the charge for taking three trunks to the Depot a few days ago, was $3, and the numerous hand-cart men are equally exhorbitant.

In my recital of the above, I hope I have not exhausted your readers' patience, and, when you next hear from me, also that we will have seen the last of this terrible disease, which has now carried off about 60 horses up to the present. W. H. W.

Cincinnatti, Nov. 20th, 1872.

STOP THE PAPER !

SIR,—This is to inform you that I cannot patronize the ADVOCATE any longer. I am sorry for it, as I think it is one of the best papers of the kind I ever read. S. W. K.

Woodstock, Dec. 9th, 1872.

[To any one discontinuing his subscription to the ADVOCATE, we would feel obliged by his stating his reasons to us for doing so—ED.]

REVIEW OF FARMERS' ADVOCATE.

SIR,—Perhaps you will be able to afford space for a few observations on matters which have been noticed in your paper during the present season. Dr. Bethune's account of the Wheat Midge reminded me that I had lying by a copy of Professor Hind's Prize Essay on insects and diseases injurious to the wheat crops, so I looked for it, and find his account of the Midge substantially the same as that of Dr. Bethune, but more in detail. If our Ontario Government would apply a small portion of their surplus funds to reprinting that essay, and send a few copies to every County Agricultural Society in the Province, to be by them distributed amongst their members, it would prove beneficial to the agricultural interest generally.

As for Mr. Stirton's Canada Thistle Bill, I hope it will be strictly enforced in every locality. No farmer has any right to injure his neighbors for miles around on the plea that his farm is so poor that he cannot afford the expense of cutting down the thistles. Few of your readers are, perhaps, aware that Canada Thistles, if cut just as they are coming into bloom, cured as hay, and stacked with a liberal allowance of salt make excellent fodder for cows. They can be fed out with a hay fork, so that the sharp prickles need occasion no inconvenience. The thistles should be cut again in the fall and the ground ploughed, and the following spring, just as the snow is going off the land, sow with early red clover at the rate of 12 pounds to the acre. The thistles will shade the young clover at first, and when they are cut just before midsummer, the clover, if it has come up, will have a chance to get ahead. By cutting the thistles and clover twice a year a quantity of good fodder will be secured.

I consider you are quite right in denouncing Mr. McKellar's proposed plan of importing improved breeding stock at the public expense, in opposition to those breeders who, at a great expense and risk to themselves, have brought the live stock of this province to its present degree of perfection. However, as Mr. George Brown wishes it to be done, the whole weight of Government influence will doubtlessly be brought to bear to induce the House of Assembly to grant the required amount. But how will the cattle be disposed of when they are imported? If they should be sold by public auction, the Americans will carry off the best of them, and if they should be sold by private contract, we may be sure some one will get the lion's share of the bargains, so that the farmers generally will be little the better for them.

As far as the Agricultural College and Model Farm are concerned, they will doubtless be excellent things, if well managed, but then they must be managed by practical farmers, and not made mere places of refuge for Government dependents.

Your idea of carrying on the ADVOCATE by a joint stock company seems to me a good one, and I hope some of our leading farmers from every section of the country will unite to take stock in it. The reasons why our Canadian agricultural journals are no so well supported as they ought to be, are not hard to find. The American publishers have more capital than our Canadian publishers, and, what is more to the point, they are better supported. Nor is that to be wondered at. There are very many farmers throughout the States who can well afford to pay good prices for their papers, so that when introduced into this Province they allure subscribers by their more attractive appearance. It should be recollected that some of these papers were circulated to some extent in the United States, sixty years ago, when the greater part of Ontario was but a wilderness, and the most of those by whom the wilderness has been subdued, and brought into its present flourishing condition, were hard working men, not, as a rule, possessing much education, and too much occupied in obtaining a subsistence for their families to care much for reading, and I fear the present generation must pass away before we shall see a very general improvement in that respect.

Whilst some parts of the Province have suffered from a severe drought, this section has been visited by frequent showers throughout the season, and, as a rule, the crops of all kinds are excellent, except, perhaps, turnips, which have suffered severely by grasshoppers. Small brown grubs were in some places injurious to the spring crops, and the dreaded Colorado Potato Beetle has made its appearance amongst us, but without doing much harm, as potatoes are an abundant crop. They will, of course, be worse next year, so that farmers generally will have to plant only enough for their own use, and look well after them.

The Midge and Weavil were not unknown, but very little damage has been sustained from them.

It is not an uncommon practice here to sow Glasgow wheat late in the fall, just before the snow comes. It ripens nearly as early as the fall wheat, and if the ground be dry, frequently produces a better crop than when sown in the spring. I would not recommend this practice in those parts of the country where early snow and plenty of it cannot be depended on, but we are pretty sure to have enough of snow here.

I have tried the Arnold Hybrid Wheat beside the Treadwell ; it is equally hardy and ripens a day or two sooner, but it is shorter in the ear, and not so plump in the grain as the Treadwell neither is it Midge proof, so I shall not try it again.

The Manitoba Wild Pea, mentioned in your last number, is probably the same that I have seen growing on islands in the St. Lawrence, and on the Island of Anticosti ; it is a small pea, about the size of a vetch. The French Canadians use them for soup. The leaves are as large as those of the field pea, but I don't think they are perennial, for if they are cut a year or two in succession, before the peas are ripe enough to shell out, they disappear ; however, the make as good fodder as any other kind of pea.

We have had the horse distemper here as bad as in most other places, but I don't believe in medicine, at least I have used none. I just let the horses run for a week or ten days, feeding them on bran mash with boiled flax seed, boiled oats and a little hay, keeping them in the stable on wet days, and they soon recovered. I have a two-year old colt which probably caught it from the other horses, but nothing whatever was done for him, and he soon recovered. An old Canadian who lives near me tells me it is only the Strangles, from which the stage horses throughout the country suffered very much in 1834. The disorder is contagious as well as epidemic. Some of my neighbors kept their horses at work ploughing all the time ; they were longer recovering than mine, but none were lost.

My plan of keeping cabbages for winter use is to choose a dry day before any frost comes, and pull them up by the roots with as much earth as possible, strip off the outside leaves and set them up in the cellar as close together as they can be placed, and they will keep a long time.

Celery I keep in the same manner, setting the first row close to the wall, then bring in some earth and fill them well up ; as many rows as may be required, with a little earth between, may be stood in this way, and they will improve in quality and keep better than in any other way ; besides, they are always at hand when wanted.

Leeks may be kept fresh in the same manner, cutting off part of the tops before they are brought in. However, the cellar must be well ventilated.

The German way is probably the best wherever there is a fire place. A flue is opened in the foundation of the chimney about a foot from the floor, carried up through one side of the fire-place, and opening out just where the chimney is drawn in. For houses where there is no fire place, a ventilator should be used made of a sheet iron pipe about three inches in diameter, with an elbow at one end long enough to pass out over the sill, and the lower end about twelve or fifteen inches above the floor, with a short elbow at an angle of about 45° ; this acts on the principle that there will always be a draught of air up the long leg of an inverted syphon.

Without some ventilation no vegetables ought to be kept in the cellar at any time. A good way for those families who have neither cellar nor root house is to preserve pot-herbs, leeks, greens, celery, parsley, &c., is to cut them all up small together and pack them in a wooden vessel with alternate layers of salt, and place a heavy weight on them ; a great deal of water will come from them, which should be thrown away, and then cover them with strong clear brine. When wanted for use they should be well rinsed in warm water and they will be found an acceptable addition to soups or stews of any kind. Yours truly,

CHAS. JULYAN.

Grey, December, 1872.

FARMERS' INTERESTS.

FRIEND WELD,—There is plenty of room for the discussing of the position of the farming class in Canada. From the peculiarity of our commercial relations, however we are almost powerless, and it appears futile to discuss the question for two reasons, one is—few take the trouble to investigate the disadvantages we labor under, and if they did they are met by obstacles which appear almost insurmountable; and the other reason is we have the whole Press of the country against us; they are like a certain class of whom it was said, "They lay grevious burdens upon us, but will not so much as lay their fingers to it themselves." Why is it that every species of production in Canada is protected against foreign competition? while the farming class are compelled to compete against the world, it may be said, while every other industry has a stimulus by way of a percentage.

Wool is imported free of duty, but if we happen to have a quality or fibre in demand in the market which we have, we are met by a duty of ten per cent. per lb.

It is a fact well known that corn is admitted free of duty, which article affects injuriously the price of oats and peas.

Wheat and flour is being imported in immense quantities, and, of course, affects prices to our disadvantage. Well, if we happen to cross over with a car load of sheep or cattle, 20 per cent is demanded and taken. Every one does not know, but they might, if time was taken to investigate, that *twenty-five hundred per cent.* of the products of Ontario cross the lines to the south of us, on which we are paying 20 to 30 per cent to obtain it at market. But there is another side to the question, which we must not lose sight of, that is, add the import duties on cotton and woolen goods, hardware, etc., and it makes a round 50 per cent., or nearly so, that the farmers are obliged to submit to; is there any other class similarly situated in the Dominion? Now, Mr. Editor, you will be kind enough to speak, if you find these things really exist, and we shall be under obligations if you can demonstrate that they do not To illustrate one particular article:—When potatoes are scarce, why, they are imported free of duty, but when they are a good crop, the duty against us is almost prohibitory. It certainly is a very humiliating position for a class of the community who represent so large a portion of the whole as **farmers—they have not so much as a single paper to speak for them.** I don't wish by this to be understood as disposing the day of small things, but who hath believed our report—or who cares or imagines if these things are so?

I believe support sufficient can be obtained to make your paper independent. A competency is essential to an open, fair discussion of our situation. But if you speak only twelve times a year, and others three hundred, or fifty-two even, your caliber and range must be prodigious to make even a show of opposition, but which is a fact, if they hear you only once a month, it is easy to infer you are silenced, sunk, or disabled. But you may very naturally ask, what course is necessary to pursue to interest the farmers in your support and make a mutual and reciprocal interest? why, you just tell them how to obtain a large per centage over present prices, and that they can, by certain justifiable legislation, improve their farms. if good ones, twenty dollars per acre. That little manufacturing interests will spring up all over the Provinces, and the large manufacturers will double their present products; that twenty millions of our money that now goes out of the country to pay for goods will be paid to our own people; that it will be circulating amongst the farmers and mechanics, and that the Bank of Montreal will find use for its circulation this side of the lines, instead of speculating with its gold in Wall street; that, instead of drawing capital and enterprise out of the country, it will come in. Your Emporium is a good thing—hope it pays. I only wish your territory were equal to your abilities, and your aims and operations were equal to the wants of the whole community, which you could so readily supply. I make no apologies for the length of this article. Who will speak next? Yours,

DR. BROWN.

Paris, Dec. 12, 1872.

MALARIA.

Analogous diseases seems to pervade the animal and vegetable world—indicated by the periodical visitation of epidemic maladies, viz:—cholera, cattle plague, potato blight, odium in grapes, and mould in hops. The primary cause no longer remains in obscurity, being clearly traced to the baneful influence of malaria, widely defused, and always attended with sad consequences. The deadly poison can, however, be soon decomposed, and its virulence subdued, by proper chemical agents, easily provided and safely used. It is well known that the gem like dew drop is charged with electricity, and when impregnated with marsh miasmata or noxious gases, combine deleterious elements, which, inhaled by the lungs, vitiate the blood, engender various disorders, and often prove fatal to human life. Silk being a non conductor, respirators contrived chiefly of that material will afford protection from the infected vapor, obviate the dangers incidential to exposure and achieve the object designed. A simple method is suggested for purifying foul or contaminated air, which will be found on trial peculiarly effective in restoring a wholesome condition, while involving a small outlay in application, and little skill in performance. The expedient consists of of burning green wood refuse, branches of trees and collected weeds, with a sprinkling of sulphur and lime, at convenient spots in the several gardens, vineyards, or hop grounds on the appearance of night fogs, and repeating the experiment when necessary. The operation will serve as an inducement to eradicate wasteful plants, followed with the advantage of increasing the growth of profitable crops. The antiseptic qualities of pyroligneous acid are duly valued and successfully tested. The system of lighting bivouac fires in military encampments, and in the Campagna, near Rome, at harvest time, has been long practiced for sanitary purposes, to dispel fœtid effluvia and destroy the germs of disease. The cus om that has existed in Ireland for ages, of lighting fires through out the country on the eve of St. John's day, and chasing the cattle in the field with burning bushes, regarded by many as a Pagan rite of Baal worship, probably originated in precautions against murrain, usually prevalent at midsummer, displaying simple devices to purify the atmosphere by means of fumigation, and stimulate perspiration in the animals by active exercise to perserve health. Among the measures advisable for abating pestilence and preventing the spread of contagion, fumigating deserves special notice. The process, correctly conducted with right ingredients, seldom fails to produce satisfactory results. The fumes of burning coal tar, mixed with oakum, aid beneficially in relieving asthma, whooping cough, and other pulmonary complaints. New Orleans journals remarked that during the outbreak of yellow fever in that city, persons engaged in gas works and in laying asphalte pavement escaped from attack amid unprecedented mortality. Gunpowder, ignited in a damp state, or otherwise artificially prepared, exhibits rare disinfecting powers, arising from the united action of sulphur, carbon, nitre and hydrogen gas. The fact is recorded that the cholera at Paris, in the year of its last visit, suddenly ceased, just after a grand display of fireworks. It is worthy of observation that Lisdoonvarna, in the County Clare, has been invariably exempt from cholera while raging in the vicinity, doubtless owing to exhalations from sulphur springs which abound in that locality. The properties of sulphur are, as yet, imperfectly understood; but when its intrinsic worth becomes fully developed, a reasonable expectation is indulged, that an article largely consumed in the business of destruction, may, ere long, be wisely rendered available for a more noble pursuit, in mitigating some of the ills which flesh is heir to, and, favored with devine blessing, confer signal blessings on mankind.—*M. J. Keating, Dean of Kilfernora.*

OUR FORESTS.

What are we to do for wood and timber in the next generation is becoming a very serious question. It is estimated that eight millions of acres are stripped of their forests every year to supply the wants of our present population. If these eight millions were left to grow up to wood again, or if as large a territory were planted every year, the fall of the forest would excite no alarm. But this is not the case. There is absolutely no system in our preservation of forests, and almost every land owner follows the impulse of immediate profit. A very large proportion of our farming population use wood for fuel, and the destruction of forests from this source is immense. On almost every cultivated farm the breadth of forest is steadily waning. If there be any exception to this rule it is in the older States, where the agricultural population does not increase. Our railroads consume large quantities for fuel, and the draft for ties is very large. Every mile of railroad calls for two thousand ties, and these do not last more than seven or eight years. One only needs to visit the lumber regions in any of the States to comprehend the rapid disappearance of forests from those large tracts put down in the census returns as uncultivated lands. The steady advance in the price of lumber in all the older States is probably the best measure we have of the extent of the evil. Concerning the influence of this destruction of forests upon the rainfall and the climate there is much discussion and some difference of opinion. There can be no doubt that climate is softened by the shelter which woodlands afford. A belt of evergreens inclosing a garden in any of our Northern States will virtually remove it three hundred miles south. The ground is not frozen so deep in winter, the snow disappears earlier, and fruits and flowers can be grown with certainty that can not be raised outside. The advantages of shelter are conceded by our best cultivators. The rainfall may or may not be increased by the forests. It is conceded by all that the rain which does come is more evenly distributed, and that there is much less liability of damage from floods or drought. It is pretty well settled in European countries that the welfare of the farming interest demands that at least one fifth of the whole surface of a country should be kept in forest. More crops, and of better quality, can be drawn from four fifths of the land with this protection than from the whole without it.—*From American Agriculturist.*

TO PRESERVE POULTRY IN WINTER.

This is a matter not fully understood, and for the information of the general reader we can not do better than to give the mode practiced by the venerable Judge Buel, in preserving poultry in winter. He says:—"I purchased a quantity of poultry for winter use early in November. Their sides were careful drawn, and their place partially filled with charcoal, and the poultry hung in an airy loft. It was used through the winter, till about the first of February, and although some were kept seventy days none of it was the least affected with must or tint, the charcoal having kept it perfectly sweet."—*Lewis' Poultry Book.*

GROOMING HORSES.

Though suitable and properly prepared food is the prime requisite for the horse, regular grooming holds the second place in the management of him. A man who omits the customary ablutions at stated times—who goes for days or weeks with uncombed hair, may exist—but does not live in the proper sense of the word. So of the horse. Grooming is alike essential to looks, health and elasticity of action. The curry-comb and card should be brought into daily requisition, nor should the clipping shears be ommitted. Fetlocks bedraggled with mud, unkept and tangled mane, detract much from the appearance of the animal, repress his ambition, and hence diminish his usefulness. A man who neglects the regular grooming of his horses, is an enemy both to the beasts and himself; to them because he withholds labor which is their due, and to himself because he depreciates the value of his own property.—*Live Stock Journal.*

TANNING SHEEP SKINS WITH THE WOOL ON.—The following directions are from the American Artisan:—Take the skin upon a board with the flesh side out, and then scrape with a blunt knife; next rub it over hard with pulverized chalk until it will absorb no more. Then take the skin from the board, and cover it with pulverized alum; double half way over with the flesh side in contact; then roll tight together and keep dry for three days, after which unfold it and stretch it on a board or door, and dry in the air, and it will be ready for use.

EFFECT OF TURNIPS ON SOIL.—Prof. Voelcker says, in the Mark Lane Express, that by far the largest proportion of the fertilizing substances contained in the turnip crop, probably about seven-eighths, is returned to the ground, and if the crop is consumed by the sheep on the field only about one-eighth of the materials useful as manure is carried away by the sheep in the form of bone, and the nitrogenous matters which enter into the composition of the animal organism.

A country youth inquired at a city drug store for ten cents worth of "love powders"; "something that wouldn't stir her up much but make her dream of him at nights." The urbane druggist's clerk put up some magnesia, and cautioned the purchaser not to give his victim too much of it at a time, but rather win her affection by degrees.

Parties are now given in Boston at which the word 'fire' is interdicted. People are sired of it. 'Conflagration' creates convulsions and 'insurance' induces suicide.

A young man who went West a few months ago, has sent only one letter home. It came Friday. It said, 'send me a wig,' and his fond parents don't know whether he is scalped or married.

An advertisement in a St. Paul (Minn.) paper reads: Persons who have contracted debts to B. F. Simmons are forbidden to make payment thereof except to the undersigned.—Mrs. B. F. Simmons.

An original Pennsylvania editor comes out fairly and squarely. He calls his paper 'An airy old sheet, devoted to wind, whiskey, wickedness and other religious matters. Vox Populus, Vox Belzebub.'

The city editor of the Indianapolis Sentinel speaks of the sprightly lunatic who presides over the city department of the Journal.—The Journal retorts by a gentle allusion to the idiotic wanderer temporarily roosting on the local columns of the Sentinel.

An Alabama editor mildly alludes to his rival as a 'reservoir of falsehood and an aqueduct of mendacity;' whereupon his rival retorts by referring to his contemporary as a 'bottomless pit of infamy and an earthquake of blasphemy.'

King Baby.

His sceptre is a rattle,
His throne is mother's arms;
He reigns a tiny tyrant,
In all his dimpled charms!
Yet round his royal presence
Our loving hearts entwine:
Dictator of the cradle,
And king by right divine!

Whatever be his mandates,
No courtiers dare rebel;
His mother's chief of the household,
Prime minister as well!
In yon perambulator
His downy car of state,
Exacting rosy monarch,
What triumphs on him wait!

In purple ease and splendor,
Long, long he seeks to reign;
All hints of nose disjointed
He smiles at with disdain!
Alas! that royal greatness
Should ever be disowned;
Here comes a tiny stranger—
King Baby is dethroned.

—*From the Aldine for November.*

UNCLE TOM'S COLUMN.

We put this cut of acrobats in again this month, because nearly everyone disagrees as to the number in it The answers have been five, nine, ten, and fourteen. Now, Uncle Tom says there are ten, that is, two on each head. Mr. Weld says nine, so how are we to decide? We have determined to leave it to those who write this month. Let each one of you examine the puzzle, and send his or her opinion to us, and then we will decide by the majority.

PRIZES FOR TH
OF PUZZL

To be sent in before

1st Prize—Vick's be
—a small eng
above. Thi
dollar chromo
2nd Prize—Vick's
Something pe

Now I want every
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VOCATE will tell wh

PRIZE P

One of Washbur
graphs to the perso
swers to puzzles, &c
out for the names o

ANSWERS TO P

Plenty of answer
honor below.

If your lips you w
Five things obser
Of whom you sp
And how, and wh

ACROST

REBUS.—

ACR

Correct answers
and acrobats.—Edg

Correct answers
Elizabeth A. Whe
Edmonton; Tho
Priscilla J. Bonk,
Unionville.

Correct answers
A. Murrell, Markh

Correct answer t
Brownsville.

Correct answer
house, Malton.

Correct answers
Harper, Shanty B
ner ux; Thos. Gui
last correspondent
their exeeedingly r

We failed 1st m
Craig, of Millisen
Auburn, for answe
and acrostics; al
square words, publ
us hear from you a
FOR PUZZLES.

1.

I thee re
love is u
but that ar
one and do

2. DOU

The initials fr
finals, the river on
large bird. a clus
song, a mixture of

SQU

3. To unite, th
cabbage.

4. A kind of gr
Globe, an importa

PRIZES FOR THE BEST COLLECTION OF PUZZLES AND GAMES.

To be sent in before the 20th of January, 1873.

1st Prize—Vick's beautiful Chromo-Lithograph—a small engraving of which is shown above. This picture excels any five dollar chromos we have ever seen.

2nd Prize—Vick's Floral Guide for 1873. Something perfectly beautiful.

Now I want every one of you to send in lots of puzzles of all kinds, and next months' ADVOCATE will tell who has won.

PRIZE FOR ANSWERS.

One of Washburn's beautiful Chromo-Lithographs to the person who sends the best answers to puzzles, &c., in this number. Look out for the names of winners in next number.

UNCLE TOM.

ANSWERS TO PUZZLES IN DEC. NO.

Plenty of answers this time. See the roll of honor below.

ANAGRAM.

If your lips you would save from slips,
Five things observe with care:
Of whom you speak, to whom you speak,
And how, and when, and where.

ACROSTIC.—December.

REBUS.—Hippopotamus.

ACROBATS.—10.

Correct answers to anagram, acrostic, rebus and acrobats.—Edgar Weaver, Dereham.

Correct answers to all excepting acrobats.—Elizabeth A. Wherry, Newry; John Cooney, Edmonton; Thomas A. Nelson, Ottawa; Priscilla J. Bonk, Fonthill; Margaret Young, Unionville.

Correct answers to anagram and rebus.—W. A. Murrell, Markham.

Correct answer to anagram.—Thos. Winder, Brownsville.

Correct answer to rebus.—Maggie Gardhouse, Malton.

Correct answers to acrostic and rebus.—M. Harper, Shanty Bay; Martha Johnson, Lamarsh; Thos. Guilfoyle, Lefroy. These two last correspondents deserve great praise for their exceedingly neat handwriting.

We failed last month to give credit to Elsie Craig, of Millisen and Harriett E. Barns, of Auburn, for answers to decapitations, puzzle and acrostics; also for new double acrostic and square words, published in this number. Let us hear from you again. See our list of PRIZES FOR PUZZLES.

1. PUZZLE.

I	thee	real	see	that	me
love	is	up	will	I'll	have
but	that	and	you	have	you'll
one	and	down	and	you	if

T. DOIDGE.

2. DOUBLE ACROSTIC.

The initials from the name of a city, the finals, the river on which it is built, to allow, a large bird, a cluster of stars, to disfigure, a song, a mixture of wine, water and sugar.

ELSIE CRAIG.

SQUARE WORDS.

3. To unite, thought, a proper name, a kind of cabbage. ELSIE CRAIG.

4. A kind of grain, to relieve, a part of the Globe, an important part of a legal document.

HARRIETT E. BARNES.

5. ACROSTIC.

Joyful still and glad are we,
After all our mirth and glee;
Now the holidays are past,
Useful winter still doth last;
And our evenings now we'll spend
Reading in the "farmer's friend."
Your well-wisher still remember.

J. LAWSON.

Battersea, Dec. 9th, 1872.

PUZZLES.

No. 6. X X U R, X X U B; I C U R X X 4 M E.

No. 7.—A C 80 C O A R 8).

No. 8.—When may you be said to have put your foot in it?

No. 9.—Take four grains of corn and place them so that they may be all equally distant from one another.

No. 10.—Why is a widower like a house in a state of dilapidation?

No. 11.—Which are the two hottest letters in the alphabet?

No. 12.—A man went into a shoemaker's and bought a pair of boots for six teen shillings. He put down a pound note (20 shillings) and, the shoemaker having no change, sent to a neighbour and got it and gave it to him. Later in the day his neighbor sent in to say that the pound note was a bad one, and insisted upon the shoemaker making it right, which he accordingly did. Now, how much did the shoemaker lose by the whole transaction?

HIDDEN CITIES.

For the benefit of those little ones who do not understand this game we give this explanation. In the sentence which is given the name of some city occurs with the letters in regular order, although they may be in different ways, as in the sentence: "He has had many a fall ON DONkeys." You notice the hidden city is London. Find the answers to the following:—

13. I am going to take on trial yon sailor lad.
14. He is the best boy in the world.
15. Eve saluted Adam as customary in Eden.
16. You cannot pull the wool on his head over his eyes.
17. Most fickle you but constant I
No plebian shall our fate decry.
18. We will have nice times in Jerusalem.

In this last there are four cities. It is fine fun to set around the fire on winter evenings and give these puzzles, as they are much more difficult to make out when you do not have them written before you. We are indebted to some of our young friends for the above hidden cities.

A SEASONABLE HINT.

You know how it is yourself.

VEGETABLE AND FLOWER SEEDS. Mr. J. J. H. Gregory, of Marblehead, Mass., is well known as one of the few leading seed growers in this country. He was the original introducer of the hubbard squash and many other of our new and valuable vegetables. All seeds from him are warranted fresh and reliable. His advertisements will be found in this number, and we invite attention to them. His illustrated catalague for 1873 (now ready) will be sent *free* to all applicants.

The FARMERS' ADVOCATE, edited in London, Ont., D.C. Terms, 1 per annum, if in advance; $1 25, if in arrears; postage prepaid. Advertisements 10c. per line, agate space. Communications and advertisements should be in the office by the 15th of the month to ensure insertion in the following number. Postage and all other expenses charged on collection of accounts, if in arrears.

London Market—Dec. 26.

White Fall Wheat, per bush.	$1 10 to 1 25
Red Winter Wheat	1 00 to 1 07
Barley	45 to 58
Peas	50 to 62
Oats	34 to 35

Great Western Railway.

Trains leave London as follows:—

GOING WEST.—12.50 p. m.: 5.35 p.m.: 2.45 a. m.: and 5.45 a.m., and 6.45 a.m.

GOING EAST.—6.00 a. m.: 8.40 a. m.: 12.35 p.m.: 4.40 p.m.: 11.30 p. m; and 1.15 a.m.

Grand Trunk Railway.

Mail Train for Toronto, &c., 7.30 a. m.; Day Express for Sarnia, Detroit and Toronto, 11.10 a.m.; For Stratford and Goderich, 2.55 p.m.

MARKHAM BELL FOUNDRY.

No. 1 Bell,	15 inches	diameter—yoke & crank	...	$10
No. 2 "	16 "	" "	...	12
No. 3 "	18½ "	" "	...	20
No. 4 "	19 "	" —Yoke & Wheel	...	30
No. 5 "	26 "	" "	...	50
No. 6 "	30 "	" "	...	70
No. 7 "	36 "	" "	...	120

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 ladies to get swelled necks by blowing. JONES & CO., Markham P. O., Ont. W. WELD, Agent, London. 72

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SINGER & HOWE SEWING MACHINES,

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Toronto, Ont., Feb. 27, 1872. 3-y

W. WELD, Agent, London.

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August 27, 1872. 8-tf

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Perrytown, April 26, 1872. 5-tf

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London, May 26, 1872.

THE ARTIST PHOTOGRAPHER,

FRANK COOPER,

STUDIO RICHMOND STREET,

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London, May 1871. 71-5)

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Toronto, April 26, 1872. 6-tf

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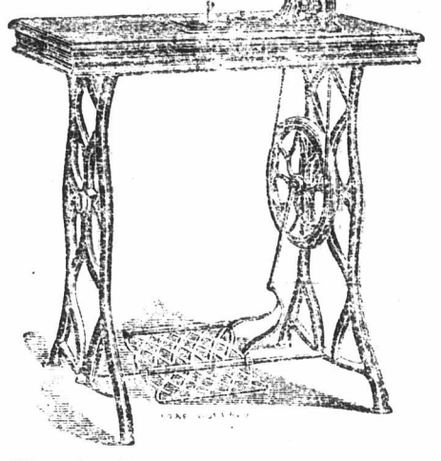

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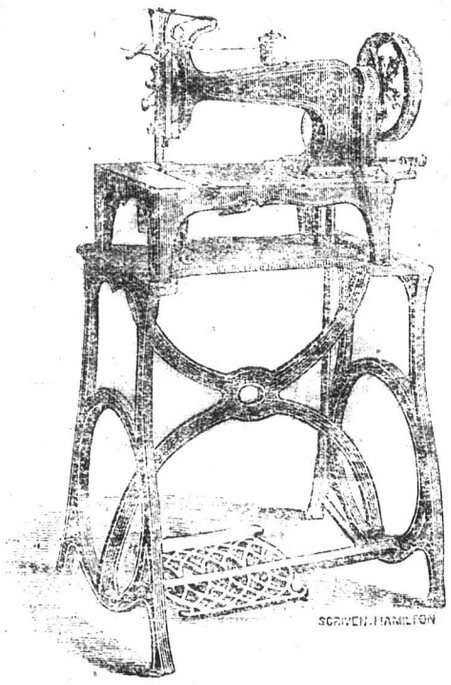

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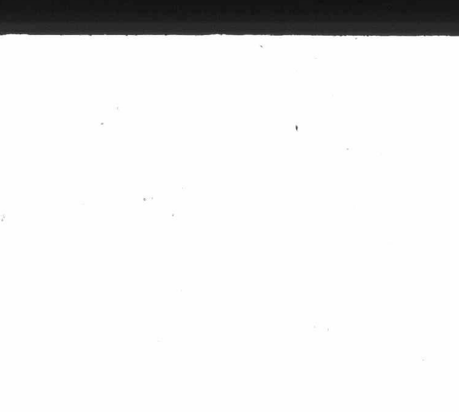

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Read for yourself and restore your sight.

Spectacles and Surgical operations rendered useless. The inestimable blessing of Sight is made perpetual by the use of the new PATENT IMPROVED IVORY EYE CUPS.

Many of our most eminent physicians, oculists, students and divines have had their sight permanently restored for life, and cured of the following diseases:

1. Impaired Vision; 2. Presbyopia, or Far Sightedness, or Dimness of Vision, commonly called Blurring; 3. Asthenopia, or Weak Eyes; 4. Epiphora. Running or Watery Eyes; 5. Sore Eyes—specially treated with the Eye Cups—cure guaranteed; 6. Weakness of the Retina, or Optic Nerve; 7. Ophthalmia, or Inflammation of the Eye and its appendages, or imperfect vision from the effects of Inflammation; 8. Photophobia, or Intolerance of Light; 9. Over-worked Eyes; 10. Mydesopia—moving specks or floating bodies before the eyes; 11. Amaurosis, or Obscurity of Vision; 12. Cataracts, Partial Blindness; the loss of sight.

Any one can use the Ivory Eye Cups without the aid of Doctor or Medicine, so as to receive immediate beneficial results and never wear spectacles; or, if using now, to lay them aside forever. We guarantee a cure in every case where the directions are followed, or we will refund the money.

2309 Certificates of Cure,

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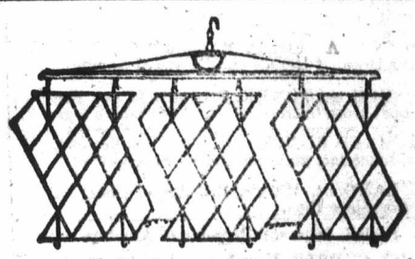

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