

AND HOME MAGAZINE

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FOUNDED 1866³ THE FARMER'S ADVOCATE

HOME MAGAZINE. WILLIAM WELD, Editor and Proprietor.

The FARMER'S ADVOCATE is published on or about the 1st of each month, is handsomely illustrated with original engrav-ings, and furnishes the most profitable, practical and reliable information for dairymen, for farmers, gardeners or stock-men, of any publication in Canada.

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THE FARMER'S ADVOCATE" PRIZE OF \$100

given annually by Wm. Weld, Editor and Proprietor of this paper, will be awarded at the next Provincial Exhibition, to be held at Guelph, Ont., from the 24th to the 29th of September, inclusive, for the best samples of wheat.

The prize will be divided as follows : Two prizes of \$30 and two of \$20 each. The first prize of \$30 to be given for the best variety of fall or winter wheat for the general farmer to raise, and \$20 for the second best variety of fall or winter wheat; \$30 for the best variety of spring wheat, and \$20 for the second best variety of spring wheat.

RULES.

Two bushels or 120 pounds of the wheat to be exhibited. The name of the wheat, together with a written description, to be given, stating where the wheat was procured, how originated or introduced, as far as can be ascertained, a description of the soil and situation on which grown, what fertilizer used, and general history of cultivation. (The wheat must have been grown in the country for at least three years.) Also a report as to its milling and marketing qualities—a practical miller to be one of the judges.

The prizes will be given to four distinct varieties, and the descriptions and reports must be furnished to the Association before the bags are opened, the reports of all competitors to be the property of THE FARMER'S ADVOCATE. It is not necessary that the finest sample of wheat should in any way effect the award of the prize except that the wheat should be pure, clean and unmixed, the object being to decide the most valuable variety from actual yield and general qualities.

Our Monthly Prize Essay.

Our prize of \$5.00, given for the best method of eradicating and preventing the growth of Ray Weed, has been won by E. J. Yorke, Wardsville, Ont., whose essay appears in the usual column.

Railway Rates of Freight and Trans portation Monopolies.

Editorial.

The following resolution, passed by the Elgin County Council, carries out suggestions repeatedly made in this paper. It would be well if all the other County Councils promptly followed this example :

"That this Council co-operate with the other counties of the Province in petitioning the Dominion Government for the following purposes, viz.:-To create a Railway Commission, with power to settle all disputes between individuals, corporations or companies, and all railways doing business, or who may hereafter do business in the Dominion. Also to compel such railway companies to so arrange their tariff as to do justice to all par-ties, and abolish all discriminations in favor of individuals, and to so arrange their trains as to give all possible accommodation to the public.'

Farmers must remember that just in proportion as the railways charge excessive freight rates, so much more they have to pay for rates, so much more they have to pay for all they buy, and that much less for all kinds of produce they sell. As an instance we may here mention that if the same *through rate* of freight could be procured to-day that shippers were getting this time last year, wheat would be worth from 12 to 15 cents per bushel more money than it now brings on any market in the country. We give this as an instance of the effect high rates of freight have upon the price of the products of the country. Especi-ally is this the case with all kinds of grain, stock, &c., which the farmer is interested in use on a charge as prossible.

seeing carried as cheaply as possible. One thing we wish to call the attention of our farm-ers to is :- Talk the matter up with your neighbors and find out what the feelings of your representa-tives at Ottawa and Toronto are on the subject. Give them to understand that you think the time is coming when legislation will be necessary on this question. In England the rates of freight and all claims are controlled by a commission appointed by the Government. The Legislature of New York State has also passed a law providing for the nomination by the Governor of three railroad commissioners. Now we think it would be well for our own Government to take this matter into consideration, and appoint a similar commis-The object of this Board of Commissioners sion. would be to act as a sort of court of equity and arbitration between the railroads of the Dominion and the public, checking the exactions and unfair discriminations of the railways, and adjudicating, within certain limits, upon the complaints of the public. This arrangement would do away with discriminating rates between different and non-competing points Rates would be arranged on a mileage basis, and all kinds of merchandise and produce would pay a rate of freight just in propor-tion to the number of miles it was carried by the railway To some points and large centres this arrangement would be an advantage, and to others it would be a disadvantage. Still we think, on the whole, it would be a benefit to the community, as a whole, but should be discussed and viewed in all its bearings before any decided action is taken.

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New Subscribers.

During the past month we have been muchgrati fied by a continued flow of new subscribers from every Province in the Dominion. Our increase has been greater than ever, and this abundant proof of confidence in THE ADVOCATE and desire to increase its strength, forces us to ask all our subscribers to continue their efforts during February and March.

You can surely think of some person who ought to take your paper, who will benefit by its columns, and who in turn will induce others to subscribe. Speak a good word, show your paper, and we have a most useful and attractive Premium List from which you can select your reward. A single hour will on an average secure a new subscriber to you, as well as the premium.

This leisure month is an excellent season; there is plenty of room. Try a little. We are sure you will be amply satisfied with your success.

Every subscriber should win a collection of Vegetable and Flower Seeds. Read our grand collection in January issue. Only one new subscriber for each.

Send for sample copies, and make a start imme-diately after reading this month's number.

We will give a prize of \$5.10 for the best essay on the advantages and best results to farmers from planting forest trees. The essay to be handed in by the 20th of February next.

We will give a prize of \$5.00 for the best essay on the following subject: The best five varieties of potatoes grown in Canada, and which are best adapted to the soil and climate. The essay to be from the actual experience of the writer, and must be handed in to this office before the 20th of March next.

Our subscribers who have been so generous in speaking of the merits of THE ADVOCATE, will no doubt cheerfully mention their good opinion to their friend or neighbor who is still in want of a reliable Canadian agricultural paper.

To help your canvass send for a sample copy for a friend, or a few for your own use, and carefully read our Premium List, and have one of our Illustrated Posters put up in a conspicuous place.

"After not taking THE ADVOCATE for nine years, and again renewing my subscription, I feel as if I have found a long lost friend, and one that I purpose making a permanent friend as long as I can raise one dollar. No enterprising farmer can profitably get along without it "-D. DRISCOLL, Watson, Cass Co., Dakota Territory, U. S.

F. W Broughton, late General Manager of G. W. R., would make a good commissioner, another chosen by the Dominion Board of Trade, and the third by the Board of Agriculture and Arts, or by these bodies jointly along with a delegate from each of the five largest inland cities of the Dominion.

February, 1883

On the Wing. MANITOBA.

(Continued from vol. 17, page 251.)

The extreme wet season at the time of our first visit to Manitoba prevented us from seeing as much of the country as we wished ; and the rapid, hurried manner of our flight last summer, precluded us from observing as much as we could wish of the agricultural capabilities, prospects and progress of the farmers themselves. The most convincing testimony we had was a drive of four miles into the country in the vicinity of Portage La Prairie. Here we noticed abundance of good grain-milch cows and young cattle running on the prairies, looking quite as sleek, fat and comfortable as they appear in Ontario or in England. In fact, we never saw such abundance of feed, and the cattle appearing more comfortable or in better condition on grass. Of course, this was the best time to see them, namely, in August, as both the cold and hot weather had passed, and the flies had ceased annoying them. The rapidity with which the cattle accumulated fat at this season was perfectly astonishing. Self-binding reapers were at work in every direction in the large, even fields of wheat, with heads well filled, without the least sign of Hessian fly, midge or chinch bug to be seen. Such a glorious sight delighted us, especially when upon frequently going into some of the fields and examining the straw, not a speck of rust or mildew was to be seen-not a lodged spot, but all a standing and heavy crop. The straw was the brightest and cleanest, and stood the stiffest of any we had ever seen, and we have seen a good deal, both on this continent and in Europe.

We had formerly some grave doubts about the country and its capabilities. We know many onesided and over-alluring statements have been made by enthusiasts and interested parties; but this sight inspired us with such confidence that we felt that, if youth was on our side, and the knowledge that we have of the difficulties that exist in Europe, we should no longer hesitate about making a change, if we had means to make a start in Manitoba. But in every place there are obstacles to overcome and dangers to be met. The two worst of these in Manitoba are the scarcity of fuel and the length of the winter, which is far more to be dreaded than its severity.

Between Portage La Prairie and Brandon there is considerable poor land; in fact, much that we consider worthless. At Brandon the land is not so rich as at Portage La Prairie. Settlers have favored the Qu'Appelle Valley, in which section

beyond what we could have ever believed, had we not personally seen the changes. The improve ments are so great that it is not to be wondered at that so many are flocking into and taking possession of this valley. We should be sorry to disturb the minds of the contented farmers in our older Provinces, and would by no means advise one of them to sell out or move there with a wife or family, before first examining for themselves and weighing well all the disadvantages before parting with a comfortable home. Still there always will be some dissatisfied with their lot, particularly young men. To those we would also say that without a sufficient sum of money to start with and keep themselves for about two years, or unless they have friends to go to, then they had better try and earn money enough in Ontario before going, so that if they were not fully satisfied they could come back again.

Herd Books.

Herd books are of value for the facility they afford in tracing the genealogy of any animal. There have been and still are numerous herd books for stock registers, kept by careful farmers. In England a body of farmers united and consented to keep one general one for the Durham Shorthorn cattle. It was conducted on fair and honorable principles, and now stands pre-eminent as the most reliable record in existence. There have been numerous herd books established on this continent, most of which are in the United States. The Shorthorn breeders in the States have now centered all the interests in one. Large sums are being subscribed, and the Shorthorn men in the States appear almost unanimous in its favor, and it is our impression they will make it a success. A great many of the wealthy breed ers of the States are subscribing \$500 each in loans. to complete the purchase of the Allen & Bailey books. Some Canadians are also subscribing liberally towards it. The Government of the States in no way interferes with the work of the farmers in this, one of the great means of developing the wealth of their country, and we believe they are acting judiciously, as in England, that is, to leave this thing entirely in the hands of the farmers. In Canada the Government took control of the Canadian herd book, at least, they entirely controlled the Board of Agriculture and Arts, under whose management the herd book exists, and have made and altered laws to maintain and uphold them, and both act as one. The Canadian herd book was establishing for itself a high repu tation on this continent. But for the personal aggrandisement of a powerful combination of members of the Board, the high standard of the Canadian herd book was lowered without the consent of many extensive breeders. The consequence has been a general dissatisfaction, and such an outery raised both in Canada and in the States against it; that the breeders of Shorthorns found it necessary to establish a new herd book for themselves. The Government officials, when too late, attempted to make amends, and now we have two opposition herd books. Many farmers have paid into the Treasurer of the Government's hands various sums in hard cash for the registration of stock, and by a recent act, very large quantities of the stock that had thus been paid for was struck out of the herd book, giving great dissatisfaction to many of the farmers who have been duped by the old herd book and its manipulators, and have no means of redress. It is now a difficult matter for many farmers to decide where to register their stock. Some of our most extensive breeders have become so disgusted with the management of the Government herd

and subscribe willingly \$500 towards the same. Others are uniting their efforts to abolish the new Canadian herd book established by the breeders, which book is called the British American Shorthorn herd book. These two new herd books, at the present time, take the place of the old one. The Americans, and some Canadians, are in favor of supporting only one, namely, the American; but we would strongly advise every loyal Canadian to maintain our own herd book. More particularly is the necessity of this impressed on our mind since attending the great fat stock exhibition in Chicago. Every Canadian and many Americans saw the great injustice done to Canada by not awarding the justly and fairly earned sweepstake prizes to Canadian stock. This should show to every one the great necessity of maintaining our own herd book. It is our opinion that the old herd book will be abandoned by the Government. Why should we maintain two? We do not think that Government money should be expended to oppose the private enterprise of farmers.

and will register only in the American herd book,

United States Letter.

[FROM OUR OWN CORRESPONDENT.]

Washington, D. C., Jan. 20, 1883.

The increased and increasing interest manifested in agricultural topics by legislature and the public press, within the past two years, is a healthful sign. When advanced thinkers, statesmen and wise political economists turn their attention to this subject, on the success and progress of which the prosperity of the nation depends, we may expect to see many thousand citizens led by their teachings and example from the over-crowded marts of our great cities, to the more healthful and nobler calling of the agriculturist. These reflections, applicable alike to Canada as to the United States, are suggested by two things : First, the showing of the recent census of this country, from which it appears that the cities have increased in population ten-fold more than the rural districts, and that the increase in the number of farmers is far below the percentage of other callings in the increased population. Secondly, in Congress more speeches have been made favoring the enlargement of the duties of the Agricultural Department, and in the interest of agriculture, and more conventions of prominent agriculturists, wool-growers and stockmen, have been held in these two years than have been seen or heard before in twenty years or more.

At the Shorthorn Breeders' Association,

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one of our sons selected a location, on which he has erected his house and commenced breaking. He had enquired and travelled about to select a site; he found timber, water, hay, prairie and grain land, and appears well pleased with his location, being four miles from Grenfell Station. He considers his land ten times more valuable than much he had seen. The further we went by rail through this Qu'Appelle Valley, the better the land appeared. We hear the land near Fort Qu'Appelle has many advantages not to be found in much of the prairie country, there being wood and water, good drainage, and fine scenery in this locality. Deer, rabbits, grouse, partridge, prairie hens, fish and water fowl are found here in considerable quantities.

On page 44 we give a sketch of Fort Qu'Appelle drawn on the spot and furnished to us, which will give some idea of that locality. Much of this fine valley is owned by the Qu'Appel'e Land Company, who are rapidly disposing of it to settlers The rapidity-with which improvements are made on farms, villages and towns that spring up in this

the Wool-Growers' Association and the American Sheep and Swine Breeders' Association, which met at Columbus, Ohio, a few days ago, addresses on these various subjects were delivered by men who are not only practical Shorthorn breeders and woolgrowers, but who are among the leading men in the country. Prof. N. S. Townshend, of the Ohio State University, in his address on the "sheep as a farm animal," spoke of the sheep in early farm life as being pastured on the common and driven to farming spaces of ground, where they were kept over the night to produce fertilizers for the ground. This way of enriching the ground was carried on in a systematic manner in old times, and the number of sheep graded to the quantity of land. He then discussed the modern relation of wool to agriculture, and the necessity of wool to the population. Facts were presented showing that the U.S. only produced about two-thirds the wool its people used. Wool, he said, at 35 and 40 cents a pound, in this country, is not as good as wheat and corn as a crop. These latter, and the growth of dairy products, have exceeded that of wool raising. He stated wast and distant part of our Dominion, is altogether book that they will have nothing to do with it, that mutton was growing in demand, as compared

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THE FARMER'S ADVOCATE.

with pork, that mutton is more healthy, and that only about 5 per cent. died from disease, while about 20 per cent. of hogs died.

Hon. L. B. Wing, President of the Shorthorn Breeders' Association, delivered an interesting ad dress before the Association. Among other things of interest he said, that about 3,500 Shorthorn cattle were disposed of during the last year at public sale in the West, and the price-was an average of about \$200 per head. In Great Britain 1,600 head were sold at thirty-five different sales, at an average of \$175 per head. The demand for young bulls for the great cattle ranches of the Territories is greater than the supply, and it is likely that all other beef breeds will find there a ready market for their breeding animals, for a long time to come. He said that while a believer in and a breeder of the Shorthorn, he would welcome the breeder of every improved grade. He ventured to suggest that the present is an excellent time for a beginner to invest in the Shorthorns. Beef is high and likely to remain so, and the sort that yields the greatest profits to the producer, that which is in greatest demand for export and for home markets, is that which requires the pure Shorthorn to produce. For many years after the first importation of Shorthorns, those of the largest size, even when rather coarsely made up, were preferred. Experience, however, has taught that those of more compact form and finer points mature earlier, have less waste and are in every way more desirable. To breeders who own herds of considerable size, he suggests that it would be a wise policy to provide thoroughbred steer calves each year, to be raised for future exhibition, or fat animals; something that would exemplify the capacity of their stock in the way of excellent beef and early maturity. A few such steers about their farms would be a source of increased pride in their herds, and would be a most excellent advertisement of their breeding animals. Often a prospective purchaser, hesitating and doubtful of his own judgment as to what is best for his use, would buy at once upon view of the sort of beef animals the herd does actually produce. I have made reference, so far, to the Shorthorn as a beef producing animal only, but I do not forget that, for the general purposes of the farm, the Shorthorn cow is as much superior to those of any other breed as she is for beef

The U. S. Agricultural Society, the oldest in this country, will meet in this city on the 23rd inst. This Society was organized many years before the war, and included then, as it does now, many leading men in this country among its members. The war suspended their meetings and labors, but after many years they re-assembled with new zeal and energy. Among the interesting and practical addresses to be delivered are the following, of which I shall hereafter give you a synopsis:

shall hereafter give you a synopsis : "The Manual Labor System for the Farm," by Prof. T. C. Abbott, Mich. Agricultural College;

Sints and Selps.

Feed Rack for Stock.

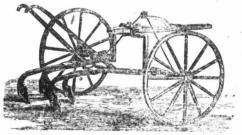
Feed racks are indispensable articles of the furniture of the sheds and yards. We give a cut of one which may be suggestive to some of our readers. It is designed especially for sheep, but it may be used for larger stock. The dimensions are 30 inches high, 28 wide, bottom formed by nailing together four boards, 8 or 9 inches wide, in the



shape of two troughs, or the letter W, resting on the crosspiece B. The novel feature, perhaps, is the cant-boards A A, which are hinged, and then fastened to movable braces. These boards serve as partial shelter to sheep, both from snow and chaff from fodder, and by moving the braces they assume a vertical position, and thus keep out the sheep while one is filling in the grain.

An Improved Cultivator.

An improvement in cultivators, by which a plowman is enabled to so adjust his cultivator that the shovels, when brought close together, will not be turned away from the plants, is shown in the annexed engraving. The wheels, the arched axle, tongue, plowbeams, and the shovels are of the ordinary construction. Couplings, which are made in the form of wide hooks and with flanges at the upper side of the openings, are placed upon these couplings are flanges, to which are secured a cross-



bar, which crosses the lower part of the arch of the axle at its rear side, and to the crossbar are secured couplings attached to the forward ends of the plowbeams. The couplings are so secured to the crossbar that they may be adjusted to any desired width. With this improvement the shovels can be brought close together for cultivating small plants, and will be in proper position for throwing

favorable conditions, and in good soil, it will grow to an enormous size, and mature millions of seeds. The writer has owned one farm that appeared emphatically to be the home of the Ragweed. Here, in 1872, it grew so very rank that while viewing the land preparatory to a purchase, we were forced to the conclusion that the land must be first-class, and that when rid of this pest it would certainly produce something that would prove more satisfactory and useful, and we were not disappointed either. Why, sir, after that season's crop of corn had been harvested it was a puzzler to find even an ox in some portions of the field, so thick and stout had this weed grown. Here, indeed, we had a fine opportunity for testing our method of exterminating it; in fact it was this that occasioned us to evolve the method itself. Hence; in 1873, we resolved to summer fallow this particular field, but since the previous season's crop of seeds was chiefly upon the surface, and the ground otherwise in favorable condition, we decided to utilize the proceeds of their growth as a fertilizer ; therefore the plowing was delayed until the weeds had obtained such a growth as to form an excellent coat of green manure. This was then carefully turned under, and the surface subsequently kept clean. By this means we got rid of the seeds in two sides of the soil. We conceived that there were two objects to be aimed at, while cultivating soil containing foul seed, with a view of cradicating it, viz., first, to keep the surface as open, mellow, and thoroughly stirred as practicable so as to permit the air, light, heat and moisture to enter and permeate it as fully as possible, so as to encourage the germination of the largest conceivable number of seeds in one season ; and secondly, to prevent all re-seeding. Having secured these conditions as nearly as convenient, we at the proper time seeded a portion of the field to fall wheat and timothy, and the balance to timothy only, and followed in the spring with a liberal sprinkling of clover. The following summer we reaped a magnificent crop of wheat, with long, bright straw and free from Ragweed, and a fair crop of hay. We made it a point to cut early, so as to prevent whatever Ragweed might put in an appearance, from maturing seeds, and the sheep then effectually disposed of the aftergrowth. The same treatment of the hay and land, viz: early cutting and after pasturing with sheep, was observed year after year, and no further trouble was experienced with the Ragweed on that

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"Swine," by T. B. Curtis, of N. J. and Ezra Stetson, of Illinois; "Breeding and Feeding for Beef," by John Scott, of Iowa; "The Transportation of Cattle and its Relation to the Propagation of Contagious Diseases," by Prof. Jas Law, Cornell University, N. Y.; Cattle Husbandry and the Demand for Beef," by Hon. J. B. Grinnell, Iowa; "On Sheep," by Wm. C. Markham, N. Y.; "Agricultural Education," by Prof. Conrad, of Va. The Futomological division of the J.

The Entomological division of the U.S. Department of Agriculture reports that the introduction and cultivation in this country of the pyrethrums is a success. These were known to have great value as insect destroyers, and the powder from which is variously sold under the name of "Persian Insect Powder," "Buharb," &c. The entomologist as-certained by experiment that preparations of this plant might be used successfully in the field against several of our worst insect pests, and its cultivation over as wide an area as possible was therefore desirable. A circular giving information about the two species having this virtue was sent out with seed that had been imported from Russia and the Caucasus. Reports, received from those to whom the seeds were submitted for experiment, show that they flower profusely in this country, and give a powder equal in its in ecticide qualities to any previously tested It is adapted to the latitude of Canada, and would doubtless be equally useful against some of the insect pests of its fields. Lorus

the soil around the plants.

PRIZE ESSAY. How Shall We Best Eradicate and Prevent the Growth of Ragweed ?

BY E. J. YORKE.

Such is the question proposed by the FARMER'S ADVOCATE for discussion by its readers, and while attempting to answer the above query, we do not deem it either advisable or necessary to enter into a full and minute history of the plant itself, but will rather assume in the outset, either that it is now an inhabitant of the soil, or is liable to become such.

Many of the readers of the ADVOCATE may be quite ignorant both of the appearance and annoy ing habits of Ragweed, in which case we say rejoice and clap your hands on account of the want of such information, and pray to be delivered from any future practical experience with its pestiferousness.

Past experience with Ragweed leads us to regard it as a wet weather, a dry weather, a hot weather, and a cold weather weed, as well as an early -nhabitant and 'late tenant of the soil. Under

of the black-faces, which would be, in-a manner, impossible, unless they were too few in number. we would, during the season, have run the mower once or twice over the ground, so as to assist them in preventing the maturity of seeds. And here let me remark, once for all, that, while any sheep are good for this purpose, the Southdowns are pre-eminently the helpmates of man in eradicating weeds, since they are much less exacting in the kind and quality of their food than the long wools are. The same season our oats yielded handsomely, and having been cut somewhat early, all re-seeding was prevented on that ground. Our next tield came under the three-course system of oats, wheat and grass treated as before. We do not, by any means, recommend this as the best method of securing a large yield of wheat, but it is most certainly a very effective mode of dispensing with foul weeds. The next season we were enabled to enter upon a full course of corn, oats, wheat, grass, together with the sheep, and the work was thoroughly done. Some may suggest peas as an advantageous crop in this regard, but allow me to warn them against trusting too implicitly to the smothering power of peas for the destruction of Ragweed. Because we tried them the first season along side of the oats, and, sir, while it may appear almost incredible, it is a fact all the same, that while the oat ground was comparatively

field. Had we been pasturing that particular

field, and had the Ragweed gotten any advantage

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clean, we actually had to hand mow the Ragweed upon the pea ground before we could trust the pigs to find the uncut peas. But ours were the Crown peas, and those kinds which grow an abundance of straw might do somewhat better, and we would even advise a trial of them in those sections where corn will not do well. Yet, even with such an abundance of straw, some weeds will force through and render the cutting very disagreeable, as well as mature (unless cut sufficiently early to prevent ripening) a large crop of seeds to go into the ma-nure heap. And this brings us directly to the question, how to prevent the growth of Ragweed ? Manifestly the satest method of preventing its growth will be to prevent it from getting into the soil, either through the agency of the manure, or from being sown with field seeds. The careless habit of sowing foul clover-seed has hitherto been the chief means by which Ragweed has become so generally distributed over the country, though some farmers have unwittingly incorporated it in their soil by securing manure from others.

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As already hinted, the best method of getting rid of any foul seed is by securing its germination and then preventing it from arriving at maturity. But having it in the manure we may no doubt effec tually destroy it through the agency of the compost heap, when this means is feasible. Yet this may not always be convenient, as the manure may be required for the next spring's crop, when there will not be time to compost it. Though had the manure been properly heaped when removed from the stable this disadvantage could have been avoided, so far as that manure was concerned, as it would have gone on working during the whole winter, and would, consequently, have been in much better condition for the spring use, and comparatively free from foul seed possessing any vitality. But in the event of this heaping not hav-ing been done, the next best thing will be to use it as a top dressing in its coarse and raw state, which may easily and properly be done upon all, except perhaps the hoed crops, in which case the foul seed will, in all probability, when ploughed in, remain dormant in the soil to be brought up and destroyed by the rotation to follow, which will somewhat lengthen the time consumed in clearing a field of Ragweeds. But when the manure has been applied as a top dressing, the foul seed, being upon the surface, will in all likelihood germinate the same season and come to grief through the agency of the reaper or mower and the after pasturage. Care in all cases must be exercised to prevent the maturity of weeds along sfences where there are growing crops. In such cases the weeds must invariably be cut with the scythe, so as to prevent any ripening of the seeds. Now that stock growing is attaining such dimensions, we prefer to use the coarse manure on the grass lands. I know some will be alarmed about the coarse stuff being in the way of the mower and horse-rake, but there is but little danger of any trouble from this source. The writer has for years teen using it thus, whole corn stalks and all, by hauling it out when there is frost and snow enough to do the work with the sleigh, thus avoiding much extra labor, and saving valuable time in the hurry of the spring work, also the cutting of the land by wheels, though the latter difficulty, including much of the former, is now overcome by means of a truck wagon with broad tires. When such manure has been early and properly applied in the spring, and the land thoroughly rolled, no difficulty need be experienced while handling the subsequent crop, which will be found to be about double what it would otherwise have been. The same mode of application may be practiced on wheat, only care must be taken to spread the manure properly from the load, or, at least, not to permit it to lay too long in heaps, or it will smother the wheat. We are now carrying out these suggestions on our second farm, which has been thoroughly over-run with the Ragweed, and with the addition of permanent grasses the system is giving entire satisfaction. Indeed, we are willing to guarantee that if the foregoing observations are carefully and promptly acted upon. in a very few years we shall have heard the last of this pest upon our lands.

Cattle Barns.

The rapid strides which the Canadian live stock nterest has recently been taking, and the gigantic proportions it is now assuming, render a firstclass cattle barn an indispensable necessity with the enterprising and thrifty farmer. These, to secure the greatest possible convenience and utility at a moderate outlay, have been, and are being, constructed upon a variety of plans. But the di mensions suggested in the proposition submitted for discussion in this essay are quite out of pro portion, being entirely too narrow to admit of the best results being attained. Cattle barns should always be sufficiently wide to allow of two tiers or rows of cattle to stand facing each other, with a gangway between them wide enough to permit a team and load to pass along it. The plan adopted by the writer is as follows, viz. : The building is to be not less than thirty-six feet wide, with at least sixteen feet siding, standing upon a brick stone or concrete wall, eight feet high, and of sufficient length to accommodate the number of cattle it is proposed to keep, say sixty feet. Such a building will furnish ample room for thirty-eight or forty head of average size, together with a large amount of storage for fodder. The lower story being so laid out as to give a gangway about nine feet wide, this will bring the cattle mangers just under the edges of the upper floor, to permit the feeding being done from above. The upper floor proper being but ten feet wide, with a foot space along each side through which to feed. These feed spaces being fitted with portable trap doors, which, when closed, form practically a twelve foot floor. Thus on the lower floor we have about twelve feet between the mangers and outer walls along each side of the building, which will give a standing floor for the cattle from four to five and a half feet, according to the size of the cattle to be accommodated, together with a gutter or drop eighteen to twenty inches wide and a walk behind the cattle. A good idea is to make the standing floor at one end of the stable longer than at the other, so as to accommodate larger cattle as well as smaller ones, as there is no likelihood of all being the same length. This may be accomplished by running the gutter slightly angling with the outer wall. The bottom of the drop should not be level, but rather should have an inclination from each end towards the centre, and should be deep enough to prevent the attle from standing in it The object of this incline towards the centre is to bring the liquid or urine to a pipe connecting with the drop at this point, and leading under ground and out of the reach of the frost, to a urinarium, a few rods distant, constructed for receiving and re-taining the same. The propriety and utility of this arrangement will at once be seen by those who understand the value of liquid manure. The bot tom of the manger should be at least four inches higher than the standing floor, and should be divided into boxes by means of a narrow partition between the two bullocks in the same stall, and by the stalls between each pair of bullocks, and tight enough to feed meal in without waste. This par-tition will not materially interfere with the feed-ing of hay, and yet will form an efficient division between the meal rations of the cattle. The floor should be made secure and firm, so as to avoid accidents from breaking through, and should fall a little towards the gutter or drop so as to effectively carry off all surplus moisture and afford a dry comfortable bed to lie upon. When plank is used for flooring, a good idea is to carry the sleep ers of brick, stone, or concrete, to the desired height, and then fill in between them with stone, or brickbats and muck, or other suitable material, all to be well packed in and made level, with the permanent sleepers and the planks then laid on This mode affords a very warm floor in wintop. ter and cool in summer, much more so than when raised some distance above the ground, besides security from breakage. A block pavement or cement floor will give good satisfaction. give good satisfaction. Good stalls erected between each pair of bullocks and furnished with the chains sliding on upright studs, will permit of a greater number being accommodated than any other system, except the stanchions, besides enabling the caretaker the more easily to feed any given animal or animals separately for ripening off purposes. But stanchions are not to be thought of, owing to the cruel and unnatural position in which they compel the cattle to remain, whether lying or standing. Stalled cattle should always be sufficiently at liberty to lick themselves and rub certain portions of the body with their horns.

divided into two or more departments by means of firm partitions with a door the width of the walk behind the cattle attached, so as to permit the movement of abeast from one department to the other, as well as other conveniences which would be realized from said door. Such a partition would very much diminish the risk from danger by a stronger animal becoming loosened during the absence of the keeper. And adjoining such a partition should be placed a narrow door forming part of the enclosure at the front part of the manger, so as to permit the attendant to easily pass from the stable to the gangway in front of the cattle, and vice versa. The space between the front part of the manger, which should not be too high, so as to allow of the easy passage of roots and other provender into the manger from the gangway, should be closed up tightly to the upper floor; but leaving a horizontal passage from twenty to twenty-four inches wide, through which to feed, and which passage or space should be furnished with doors opening upwards, so that they may be closed in whole or in part as may be desirable for ventilation. The object of this complete enclosure in front and above the cattle is to prevent the air, when warmed by the heat radiating from the cattle's bodies, passing out in front and upwards, to be replaced by cooler air, thus necessitating the warming of all the air in the building before the cattle can become comfortb'ea. Moreover, when open spaces are left either in front or just above the heads of the animals, a current is formed by the upward movement of the warm air, and this current naturally draws the foul fumes with it, thus compelling the cattle to breathe impure air, which, in itself, is extremely deleterious to their health, besides the noxious fumes passing to the loft above would damage the feed to a very serious extent. Again, the over-lays or beams just above the cattle should incline several inches towards the centre of the building, and the floor on them should be laid with strong tongued and grooved stuff. The object of such arrangement is to form a perfectly tight enclosure about the cattle, which, when the trap doors in the feed spaces along the upper floor are closed, will be secured. Thus all drafts towards the heads of the animals will be corrected, and all waste of natural warmth, together with the ascent into the loft of noxious fumes to foul the fodder, will be avoided. Then, again, the elevation of the ceiling towards

the outer wall will facilitate the backward movement of the foul emanations to further escape by means of box vents or shaft connecting with the loft floor, and extending upwards along the wall and out through the roof as seen in the profile. These shafts should have placed in the profile. These shafts should have placed in them check valves, so that the caretaker can easily regulate the ventil-ation. In this manner good and efficient ventil-ation can be secured, and yet it will be under the full control of the operator. Furthermore, when the loft floor has been laid as above, and the fodder, which has by this means been protected from injury, has been removed either during the winter or early spring, all cold drafts from above are obviated, and the uniform temperature of the stable can still be maintained ; and upon this consideration alone may pend the success or failure of the feeder. It may already have been observed that according to this plan the loft above the animals on each side of the upper drive floor will constitute a bay with a breast beam, say two feet high, and above these breast beams and about eight feet above the floor, should be another timber similar in size to the breast beam and supported by means of 4 x 4 studding placed four or five feet apart, across which portable beams or stringers may be placed so as to form a temporary loft over the drive floor. By this means, after the two bays have been filled to the greatest extent possible, and after the temporary loft has been erected, all the availabl espace above the floor and to the roof can be utilized. This may be best accomplished by erecting the temporary scaffolding in sections, say from one purline post to the next one, when hand pitching is the mode. But if the horse fork is resorted to, then it will be better to erect all of the temporary scaffold, only leaving room for the load to enter the barn. When unloaded the empty wagon can pass on through. The writer, this last season, was so crowded for room that all was covered but about four feet to pitch up through. In this way all space is utilized, and space, with the least outlay for roof, etc., is an important item of economy in building. Should the builder not desire so much stable room at first, then he may omit the over-lays and stalls on one A stable sixty feet long would be better if the stable floor below, and so secure additional

"For many years I have been a subscriber to some of the best agricultural journals, and I can say that the reading of them gave me no more pleasure and profit than the FARMER'S ADVOCATE. It is the only one I continue to subscribe to, though I have no more direct interest in agricultural pursuits since I have sold my farm.'

L. H. B., Montmagny, P. Q.

February, 1883.

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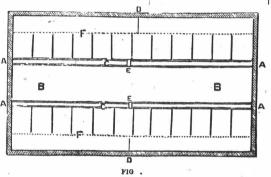
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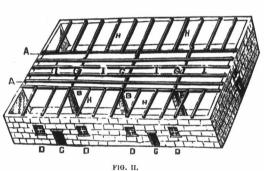
THE FARMER'S ADVOCATE.

space for several tons more. Should this course be adopted there need be no difficulty experienced in removing the hay, as some may suppose there would be, because it need not all be ptiched to the upper floor. On the contrary, when it has been first-class ripening condition during the whole fed to a level with, or a little below the floor, the balance can be removed through the gangway in the lower story. This last season the writer filled one stable as above, up to a little above the upper floor, and then placed the over-logs, and so constructed a temporary loft over the stable and proceeded to fill the loft over the floor, and found no difficulty in feeding the hay from the stable through the lower gangway. In this manner the stable was clear by the time it was required for the sheep. In addition to such a cattle stable as has been described in the foregoing, the writer has his grain barn standing sideways to, and joining with, the cattle barn at the lind end, as it appears in profile No. 4, so that the drive floor of the one is on a level with that of the other, and a stairs here connects the upper and lower stories. The lower story is now used for stowing away the implements, which is far superior to a wooden room, as it so effectually shuts off the wind and dust ; but when required it may be used for stabling purposes, or hospitals for sick or breeding animals; or one-half of this story may be used for a manure pit, which would be decidedly better than to have such pit just below the cattle, as some advocate. When the manure is placed just below the cattle there is no possibility of k eping down the fumes arising therefrom, and which are so very deleterious to their health; indeed, an animal kept constantly for fattening purposes in a stable such as this arrangement would necessitate, would, every pound of him. be surcharged and flavored with such fumes, and the same would be the case with the milk of cows kept therein. With the writer's plan, however, all fumes can be kept from the cattle, and with regard to this particular we are now experimenting. Just let a man pass a manure heap on the opposite side from the wind, when it is in full course of decomposition, and he will soon learn how extremely noxious it is. How superlatively dangerous then must it be to the health and thrift of the animals who are compelled to breathe it constantly? Is there any wonder that lung and kindred diseases are so prevalent? An-other great advantage to be derived from such a connection between the grain barn and cattle lodges is the ease and facility with which the straw, at threshing time, can be conveyed to the loft and bays above the cattle, while the chaff can also go there or be stored upon the drive floor of the cattle department, or go to the gangway be-low. In this manner all the straw can be safely housed from the weather, and will be found useful for feeding purposes, even if not worth more than half the value put upon it by Mr. Brown's estimate, while the chaff will be ready for use, as a mixture for meal, to be fed in the early fall, before there is time for chaffing coarser feed, to be administered with pumpkins or roots, that may also occupy a portion of the lower gangway. Moreover, when the time comes for chaffing the straw, it will be found in the most convenient position possible to to the cutting box, as all will be downward. And when cut it will still be downward to the gangway below, from which it can readily be passed into the mangers. This gangway may also, when not otherwise in use, be converted into box stalls for breeding animals, or calves, etc. When feeding meal or chop either separately or in connection with bran, we have recourse to the use of small hoppers and spouts, reaching from the feed boxes to the upper floor. Thus, by feeding from above, all annoyance from the cattle's heads is avoided. A rare luxury, within the reach of but a favored few, can be had where side hill springs are within reach, or by reservoirs erected upon sufficiently elevated spots and protected from frost, by means of pipes to convey the water to a receptacle just below the manger or feed trough, and constructed for this purpose, with access had to it for the cattle by means of trap doors in the bottom of the manger. by means of trap doors in the bottom of the manger. But it is generally preferable for the cattle to go out to water. Lastly, but not least in importance, is the mode of disposing of the manure until required as a fertilizer. Pitching it out through smal doors behind the cattle, to be washed by every rain and the eaves, is rather unsatisfactory to those who can appreciate a good article of this kind. Nor yet is wheeling it out by hand a very pleasant job, though with a slight down grade from the door this system works very well. Then by means of a shed near the urinarium, as shown in

the profile, it can be protected from leaching, and the urine can be pumped upon it as occasion may require, and by this mean and an occasional sprinkling of salt and gypsum, it may be kept in



winter, and come out in the spring as nicely as the best "Myrtle Navy." Such a barn may be erected in a side hill, and the doors altered to suit, or on a high knoll, or the level, and be kept tidy by means of under drains. Such a cattle barn erected upon a brick wall would cost, providing the timbers were furnished by the builder from his farm, in



this locality, from \$1,000 to \$1,400, according to finish. The cost of building will always depend upon the local conveniences for securing material, labor, &c.

KEY OR EXPLANATIONS OF DRAFTS.

The different profiles are numbered 1, 2, 3 and 4.

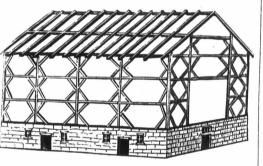


FIG. III.

the brick or stone wall with the foundation already laid. In this picture the different parts are shown also by letters; A A indicating the feed passage in the upper floor one foot wide ; B B B are three brick pillars that support the timbers in the foundation or upper floor, and on which the purline posts will rest. These long purline posts enable us to do away with the cross beams, which prove such a nuisance when the hayrack is in use; CC are the side doors to the stables, each side being the same ; D D D D mark four slide glass windows; E is the door leading to the gangway of the lower floor ; F is a glass window immediately above the door E; G G G show the cross sills which receive the sleepers of upper floor; HHH H mark the overlays or stringers supporting the loft floor just above the cattle, and I I I mark the sleepers in the floor of the upper gangway. In figure No. 3 we have a representation of the

frame erected upon No. 2 figure or foundation

Number 4 figure represents the building as enclosed, except the doors and windows, together with a few parts not already explained. In this figure G shows the door leading to the upper gangway; F a glass window in gable; E marks the cupalo on roof; H H H show the projecting ends of vent boxes or shafts coming through the roof ; I are the three timber stringers reaching from earth grade to upper gangway, supporting a bridge; J is the incline grade forming approach to upper floor ; K is a cap or roof over end doors ; N N are small doors in sides to admit air during haying, and to let the dust escape and give air when threshing in grain barn and straw is passing to cattle barn; L is the manure cover or shed; M is the urinarium which receives the liquid manure from the drop or gutter, per underground pipe.

E. J. YORKE.

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The Blue Thistle.

From various sources we learn that bee-keepers in the United States have been cultivating this pest for honey purposes. It is claimed that the plant is hardy and yields an abundance of firstclass honey. Hence it has been eagerly sought for by professional bee-men. The botanical name of the plant is Echium vulgare, and other writers have it Cirsium arvense ; and again it is called cursed thistle. From the appearance of the plant, having no prickles, we believe that those who planted it at first for bee-feed were deceived, and did not understand the pernicious character of this weed. The complaints mainly come from the other side, where it is asserted it is becoming a pest. We have not seen it in Canada yet, nor have we heard through the large staff of our correspondents any complaints about its growth in Canada, and we sincerely hope there will be none; but to be forewarned is to be forearmed, and some farmers near London, Ont., have already taken the initiative, and at a meeting held last month, a unanimous resolution was passed condemning the dissemination of this blue thistle. From the report of the meeting, extracts from numerous letters from several States of the Union were read, showing the noxious character of this plant and the impossibility of eradicating it when once rooted in the soil. Whether it has got any foothold in this country we do not know, but certainly we should counsel our farmers to be on the alert for its appearance, and use all due caution to secure its extermination. We have already enough weeds in the shape of rag weed, Canada thistles, &c., to contend against, without introducing any more, especially such a dangerous character as the blue thistle.

No. 1 shows the ground floor laid off in stalls and the different parts marked with letters of the alphabet. In this draft A A A A represent the mangers, B B the centre gangway, C C the stalls ; D D the doors opening from one stable to the other in centre partition, which effectually divides each

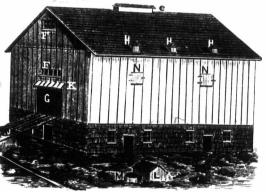


FIG. IV,

side of the barn into two stables ; E E show two narrow doors which permit the attendant to pass from stable to gan jway in front of the cattle, and F F represent or indicate the drop or gutter, as shown by the dotted line.

Profile or figure No. 2 is intended to represent

The Montreal Witness, commenting on the charges made against the management of the Model Farm, at Guelph, says if such accusations are true, "a speedy investigation is in order," and the Farm "certainly needs remodelling."

"We think it suitable to every family and every member of a family ; there is always something to amuse and instruct both old and young and entirely agree with our subscription form, that it is the best, cheapest and ouly live agricultural journal published in Canada, and is emphatically THE FARMER'S ADVOCATE. It would be hard for me to suggest any improvement."

S. T., Halloway, Ont.

FARMER'S ADVOCATE.

February, 1883

Poultry.

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Poultry Breeding. BY R. A. BROWN.

Mating Breeding Stock.

Mr. H. H. Stoddard, in his Poultry Yard, says It is astonishing to us, as it is doubtless to any one who has been in a position to observe, how many self-termed poultry fanciers there are who take no special pains in choosing to mate. As the season for mating fowls for breeding approaches, a few words on that important subject are in order.

If a cock is very alert, care should be taken to allow him hens enough, so that he may not worry or injure them by two frequent attentions.

The male bird in very many cases exerts the most influence over the color of the plumage and over the external points or marks in general, while the hen governs most of the form, size, and useful qualities of the progeny. The poise of the body upon the feet should also

be observed. If the habitual carriage appears as though the bird was balanced firmly but lightly in its tracks, then we will warrant that it is of symmetrical build all over.

Excessive legginess (which term we use because it is expressive if not elegant) in the breeding stock is not to be tolerated, though in the cock it is not quite so objectionable as in the hen; provided the mother of the cock was all right in this respect. And we remark, in passing, that on all points too little is said or thought about the mother of the cock.

There is one feature in fowls of no matter what breed, always associated in our mind with general scragginess and coarseness, and that is a long back. We would not tolerate it in either cock or hen. Now it often happens that in the breeds where great size is desired, a tall, elongated cock is chosen, simply because he pulls down the scales surprisingly. It is no wonder that he balances heavy weights, so long as bone is heavy stuff. Let us have squareness and depth of body in all the heavy breeds, and width and rotundity of breast in most of the lighter ones. In this way there

in most of the lighter ones. In this way there will be room afforded for the heart, lungs, and other vital organs, which will insure vigor and stamina, and yet there need be no coarseness. We cannot give full and detailed directions for mating, as different laws govern different varieties as to markings and the like. But the points we have noticed are inport unt in the case of all breeds, and should be taken into account when a breeding and should be taken into account when a breeding pen is made up.

Poultry in Winter.

This is a very critical time of the year in the farmers' poultry yard, on account of the great haphazard slaughter that takes place on many slaughter that takes place on many farms. The ones handlest by, or the easiest caught, and sometimes the fattest are taken, with no thought of enquiring which would be the most useful to select to mate for breeding stock, for the ensuing year.

Many young cockrels, when half-grown and halffledged, are ill specimens, yet when full grown make the best birds in the yard.

It is necessary now to 1

The breeding and rearing of poultry for pleasure or profit, when done on facts and principles, is a treasure in itself in the knowledge thus gained by a systematic method of judicious mating and care in selecting the out-crosses for fresh blood, without deteriorating the high attainments of the stock that has perhaps taken years of careful study to bring up to its present standard of excellence. Every breeder (whether of horses, cattle, sheep

or poultry) of merit, who breeds with success and overcomes every difficulty, enhances the value of his stock by the addition of fresh blood. But this must be done with knowledge; guess or chance work will not do. If the family blood which is to be added is of minor importance, the result will be a shrinkage in the attainments of your stock. When one's flock is up to a successful standard, and we look around to select a bird of superior excellence and cannot find one in the locality that one is in, to get one from abroad is sometimes too expensive, and even when this is done the new selection is too often made without seeing the object that one is paying his money for, and when it arrives it is but one chance out of ten if you are satisfied. Birds thus purchased are sometimes unsatisfactory, and the breeder is denounced as a humbug and dishonest, when the fault is too often with the purchaser, who writes that he wants a bird of merit (or sometimes a pair); he wishes them good and wants them for about a dollar a The facts are, the birds are sent and fail to piece. ive the satisfaction that it is expected they should. When a breeder sends dollar birds, he is not going to select the best in his flock to send at such prices. The best is always the cheapest. I have been most satisfied when either seeing before purchasing or being very particular in describing the defects of my stock that was to be mated. Then the seller had to send something good in the parts where mine were weak, and the result has given best satisfaction. Breeders often feel afraid to introduce fresh blood, and very justly so. But when one has al-ready bred in to such an extent that he is afraid to go farther, and to still breed in farther would de-

teriorate, one does not risk venture in getting blood that is no better than his own, for the first product will be stronger, larger and more productwe than either of their parentage. Now lay by the new purchase and resort to the old sire again for one change more; then the next year again. I have observed that where the blood was pure,

the female produced size and weight in her offspring' and more so if the offspring were females; and that the male produced his like on the color, the mould or build—in fact the fancy points, and more so to males than to females; also that he governs the healthfulness of the offspring. If the family from which the male descended had some particular points of merit or demerit, the rule is that he will transmit such particular points to the offspring. The flavor of the flesh is, I believe, inherited from the female to a greater extent than from the male. A very remarkable merit of color has presented itself to me at many different times, and each time resulting in a similarity of color. Take, for instance, two distinct families of color, one brown, the other white. If both are pure bred, the off-pring from a mating of one of each blood are nearly always black, or more black than any other color. If the matings are with a black and a white, the grey predominates in the color of the offspring. If the black and buff are mated, the product predominates in brown color. If black and red are mated, the product is chestnut or dark lemon. However, I have observed these colors to be more accurate in horses than in poultry. We are often asked which breed of fowls pays best. The rule is, the breed that you give most careful attendance to is the one that will pay best. You may take the purest and best breed that ever lived, but if not given the feed, water and attendance they should have, they will not pay half so well as a set of mongrels of the first water that are given the best feed and a tendance and every tidbit that can be procured for them. But pure bred poultry pay better than mongrels, as the latter are great consumers and poor producers, while the former pay well for every attention given them. By procuring good fowls and taking good care of them, every one who does so will be satisfied they will pay.

The Farm.

Draining.

BY C. G. ELLIOTT.

(Continued.)

THE OUTLET.

The first and most important consideration in ood drainage is the outlet. We may use tiles as large or as small as we please, and lay them as accurately as a railroad is graded, and even go to the expense of locating the lines ten feet apart, and yet if the outlet is not free, the drainage will not be successful in all respects. The lack of good natural outlets is perhaps the g catest difficulty farmers have to surmount in draining flat prairie. To make under-draining successful, he must often deepen the water-course by making open ditches, even larger and deeper than the one previously described. In order that a tile drain may dis-charge all the water that it is capable of carrying, the water must flow away with perfect freedom.

LOCATION OF DRAINS.

Mains. - Having found the difference of elevation of various portions of the land to be drained, we are prepared to fix upon the lines for the main drains. This is a work which, in many places, gives opportunity for the exercise of much skill in the use of knowledge pertaining to drainage. It will be assumed that sufficient level-notes have been taken, and distances measured, to determine the fall per 100 feet between the particular spot to be drained and its nearest outlet, or, if the land is nearly flat, the amount of slope it has in any direction.

The first knowledge that the farmer should avail himself of is, that which he can obtain by observation in the spring of the year, when the soil is saturated with water. At such time water will be found standing above the surface in hollows or basins in the land, and also on flats which seem as high as the surrounding surface. Mark these places and determine, if possible, whether the water is held by a clay sub-soil, or by the quantity of water retained in the soil at the lower portions of the field. In the first case the natural drainage will be very slow, even though the elevation be sufficient; while in the latter, the natural drain-age will go on rapidly if the surplus water is removed from the lower portions of the field, thereby giving the water an outlet through the soil. If the whole field seems nearly flat, see if there are not some spots which are wetter than others, though the contour of the surface does not indicate it. Upon examination it may be found that the cause of this is with the sub-soil, as before noticed, or with the soil itself, it being made up largely of clay and more retentive of water.

The bearing of these observations on the location of mains is this: There are places, such as have been mentioned, which must be drained by a system of branch drains. The nearer the mains can be brought to these the less will be the expense of the branches and the more effectual will be their action. By these observations the farmer has an accurate method of finding the lowest places through which all main lines should pass. The variation in the course of the main to suit particular cases is often preluded by the slope of the surface, and also by the extra expense a longer main would incur. The general rule for the location of mains is to let them follow the lowest land, or course of natural drainage. The surface then slopes towards the drain, making both natural and artificial drainage easy. We might say here that in all cases we should try and take every advantage that nature has given us in this work, for artificial drainage is only completing the work which nature has begun. There are cases which require us to make excep-tions to the general rule just given. First, the drain should be as free from angles and short turns as possible. In other words, it should be laid on a straight line, or a series of straight lines, connected by long curves. A few words in explana-tion of the advantage of straight lines and easy curves will convince the reader of their import-There is a certain number of feet or inches of fall that can be used in a given distance. The shorter we can make that distance by cutting across angles the greater the fall per 100 feet we can get, and consequent greater velocity of flow and discharge of the drain. When the total fall is

me understanding what will be best appropriated for next season's use, whether you want to breed for egg-producers or for table use. If the latter is desired, choose Brahmas or Cochins; if for eggs alone, try Leghorns, Spanish, or Hambargs; if for beauty or fancy, then try the Polands. If you want but one breed for general purposes, good for laying, sitting and table use, then try Plymouth Rocks, Javas, or Dorkings.

It is much better to breed from pure birds, as they pay better than grades ; but if they cannot be got handy, try if you can get a pure blood male to mate with your hens. If the farmers do not care to raise pure bloods exclusively, it may pay just as well to breed from pure-bred cocks and your own cross-bred hens, always breeding each year from a pure-bred cock of that variety which is best suited to your wants, each year selecting your best pullets to breed from, and killing or selling the rest. Then, in a few years, you will be grati fied with the great improvement effected at such trifling expense. Anything that is worth doing at all is worth doing well. Get good stock and take care of them; pay attention to the selection of the best for breeders, and it will pay any farmer to breed and market poultry and eggs. People must not expect that to get good stock is all that is re-quired, and that it will take care of itself, and prove a horn of plenty.

ONTARIO POULTRY ASSOCIATION, --- The association has decided to hold the next annual show in Toronto from 7th to 15th Feb'y next, and a local committee has been formed to assist the directors in holding the same.

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slight, as is very often the case on land which suffers most severely for want of drainage, everything that can be done to increase the velocity of flow is of prime importance.

Again, mains must be made of larger tiles than any other of the lines, and so cost much more per foot. Crooks in the line increase its length and consequent expense.

Short curves decrease the velocity of flow, so that, if we wish to have a uniform velocity in all parts of the drain, the grade must be increased at the bend, and as a consequence, the grade of the entire line must be lessened.

It will be seen that there are many things peculiar to each location to be considered in determining the proper course for mains. In making the line shorter in order to lessen the expense and increase the fall, we may by a deep cut, made to avoid some turn, increase the cost more than all we save, or by so dong we may fail to drain some land through which the drain should pass.

It is only by carefully weighing all those things which enter into the expense and efficiency of the work that the farmer or drainage engineer can arrive at the most desirable plan.

It must always be borne in mind that in small ponds, drained by a single line of tile, the drain should pass entirely through the pond, and thence to the outlet, instead of beginning at the edge of the pcnd as in the case of an open ditch. The reason for this is evident when we remember that water from the land on either side of the drain enters it through the joints of the tile, while the land at the end of the drain is drained but very little.

Sub-mains and Branches.—It is often the case that a single line of tiles laid through a flat basin or hollow will afford a sufficient drainage for the purpose of the farmer. When we wish for the thorough drainage of flats, ponds or swamps, we must have mains to give an outlet for the water when collected, and a system of sub-mains and branches to collect the water from the soil and discharge it into the mains. There are different systems for laying out branches, the value of each depending upon the area to be drained.

If the main is of proper size it will of itself drain the soil for a distance of from forty to fifty feet on either side

The junction of all branch drains with mains and sub-mains should be at such an angle that they pipe will discharge as nearly as possible in the direction of the current of the main and larger stream. Where it is necessary to have the drains connect at right or obtuse angles, the junction tiles should be curved in the direction of the current into which it discharges, and all angles avoided. When a change of direction is desired curves are used. The reasons for this will be discussed more fully further on.

We wish to urge upon all who are about to undertake drainage that the application of correct principles to practice is what is most needed. We can not always fully carry out a correct theory in practice, but the nearer we come to it the better will be our work.

LINSEED CAKE.

The most popular form of oilcake is, undoubt-edly, linseed cake. Linseed cake formerly usually contained 12 or 13 per cent of oil; and I recollect that some nine or ten years ago 11 per cent. was considered low for an English-made cake, and 10 per cent. was looked upon as very low even in American cakes. I recollect once analysing a thick American linseed cake that yielded upwards of 17 per cent. of oil; but samples like this are now probably to be found only in museums. Seedcrushing machinery has much improved of late, and the crusher naturally does his best to obtain the maximum yield of oil—since oil is worth three times as much to him, weight for weight, as is the cake. Although, then, there are still mi ls in England which turn out linseed cake with eleven to twelve per cent. of oil, there are others which reduce the percentage to eight or nine, and occasionally even lower than this. American linseed cakes now seldom give more than ten, eight or nine being a more usual figue. Indeed, during the last ten lays or so I have analysed at least half a dozen different samples of American cake containing not much more than 7 per cent. of oil. I am bound, however, to say that, although hard pressed, the American cakes that find their way into my hands are usually sound, clean, and of excellent quality, and they have generally the advantage of being very dry, which gives them good keeping quali-ties. English linseed cakes, independently of the oil they may contain, vary greatly in quality: There is, no doubt, far less adulteration than formerly existed, and there is no difficulty now in obtaining first-class oil cakes perfectly pure, although my experience shows that the word "pure" is still often branded upon cakes that are made from linseed that has been anything but well screened. I am now, be it remembered, speaking of cakes branded and guaranteed as "pure." Of course, much adulterated rubbish is still sold as linseed cake of "mixed" or "second" quality, and its lower price and sometimes its equally good appearance hold out a temptation to the buyer, and in such cases, there being no pretensions of purity, the buyer, even after analysis, has no remedy in his hands. The most wholesome advice that can be given to cake consumers is to buy only the best qualities of cake which are guaranteed pure, and which can be depended upon both for quality and for soundness. The best way to form a rough and ready opinion on a sample of linseed cake is to crush a few ounces to powder and to place half an ounce or so in a half pint cup or tumbler of water, placing it on the hob for a while, and now and again stirring it up. The odor while warm should be noticed, and then the mixture should be allowed to cool. It should then set to a thick mucilaginous gruel of a rich, pleasant flavor. A few experi-ments with good and bad cakes will soon enable one to form in this way a very fair rough opinion of the quality of a cake. If some of the powder be munched between the teeth very little grit should be detected If much grit be detected the sample probably contains an undue proportion of sand, showing that the linseed has been badly

numerical point of view, however, we have seen that a ton of decorticated cotton cake is equal to 1 tons of linseed cake, and this leaves a good balance in favor of the former. Doubtless, decorticated cotton cake, at first, is less liked by stock than linseed cake, but when once they take to it they will eat it with equal readiness. Many of my farming friends prefer to mix the two cakes in equal proportions both for cattle and for sheep-and this commends itself as a judicious mode of administering it-but it must be always recollected that decorticated cotton cake is a highly concentrated food, and with it, therefore, should always be mixed a more bulky food. Plenty of good hay is, perhaps, the best material for this purpose; but if hay is scarce an equal quantity of barley meal or maize meal should be mixed with the decorticated cotton cake, plenty of chopped straw being mixed in with the daily allowance of pulped roots. De-corticated cotton cake should also be broken up into small pieces, which general experience appears to show to be preferable to actual grinding. For very young stock it should only be used with great caution, as it is liable to cause indigestion and constipation, owing to its concentrated nature; but, properly used, it is one of the best purchased foods in the market. Good, fresh decorticated cotton cake is the color of prepared mustard, and has a palatable taste. Samples that are brown and pungent to the taste should be regarded with suspicion. A certain brownness of color may mean nothing harmful, but there should be no rancidity or mouldiness. This cake contains usually from 12 to 16 per cent. of oil. I have found 20, but anything above 16 is now rarely met with. Undecorticated cotton cake, which is made from whole seed—usually Egyptian seed—differs from decor-ticated cotton cake by containing a large propor-tion of woody fibre. As a feeding material it is less digestible, less nutritions, and less economical than either lineard or decorticated extension than either linseed or decorticated cotton cake ; but the husks that it contains possess a somewhat stringent property, which is useful to counteract the tendency to scour which often occurs to beasts on very succulent pasture, or on diet which comprises an excessive quantity of roots. Rape cake is a useful food, though its peculiar flavor sometimes renders it difficult to get animals to take to it immediately. Great care has to be exercised in buying and selling rape cake to ascertain that it is free from mustard seed, which renders it practically poisonous to stock. Much of such cake comes into the market, and is almost wholly used for grinding into rape cake for manure, but occasionally by some mischance a parcel finds its way into feeding markets with disastrous results if the mistake be not discovered. I say, mistake ; because no sensible cake merchant would fraudulently run the risk of the consequences which might be expected to

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Less Water-Deeper Wells.

follow.

Water was hever so scarce within my memory as it is now. Wells are usually dug too shallow, and hence fail in a dry time. For nearly a hundred years the barnyard well at Kerby Homestead supplied all the water which was required for the stock in winter, but of late years it would give out. It was only fourteen feet deep, and a few years ago, tired of this annoyance in mid-winter, a new well was sunk, going down thirty-two feet deep through the hardpan and blue clay until a strata of gravel was reached, when an abundant supply was obtained. This well now contains twenty feet of water. It is evident that the same causes which have reduced the volume of streams have also lessened the amount of water in wells. It is evident that if we are to keep up the supply of water in wells they must be dug deeper, in proportion as the land is cleared and underdrained, which have the effect to reduce the supplies in the swamps which are the natural reservoirs which feed the springs and wells The lower reservoirs must be reached. -[F. D. Curtis in N. Y. Tribune.

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Practical Value of Artificial Foods.

The following is from a lecture delivered before the Notts (England) Chamber of Agriculture, by Mr. Bernard Dyer, F C. S. F. I. C., Professor of Agricultural Science in the City of London College:

lege : The practical value of a feeding material depends firstly, upon its being in good, sound, and wholesome condition; secondly, upon the propor-tion of albuminoids, starch, sugar, &c., that it contains, having regard to their feeding value; thirdly, upon the value of the manure residue that will be left on the land, or in the dung-heaps, after the material has done its duty as food. Now the actual market prices of artificial foods are fixed entirely by the laws of supply and demand, and have no relation whatever to their practical value, either from a feeding or from a manurial point of view; the money value of food, therefore, cannot be calculated from its analitical composition-though this, aided by practical knowledge and considered with reference to the price, will enable us to decide which of various foods may be the most economical to use under given circumstances. Oil cakes have a special value of their own on account of the oil which they contain, which is worth two-and-a-half times its weight of starch or sugar as a fatten-ing material. Ten per cent. of oil in a cake may therefore be regarded as equivalent to 25 per cent. of the starch in a farinaceous food.

screened. An examination, moreover, with a pocket lens should reveal very few fragments of husks of foreign seeds, though those will often elude any but a practical eye, owing to the fineness with which they are ground, and cannot then be detected without the use of a proper microscope.

DECORTICATED COTTON CAKE.

Decorticated cotton cake I have already alluded to as possessing the highest nominal value of all pur chased foods. I might, perhaps, have excepted decorticated earth-nut cake, but that does not, as such, appear in our markets. I am a very great believer in decorticated cotton cake, particularly for feeding to sheep on pasture or in the turnip field, and scientific experiment has proved its practical and economical value, when mixed with maize, as a food for cattle, to be equal, or even superior, to linseed cake. For milk cows, I believe it to be a most admirable food, and in various dairy experiments carried out jointly with me by Mr. Parbury, of Horsham, it proved itself, from an economical point of view, superior to linseed cake. A few years since, when decorticated cotton cake was worth \$35 or \$40 per ton, while linseed cake cost \$55 to \$60, there was no comparison, to my mind, between the two foods, the cotton cake being out and away the best and cheapest cake to use; but at the present time, when linseed cake is cheap, and the money values of the two cakes are about

The crop of potatoes in Great Britian in 1882 is less by 57,000 bushels than the previous year The Champions have suffered somewhat from rot, but among the Regents and Victorias great havce has been made.

and away the best and cheapest cake to use; but at the present time, when linseed cake is cheap, and the money values of the two cakes are about equal, there are circumstances under which I should consider the linseed cake better. From a

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Fort Qu'Appelle.

(See "On the Wing," p. 38.) On the left-hand side of the accompanying illustration may be seen the encampment of the Mounted Police. The enclosure in front is where the horses are kept. Two trails may be seen leading to and crossing the Qu'Appelle River. A ferry is kept at one point, and at the other a temporary bridge is erected.

Agricultural Affairs in Scotland.

FROM OUR OWN CORRESPONDENT.

The display of Scotch cattle at the last English Christmas Shows was such as to maintain the credit of our northern farmers as growers of prime beef. For many years Aberdeenshire has taken the lead in the business of cattle feeding, and the beef that goes from this county is quoted at two pence to four pence per stone of eight pounds higher than the rates for that produced in other parts of the country. When Aberdeenshire beef, the term

subjected to a deal of criticism. At the latter show the judges generally allow more for breeding and character than at Birmingham, where utilitarian principles are more in vogue-that is, the best butcher's beast generally wins. A good deal could be said on either side of this question, but possibly a judicious blending of both systems would be best.

Scotch breeds were well represented, the majority of the cattle from this side of the border being wonderful specimens of early maturity, but often have I seen better "tops," than those which our north country farmers turned out at the recent shows. The fact is that many of their best specimens have been drafted off to America, while polled cattle are now too valuable for breeding purposes to be sent to the butcher. At the great London Christmas Market Scotland was well represented, especially from the Northern Counties. From the counties of Aberdeen and Banff alone at least £70,000 worth of stock was despatched during may be taken to include beef that is produced in | the week of the market. The prices obtained were

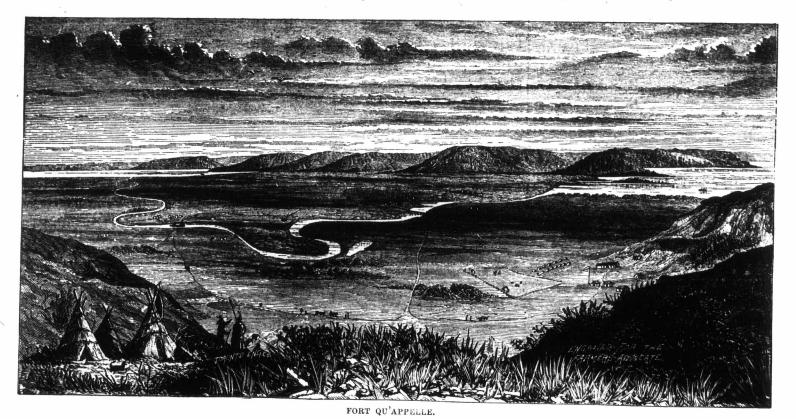
averages refer to the cattle sold at the public sales in the north of Scotland. I place the figures in juxtaposition for the sake of comparison : Average. Polled, 341..... £62 18s. 6d

Shorthorn, 547..... £26 6s. 10d The total sum realized for 341 Polled cattle was £21,458, and for 547 Shorthorns £14,409. Aberdeen, Jan. 12, 1883.

Hedges.

Fences are of two kinds-live or dead. The live fence, or hedge, has some advantages and some inconveniences, but on the whole it is probable that the latter are far less considerable than the former. A hedge is permanent, and once it is well estab-A hedge is permanent, and once it is well estab-lished needs no repair, if it is kept in good con-dition by an annual pruning, and if it is made of hardy and permanent timber. It requires a rap-idly growing tree, one that is hardy; that will grow upon any kind of soil; that will stand crowd-ing, and will bear close cutting. It should also be of easy growth, and preferably from cuttings. The principal objection urged against live fences

The principal objection urged against live fences is that they occupy too much ground and exhaust the soil upon which they stand. This objection is hardly serious enough to outweigh the advantages of a good live fence. They take so little from the



most of the northern counties, such as Banff, about one half-penny per lb. higher than last year; soil that is not returned in the fallen leaves that Moray, Ross, etc., where the system of feeding from 6s. to 6s. 4d. pe this tax upon th

and the breed of cattle are practically the same as in Aberdeenshire. There was a lack of "plums" at the English Fat Stock Shows this year, neither the champion animal at Birmingham nor London being worthy of being compared with the winners of several former years. The champion prize at Birmingham went to a Hereford steer, belonging to Mr. Price, which had also the honor last year of having won similar distinctions in Bingley Hall. At London "the blue ribbon " of the show went to a Shorthorn heifer belonging to Mr. Stratton, which was only highly commended in her class at much on the chances of this one market. Birmingham. She was an animal with great fore end, and a true looking Shorthorn in respect to character, but had plain hind-quarters and was uneven along the back. This will show you how the judges at our two greatest exhibitions of fat stock improve upon one another's decisions. A blemish in the showyard system in this country is the want of consistency and uniformity in the decisions at the different exhibitions ; and this blemish has now been brought, by the placing of the animals at Birmingham and London, into great prominence and for Shorthrrn eattle for the same period. These

stone of eight pounds for top quality. These returns may be expected to have paid the actual feeder, but a large number of the cattle were in the hands of dealers who had to ray a long price for them at home, and I hear that these middlemen have, in several cases, suffered heavy loss-as much as £5 to £6 per head. The market was overstocked, and a great many of the cattle were not sold the first day, but had to be disposed of later on at considerably less prices than those quoted above It is a generally acknowledged fact that stock farmers and dealers risk too

It is computed that in the course of last year nearly 600 Polled Aberdeen or Angus cattle have been exported from Scotland to America. The extraordinary demand for cattle of this breed has had the effect of raising prices to an extent which no one could have anticipated. Nothing will show more clearly how much Polled cattle have within the past twelve months risen in public estimation, than to give the average price per head which they realized last year, along with the average price

oductive capacity of the farm is unnoticeable. Certainly a crop will grow as well-and in many cases better, on account of the protection afforded-within practicable distance of the hedge as in other parts of the field, and the plow can be run as close to it as to a post and rail fence that is still seen here and there, notwithstanding its objectionable character. In balancing the good and 1 ad points of a hedge or live fence it will be difficult to avoid giving a judgment-that is an unprejudiced one-in its favor. It would be most desirable that live fences should be more common than they are. We are pestered beyond bearing with myriads of injurious insects, and we complain with bitterness when our friends the birds harbor in our gardens and fruit trees. What other shelter have these useful birds? Elsewhere they have no place to hide their heads. With regard to these pests the harvest is too great and the laborers are too few; their natural enemies, the birds, have no abiding place in reach of their work, and are driven off or destroyed by other birds or animals of prey, from whose attacks they have no shelter, either for themselves, their nests, or their young.

Compare our bare, silent, cold rail or board fences with the leafy, sheltering hedges of England, filled with nests of many varieties of birds for which we provide no home, and which, as compared with the sparrow, are of inestimably greater

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value and durability in every way, and the reason for the overpowering numbers of our insect pests seems to be plain enough. And it seems to point very forcibly to the necessity for encouraging the growth of hedges in place of rail fences, for before we can have birds we must have proper shelter for them; food there is in great abundance, but no homes for them and their little families, and the hedge is their home, and not the woods and the forests. There is not one va id reason that can be given in opposition to live fences that may not be urged with equal force against rail, board or wire fences.

Yearling Shorthorn Steer, "Clarence **Kirklevington.**'

Our illustration is a perfect representation of the thoroughbred yearling Shorthorn steer, Clarence Kirklevington, exhibited by the Canada West Farm Stock Association, of Bow Park, Brantford, Ont., at the late Fat Stock Show at Chicago, Ill. has taken a great interest in agricultural matters

Their farm consists of 900 acres, nearly purposes. all of which is under a high state of cultivation, and is beautifully situated, being nearly surrounded by the Grand River. The soil is alluvial The soil is alluvial deposit, and is of the most fertile character. The buildings are commodious, and are constructed according to the latest improvements in farm architecture, and ample accommodation is made for over 400 head of stock.

Fyfe Wheat.

ITS FIRST IMPORTATION AND THE ORIGIN OF ITS NAME.

A popular idea exists that red Fyfe wheat, which has become the most favorite species for cultivation in Manitoba, took its name originally from the fact of its having been grown in Fyfeshire, Scotland. It appears, however, from correspondence between Sheriff Ferguson, of Kingston, Ont., and the Deputy Minister of Agriculture and Statistics, that such is not the case. Sheriff Ferguson, who

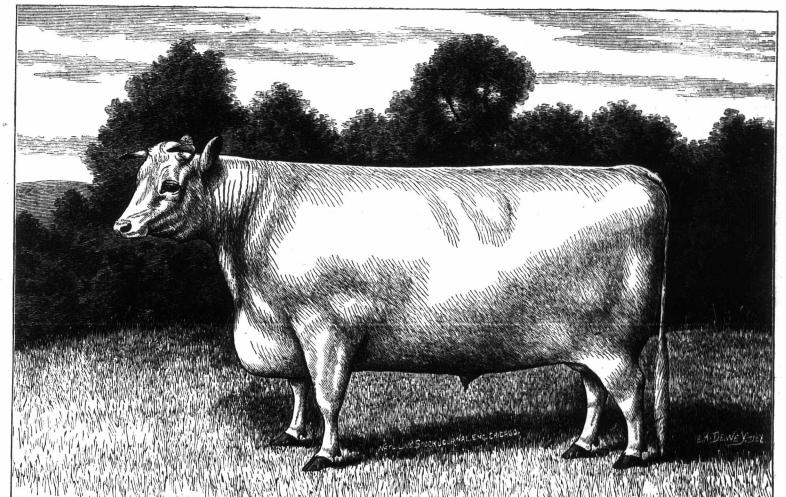
By the Way.

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No matter that we gather in rural exchanges is more eagerly read than the reports of local agricultural meetings and discussions-the freshest and best thoughts of practical men speaking before an audience of equally well-versed neighbors, and therefore most carefully stated. Success to far-mers' clubs, wherever instituted ! They are sure to do good near at hand and often far away.

Mr. Benjamin P. Ware is good authority for the statement that, but for the \$600 appropriation setts, two thirds of them would not now be in existence. The majority are entirely dependent on this bounty for their success. Does not this apply with equal force to three-fourths of our agricultural societies?

Mr. Henry Quimby, Rochester, N. Y., has used 18,000 bushels of leached ashes on almost all kinds of crops-grain, vegetables and fruits-and always with good results. So he told the Western New York Farmers' Club.



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YEARLING SHORTHORN STEAR, "CLARENCE KIRKLEVINGTON," PROPERTY OF THE CANADA WEST FARM STOCK ASSOCIATION, BRANTFORD, ONTARIO

He won the first prize in his class. The sire all his life-time, and was the first president of the of this magnificent young steer was their well known imported pure Duke bull, 4th Duke of Clarence, and his dam was Kirklevington Duchess of Horton. The object in selecting this steer for the exhibit was to show the value of high breeding for high profit This animal fully demonstrated that proposition, weighing 1,620 pounds at 645 days, showing a daily gain of 251 pounds, and is a marvelously symmetrical and attractive animal, notwithstanding his great weight for age. He was shown also in the sweepstakes ring for yearlings, composed of 26 entries. Our judgment, and that of most of the best stockmen and breeders in the show pointed to this steer as eminently the best animal in the ring ; the committee, however, singularly enough, thought differently, and gave the prize to a grade Shorthorn weighing 20 pounds less, and older by 70 days. It is intended to feed him for the Fat Stock Show of 1883.

Bow | ark farm was purchased by the C. W. F. S. Association from the late Hon. George Association from the late Hon. George five or six agricultural papers that I take I must Brown, for general farming and breeding prefer yours." P. H. G., Ridgeville, Ont.

Ontario Agricultural and Arts Association, has written Mr. Burrows as follows :

'A family named Fyfe resided near Kingston in or about the year 1837, and the men worked as stonc-cutters at the building of Fort Henry, situated at Kingston. They soon after or about that time left here and settled on land between Port Hope and Cobourg, and while there received a letter from their friends in Scotland containing some grains of the above wheat, which they had taken from a vessel that then had arrived from the Black Sea, and was unloading at one of the docks at Glasgow. They cultivated the sample they had thus procured, and found it good, and at the Provincial Exhibition soon after held in Cobourg the two bushels exhibited took first prize as the best spring wheat on the ground. I would just here remark that you can also sow the same wheat in the fall as fall wheat without fail."

"I would not be without the ADVOCATE for five times the amount of the subscription, and of the

A prominent orchardist of Iowa unhesitatingly recommends the selection of northern slopes and a free exposure of the trees to all the winds that He says that every orchard in his vicinity blow. that has been thoroughly exposed to the north and north-east is growing remarkably well, while the protected ones are failing about in proportion to the completeness of the protection and the slope of the ground to the lo'clock sun. It is well to plant shelter belts to arrest the prairie wind sweep in a general way, but the close hemming in of orchard trees by timber belts, and the selection of southern exposure, should be discouraged.

The Ensilage Congress at New York has opened with an enthusiasm for extreme views on the advantages of compressed fodder which proves that our warning against excesses in this, as in other directions, is well-timed and needed. There was little . or no disposition to question the most extravagant claims of interested persons. On the contrary, the faith that was exhibited in the qualities of ensilage bordered on the sublime-or the ridiculous. One siloist, most of whose live stock, a horse and a mule, died after a winter's diet on the seductive product of the pit, declared that his belief in the most advanced sauerkraut creed was unchanged,

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The Dairy.

Canadian Cheese. BY L. B. ARNOLD.

The dairy products of Canada are every year swelling into greater and greater importance. The production of butter is assuming new life and vigor, apparently with an endeavor to overtake and equal the cheese interest in prominence, while the latter, as if determined to maintain its foremost position, is rushing on with increasing strides. The exportation of cheese from Canada during the past year is beyond all precedent. The shipments of cheese from Montreal, which have heretofore been about half, or even less than half, of those from New York, have this past season sometimes equalled, and occasionally exceeded, those of the great metropolis of the States. Another year will see the scales pretty evenly balanced between the States and the Dominion for the season, and very soon the latter will lead in the magnitude of her exports of cheese, and become the chief supply of that luxury for the cheese eating people of England. The steady gain of the Dominion over the States in the quantity of cheese yearly shipped is not due, as some are disposed to think, to the demoralization of the products of the States, from the introduction of lard cheese, oleomargarine, suine or skim checse, nor is it because Canadian cheese is any better than that from the States. It has its origin in other considerations. In all re* spects Canada can compete with the States in the production of cheese. Both have the same market open to them on equal terms and are about equally distant from it. Both have similar soils from which to derive their goods and both have the same modes of manufacture. In the race for quality, the Canadians started behind, but by a persevering determination to succeed they have caught squarely up with their old leaders, and are now rather in the advance. But it is not their superior quality which has brought them to the front in respect to the quantity exported, nor is it because they have or can make it cheaper in the Dominion than in the States, though it is true that they have a little advantage in this respect. Of the land in which cheese is made in the two countries, that in the Dominion bears a little the lower price, and labor and stock are also a little cheaper on the Canadian side. These are important items, and are sufficient to turn an evenly poised balance. But other circumstances have more influence in shaping the current of trade. One of these is the rapidly increasing home consumption of cheese in the States. A dozen years ago the amount per capita consump tion of cheese in the United States was four and a half pounds. A half-dozen years later and it had become reduced to three pound per capita annually. Now it is fully five pounds per head per annum, with the rate of consumption rapidly increasing. There are two leading causes for this enlarged rate of consumption ; one is an improvement in the quality of cheese, which makes it more palatable and wholesome, and a second is the unparalleled prosperity of the great mass of citizens, which makes them feel better able to pay a high price for such cheese as they like. Ten years ago it was notorious and often complained of, that all the best cheese went abroad, the poorer sorts only going to the American grocers. Such a course is the most expeditious one possible for reducing consumption, and the rate ran down fearfully. Recent y the course of trade in this respect has been to a large extent reversed. The largest transactions in fine cheese are for domestic use, the home trade paying a higher price than shippers can afford to. The consumptive demand is much greater in the States than in the Dominion, and once purchased the very class of butter.

will be very likely to continue so, on account of the preponderance of cities and large villages. It takes a larger per cent. of the total product to supply them than in Canada, where the amount of product is greater in proportion to the nonproducing population. The same causes which are operating to increase consumption in the States are active in Canada, but for reasons just assigned they will fall short of a parallel effect. ' I feel confident that it will not be many years before all the fine cheese in the States will be wanted for domestic use, and the entire business of cheese exportation from this side of the Atlantic will be left in Canadian hands, and they may as well be preparing for the fortune which awaits them. Every effort should be made to make the quality as desirable as possible, both in regard to flavor and keeping quality, while the minor points of shape, size, color and texture should not be forgotten. Nobody wants food that has not a good flavor, and if they lack keeping qualities they will depreciate in price according to the danger of spoiling. A clean and full flavor, with a solid and compact but plastic texture, constitutes the leading requisite of a shipping cheese. To secure all this, more pains must be taken in the care of dairy stock and of the milk on the part of farmers. Cows not well supplied with good water, or fed on poor food, or so treated as to be in any way uncomfort-able, will not give milk that will make good flavored cheese. Fancy cheese, that which pleases first class consumers and commands the most money, can only be made from clean, sweet and rich milk. It is not enough that a cheese maker has milk "just as it comes from the cow," for it may come in that condition and then be very poor stuff. Neither should cheese makers poison their cheese by using stinking, stale, sour, or musty rennet, as many of them do, or soil it with nasty hands or drops of sweat, or fumes of tobacco smoke, as is done in many a factory, if Canadian cheese is to aspire to distinction in the list of acceptable human foods, and to lead in the markets of the Mother Country.

Betterments in the Dairy.

By John Gould, Agricultural Editor Cleveland Herald. It was a great pleasure for me to notice in the January ADVOCATE that dairy schools were thought to be advisable aids to the betterment of the butter product of Canada, and, even here in the States, such an acquired experience would be a most desirable help. It is true that we are making rapid strides in improvement, as the high price of our butter indicates, but it would also be a blessing (not disguised) were we to in some way teach those farmers that are away from factories and creameries, and where butter is yet made in the unskilled

Now, whence is the remedy? It can only com from two sources, education and the employmen of improved apparatus, so that a uniform high grade of butter can be made at home, or, the still later plan that is sweeping all over the States, the cream gathering system, the one turning up side down all the methods of home butter making, and substituting a scientific plan, for the modern cabinet creamery is a scientific process of butter making. The other is yet more radical: the transferring of the butter making from the house to a central point, where one man and an assistant make butter for fifty farms, and of one quality.

Here I may be permitted to say that I do not hold that good, even fancy butter, cannot be made at the farm house ; on the contrary, the finest butter ever made has been the product of open tin pans, and a stone churn, guided by education and skill, so that in every case there was a corresponding series of relations that controlled the product and its quality. Good butter cannot be made by "guess work," or the milk and cream and the after-product butter brought in contact with damaging influences. So it appears that when one finds a high quality of butter thus produced, we may be certain that back of it were system, order, intelligence, and adapting of methods to secure desired ends.

Before entering upon a why and wherefore of improved mechanism for home butter making, it is only but fair to say that "patent rights" are not an indispensable co-efficient in prime butter making. But butter fit for the Queen can be made in a great majority of the farm houses, if care and intelligence are brought to bear in the operation. Good milk is the first indispensable, and "cows for the dairy" may furnish a chapter for future consideration. A high grade butter cannot be made if the milk is set in the cook-room, or even where the family live. Milk needs its own room, with plenty of fresh, pure air, and yet it needs a uniform temperature, one that does not vary much, if any, from 60°. A uniform temperature is necessary " for perfect cream rising and the ups and downs of changing from heat to cold and back again, interferes with the natural specific gravities both of the cream globules, and the serums, and a perfect bringing of cream to the surface cannot be performed. Milk, cleanly and wholesome, set in pans in pure air, will produce a cream that has no superior, and if this cream is removed before the milk has become sour, or "lobbered," and churned before it has changed the milk which it contains into a thickened mass, a fine grade butter must result, provided it is churned at a proper temperature, and not gathered until the butter has been washed free from butter-milk with weak brine More butter is spoiled by allowing too excessive an acidity to appear before churning, than from any other cause ; and when such high authority as Prof. Vech ker declares that "the system of sour cream patter is radically wrong, and the sconer that the casein is taken out of the cream or butter, the better will be the flavor," it is time for us less distinguished persons to adopt new methods. The casein or cheesy matter of the milk is changed to curd by the development of acidity, and this curd in the butter, unscalded as is the case in cheese making, soon ferments, and developing gases, changes the flavor of the butter. This element can best be removed while it is in a fluid state, for it has not solidified until acidity operates upon it, and by early churning of the cream, and the gathering of the butter in brine, this casein, which in reality has no affinity for butter fats, is readily absorbed by the brine, and can be thus washed out, while no amount of working can remove it, for the more the butter is worked, the more thorough is the incorporation of the two dissimilar elements, and the more complete the injury to the butter. The proposition is this, that the greatest improvement yet made in the dairy is the abandoning of the sour cream system, and adopting in its stead, churning the cream at the first perceptible stage of acidity, or "ripeness," and after thorough washing of the granulated butter with brine, to free it from the casein, which is the destroying angel of fine butter.

ways of the past, and with the rude aids of a former generation, and bring this now inferior product up to a standard of quality. . It is not improbable that a similarity of conditions exist in this respect between Canada and the United States, and if I should make some suggestions that would be of practical value here, it is not unlikely that it would be applicable across the lake.

It is not at all probable that a lower grade of butter is made at the farm houses now, than was twenty years ago, nor that less skill is to be found, but, on the contrary, many things go to show that an actual advance has been made, outside of the creameries and factories. The truth is that the great mass of consumers are becoming more discriminating in their tastes, and demand better butter, and will have it, let the price go up as it may. The very class who, a few years since, purchased poor butter and asked no questions, now call for a butter of an unquestionable flavor; and so the great mass of butter of a grade once eaten, is now rejected, and its presence in the market is an offence that cannot be brooked, even by those who

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THE FARMER'S ADVOCATE.

Cheese Vats.

BY J. B. HARRIS. On visiting the butter and cheese Board of Trade at Elgin, Illinois, December 11th, 1882, I was not a little astonished at the prices at which butter was there bought and sold. There were about 350 tubs put on the board and struck off to the highest bidder, the greater portion of which reached 42c. and some 42%. As these figures are considerably above the market price for ordinary butter I was filled with a curiosity to see the place, where an article which could command such a price was manufactured. Accordingly I took the North Western train for St. Charles, where the creamery is located which is able to accomplish such a result. The factory of the St. Charles Co-operative Creamery Company is a plain brick structure, 2 storys high, 116 feet in length by 54 feet in width, and is located on the bank of the Pox River, ten miles from Elgin, and within a quarter of a mile of railroad communication. The building is a new one and occupies the place upon which stood a similar factory, owned by this Company, which was destroyed by fire in September, 1882. The building at the time of my visit was not com pleted, workmen being still engaged upon some

portions of the interior. In giving a description of this factory I will begin with the ground floor. Across one entire end of the building and occupying about one-ninth of the length from the ground to its roof, is the ice

give, but which I judge were ample for all purposes of the establishment. Next adjoining the ice house and occupyingabout $\frac{1}{10}$ the length of the building on the first floor, is the refrigerator, of a capacity of about five car loads. Adjoining this, a third section of the ground floor is devoted to the reception and cooling of milk, raising and separating the cream, and the churning, working and salting the butter. In this section also was located the boiler of 35 horse-power and the engine 15 horse-power; the boiler being separated from the butter and cheese room by a partition. Another por-tion of this section contained the apparatus and machinery for the manufacture of cheese. On the second floor was the office, the curing room,

consists of an oblong box about 15 feet long and 3 feet square, with bearings at each end, and is turned at the rate of 45 revolutions per minute. I remarked to the butter maker that I thought this motion too rapid, its tendency being to create heat. He, however, informed me that this was the motion required, but gave no reasons, and I still hold to the opinion I expressed on that occasion. From 30 to 50 minutes, I was informed, was the time occupied at a churning. When churned the butter was in a granular form, of the size of wheat. The buttermilk was then drawn and its place supplied with water, in which the butter was washed. It was then removed from the churn to the power butter worker, which consists of a table with an incline surface, over which two fluted conical rollers revolved, the one following the other. The butter was placed upon this worker, where it was drained, salted and worked, and then removed to trays, upon which it was allowed to remain until the following morning. It was then reworked, packed in Welsh tubs and sent to the refrigerator.

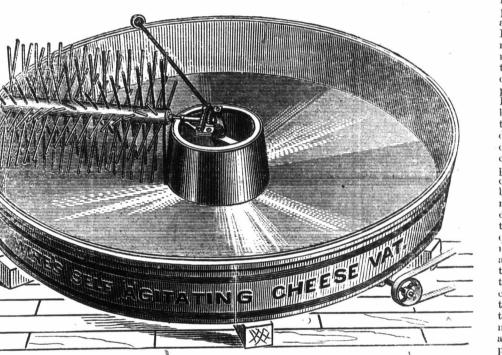
CHEESE DEPARTMENT.

Having given a brief and very imperfect description of the butter department of the establishment, I ask the reader's patience while I attempt to follow the milk from which, as we have seen, the cream has already been removed, through the various operations by which it is converted into cheese. If the reader will picture in his mind two immense wash tubs, about 12 feet in diameter by

hand in a direction radiating from the centre all around. The third cutting is performed by the roller horizontally by means of knives properly adjusted for that purpose. The process of cutting completed, the second roller is removed and the first restored to its place, which proceeds with the business of stirring. From the moment the pro-cess of cutting ends and that of stirring begins, this agitation performs the whole operation, including the salting of the curd and preparing the same for the press, in a neat and very satisfactory manner. The vats are so arranged that one side may be lowered, thus allowing the whey to pass off through a faucet in the bottom, the incline position of the vat not disturbing in the least the working of the agitator. The capacity of these vats is each 14,0 0 lbs., 12,000 or 13,000 lbs. being the amount usually worked in them. They are the invention of Mr. T. B. Wire, of Geneva, Ohio, and in my estimation are superior to any self-agitating vat in use, the superiority consisting in the very effectual manner in which they stir the curd during the process of heating, airing and salting.

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From the description I have given any intelligent cheesemaker will be able to see that the very large quantity of milk I have named is worked with a comparatively small outlay of manual labor, no other vat of which I have any knowledge doing the business of stirring the curd unassisted. It will be seen that all the cheese manufactured at this establishment are skims, the milk being allowhouse, the dimensions of which I am unable to 20 inches in depth, constructed of staves and hoops, ed to set about 20 hours and each 100 lbs. furnish-



and a large room in which baxes were to be made up. The weigh can and resting upon blocks of sufficient thickness to ccupies a platform 9 feet from the ground floor. raise them to a convenient height, he will have factory 3 lbs. to the 1,000 lbs. of milk was used, formed a pretty good idea of the appearance of the but the salt was added when the curd was in a From this can the milk is drawn into 5 vats standformed a pretty good idea of the appearance of the very moist condition, so I calculated that not more ing 4 feet lower than the scales. These vats are vats used at this factory. If he will then go a each divided into two longtitudinal compartments. step farther and conceive these tubs as lined with than 2 lbs. remained in the curd. tin, a space being left between the tub and its The 5 vats are each about 16 feet long by 5 feet in PRESSES USED. width, the compartments being of the same length lining of about 21 inches for circulating steam or The ordinary screw press was used, of which they had between 40 and 50. On the day of my by 2 feet in width and 20 inches in depth These water, he will have a still better idea of them. In compartments contain the milk, while the space the centre of each of these vats arises a conical around them is occupied by ice and water A few shaped hollow turret, about 12 inches in diameter, visit about 12,000 lbs. of milk were made up, 32 cheese being produced, weighing about 34 lbs. feet from these vats, in the corner of the ice house, a and as high as the top of the vat, in the centre of which there is a perpendicular shaft connected by large tank supplies them with water. These are These cheese were 15 inches in diameter by gearing with a horizontal shaft under the vat. This shaft supplies the motion to a roller, one end the vats in which the cream is raised and from about 5 inches in thickness, and resembled Ohio which the milk is drawn into 2 large circular vats Flats. An examination of the cheese in the curing of which rests in a wheel which rolls around upon the edge of the vat. This roller is supplied with 5 feet lower, where it is manufactured into cheese. room convinced me that they were skimmed, but very good, being soft and not too dry, and at the The cream is not skimmed, but the milk is drawn 180 spokes, or paddles, of sufficient length to reach nearly to the bottom of the vat. These paddles from under it and left in the bottom, from whence same time firm. it is conducted into a tempering vat, also 5 fect lower. Immediately below the vats I have de-scribed are 4 pools, each 2 feet deep, about 16 feet long and 5 feet wide, built in the floor like tanners' In concluding this article I would say that the are arranged in rows winding about the roller like impressions I formed, as the result of my visit to this creamery, were, upon the whole, very favor-able to its methods and appliances in the manufacthe thread of a screw. The roller has two motions, one in which its outer end traverses the whole Each of these pools will contain about 100 ture of butter and cheese. Its arrangements from circumference of the vat, and another in which it vats. revolves. The purpose of this roller is that of cans. In warm weather these pools are used for the point when the milk was taken into the places raising cream, the milk being drawn into cans agitating the milk in the vat while heating, diswhence its products were discharged for from made for the purpose, each holding about 30 lbs. The cans are placed in the pools and surrounded by tributing the rennet and stirring the curd after it market, all being admirably calculated to facility and ease in the performance of every branch of labor therein performed. Its machinery and apis cut, operations which it performs very perfectly. water. The tempering vat is about the size of an ordinary cheese vat, and is supplied with both heating and cooling appliances If the tempera-After the rennet is sufficiently mixed, and before coagulation begins, this roller is removed and anparatus it seems to me being unusually well calcuother put in its place, upon which curd knives are lated to work in harmony with the laws which ture of the cream is too high it is reduced, and if too low it is raised ; from 58 to 64 being the proper adjusted. These knives are so arranged on the nature has enacted to govern the process by which roller that with each revolution around the vat a these two very important articles are brought into being. Its butter sells with the very best on the points, according to the season. From this vat. space of about 15 inches is cut perpendicular until being. Its butter sells with the very best on the the whole surface is completed. It is then cut by Elgin market, while its cheese is not inferior to the cream is removed to the churn. The churn

ing to the butter department cream for about 31 lbs. of butter. In some particulars the method used in the manufacture of milk of this character in to cheese differs from that employed upo whole milk. First, more rennet should be used ; the reason for this being that it is desirable to have cheese of this character go into consumption as soon as possible, and the process of curing is promoted by a liberal use of rennet. Second, that the cheese may be soft in texture, less heat is required than with whole milk, 82 being the point at which they added the rennet at this factory, scalding being accomplished at from 92 to 94. * Third, unlike the whole milk method, no delay is necessary after scalding for the purpose of maturing, the whey being drawn im-

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any of that variety manufactured anywhere. As a proof that this method of working up milk is profitable to those who engage in it, the superintendent informed me that dividends have been declared by this Company as high as \$1.80 per 100 lbs. of milk. Mr. S. S. Pembleton, the superintendent, is a gentleman of whose ability to manage the affairs of the Company there can be no doubt. He treated me politely and spared no pains in giving me a thorough insight into the whole business of the creamery. Antwerp, New York.

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Stock.

The Feeding of Young Animals.

A young and growing animal requires somewhat different treatment from that needed by a mature one. A full grown animal is furnished with a complete skeleton, and while it is not adding to its weight needs only to repair the waste caused by muscular exertion, by which muscular fibre and fat are used up. A young animal grows all over, as it were; its bones enlarge with great rapidity and its muscles are increasing in substance daily. It is therefore obvious that a sufficient supply of food which contains in its elements those which are contained in bone and muscular fibre about the contained in bone and muscular fibre should be furnished to a young and growing animal if we desire it to thrive. For very young animals, nature provides in milk a food which supplies every requirement of the animal frame. It contains the phosphates, the lime, soda, albumen, and fat which are needed to supply the growth of bone and sinew, muscle and fat, and to support the animal heat consumed by radiation and by respiration. But milk is not sufficiently plentiful to feed a young animal to maturity, it is too valuable even to be given to the calf of a week old unless it be first ski, med, and in many cases even skimmed milk can be turned to more profitable uses than to support the calves. It is always a question for consideration what foods are best for young animals and which are the cheapest, considering at the same time effectiveness for the purposes required as an element of cheapness.

The great danger in feeding young animals is in overdoing it. The writer has of late made the discovery that young calves can very easily be kept from growing, and, indeed, can be brought to less weight, by overfeeding with warm skinned milk —doubtless the very best food for a young calf under 4 months old. Overfeeding with the most nutritious and digestible food unduly taxes the digestive organs, and at once stops their action. It does more and worse; it loads the intestinal canal with undigested and irritating matter which inflames the mucous membrane, causes disorder of the vital functions, and draws upon the system for matter with which to supply the waste. Not only is no growth made, but previous growth is drawn upon, and the young animal wastes its substance. The same effect occurs with full grown animals fed for fattening when the injudicious feeder supposes that if four quarts of feed will make a pound weight of flesh and fat, eight quarts should make two pounds, and acting upon his supposition learns that the rules of arithmetic do not apply to the practice of feeding animals, and that addition and multiplication may at times become subtraction. So that not only must food be chosen in reference to its nutritive qualities and its digestibility, but the ration given must be apportioned to the actual and healthful requirements of the animal. Sometimes it is necessary to feed a young animal through the dam. This is the case with lambs raised for the early market. These tender animals cannot be fed with solid food. Their delicate digestive organs, immature and fitted only for the digestion and assimilation of their mother's milk, cannot take such food as meal, bran, or oil-cakemeal, although these may contain the very elements which are required to increase their size and add to their fat. But these foods may be given to the ewe, and by increasing the quantity and enriching the quality of the milk indirectly nourish the lamb more perfectly than the unaided milk would have done. But this, too, must be done with caution and within bounds, lest the dam herself, always subject at this period to injury by overfeeding, might become disordered in health, her milk yield lessened, or even completely stopped by an attact of inflammatory garget of the udder, and the lamb entirely arrested in its growth.

First, the food must be rich in bone-making material or phosphate and in flesh-forming matter or nitrogenous matters; and second, the food must be of the easiest digestibility. Then, one must consider the peculiar action of different kinds of foods upon the bowels, as, for instance, their laxative or their costive tendency, for they vary very much in this respect. Linseed-meal has a tendency to looseness of the bowels, but this being due to its mucilaginous nature and not to any irritation caused by it, this effect is often healthful and /desirable, rather than otherwise. Cotton-seed-meal, on the other hand, exerts a costive effect, but this is not injurious either, only one must be cautious not to feed the foods to excess so as to intensify to an injurious extent their peculiar effects.

Bran is a food that is digestible and nutritious. It contains nearly all the phosphates of the grain and a large portion of its nitrogen. But if it is coarse and has been put through the process of "scrubbing," by which the inner coating of the grain which adheres to it is removed and mixed with the middlings, it produces a mechanical effect upon the bowels which irritates them and at times causes diarrhea. This is to be cautiously avoided with all young animals, as, indeed, should be costiveness as well. When bran is fed to a young animal it is best scalded, by which its hardness is softened and is rendered more easily soluble. The beneficial effects of a bran-mash upon an older animal are well known. Fine bran or coarse middlings are preferable to coarse bran, although it is less rich in the needed phosphates.

Oats, either whole or ground, are an excellent fool when given in small quantities for calves and colts. An ounce of crushed oats given twice a day to a calf of 3 months or even less, and the quantity gradually increased up to a quarter of a pint, and then to half a pint for a 6-months old animal, will be found very beneficial. They furnish precisely the nutriment that is needed and in a digestible form. A young colt may safely take four times as much as a calf, and this allowance may be begun while the young animal is running with the dam. Peas are next to milk in nutritive value for a young animal, and also in digestibility. They contain a substance called legumine, or vegetable caseine, which is identical in composition with the caseine of milk, and in some parts of the world this legumine is made into cheese that cannot be distinguished in flavor or scent from that made from milk. Pea-meal and bran scalded and made into a thin gruel is an excellent substitute for milk for any weaned animal. Corn-meal is a very defective food, being rich in starch chiefly and deficient in nitrogen and phosphates. It should be given very sparingly, but better not at all to a young animal; when it has become half-grown some corn may be given. But corn produces fat, and this is not what a young animal needs. Bone and muscle are required, and corn produces neither of these, except to a very limited extent. An instance of its pecu-liar effects may be noted in the so-called leg weakness of fowls fed chiefly on corn, and the effects of its highly carbonaceous composition upon pigs fed chiefly upon it are seen in the prevalent and des-tructive "hog cholera," or anthrax fever. The French name of this disease, "charbon," distinctly

American Shorthorn Herd Book. The following rules of entry, as recently amended, will be of interest to many readers :

SECTON 1. Pedigrees shall give the name, color, sex, date of birth, name and address of breeder and owner, and full pedigree, with, when practicable, volume and page of record of the last dam recorded. SEC. 2. The animal must trace on the side of its sire and dam, to imported English Shorthorns, or to pedigrees not false or spurious already of record in herd books published heretofore in the United States.

SEC. 3. Whenever errors, not intended as frauds, are discovered in pedigrees of animals which have been bred and recorded as Shorthorns, the des cendants shall be entitled to record in future, provided females have five crosses of recorded or recordable bulls, and males six of such crosses, and that males with such pedigrees, which have been recorded previous to the discovery of the error, shall be detained on record; and wherever the name and number of the bulls so erroneously recorded appear in any pedigree, the same shall be recorded by an asterisk.

SEC. 4. On and after January 1, 1884, imported animals must be of record themselves, or have sires and dams recorded in the English Herd Book.

SEC. 5. On and after Jan. 1, 1885, no animal except imported animals shall be eligible whose sires and dams are not already of record.

SEC. 6. Pedigrees of bulls shall be printed in full, unless there be more than one of the same pedigree in the same volume, to which reference may be made, and the pedigree abbreviated. Bulls shall be recorded in alphabetical order, and shall not be re-entered except to correct material error in first entry, and corrected entry shall have a new number, to which reference shall always thereafter be made.

SEC. 7. Females shall be entered upon their owners' names in alphabetical order, and no change shall be made for produce under dams, which shall be furnished as far as known.

SEC. 8. Pedigrees of females may be abbreviated by reference to complete pedigrees under the same owners' names and in the same volume, and any cow having produce since the last entry may be re-entered with her produce.

SEC. 9. All bulls appearing in the lineage of animals sent for record must be recorded in full, with proper numbers, in the American Herd Book, and the pedigrees of all reference bulls not so recorded must be sent in full, with the numbers by which they have been recorded in any other book.

SEC. 10. There shall be separate and alphabetical indices of females and of bulls entered as produce, and of breeders and owners, in each volume.

SEC. 11. Should any person or persons intentionally or knowingly impose a fraudulent pedigree on the American Shorthorn Herd Book, space shall be devoted in the succeeding volume to his or their exposure, and he or they will never be allowed to enter another animal in the American Shorthorn Herd Book after they are convicted by the Board of Directory.

Origin of Ensilage.

An interestin ution to the discussion of this subject is furnished by Mr. L. P. Muirhead, of Kilcreggan, who, writing to the North British Agriculturist upon the origin and practice of en-silage, says: "Sauerkraut! Yes, that's it. What is good for man is good for beast. I'll try it anyhow. So thought an old German farmer one wet season upwards of 80 years ago; only, instead of cabbage he used grass, clover and vetches, omitted the pepper corns, and used a pit in the ground instead of the family barrel or crock (irdene hagen). Some years after such words as 'salzfutter' (salted fodder), 'sauerfutter' (pickle fodder), and 'viehsost' (cattle salad) might be heard among the farm-ers of Germany and East Prussia, where the practice first obtained a hold, thereafter being carried by emigrants to America, and gradually finding its way among the Dutch and French nearer home. About 1850, it came into notice in Scotland. The Rev. John M. Wilson, at that time an authority on things agricultural, gave so full an account of it as to be well worthy reproduction." Mr. Muirhead quotes the lengthy description which answers to the method of curing grasses now known as en-silage. Referring to Mr. Sala's recent note on the word ensilage in the Illustrated News, Mr. Muirhead says : "It seems to be an Americanism, probably a corruption of the German 'enisalzen,' to pickle, or the Spanish 'ensalada' (salted), from which the English word salad is derived. Possibly salad pit for the receptable, pickling for the process, and cow salad for fodder would be more satisfactory.

The choice of foods for young animals must be made subject to two necessary requirements. characterizes it as the effect of the super-carbonatation of the blood by too much carbonaceous or starchy food.

The amount of the ration is equally important as the choice of food. It is far better to give too little than too much. An animal always a little hungry will grow healthfully and thriftily, but not fast, but one that is gorged will not grow at all; fast, but one that is gorged will not grow at all; on the contrary, it will go back and lose flesh, and become diseased, perhaps permanently. Not only is food wasted by excessive feeding, but the animal itself is wasted. The ration should be apportioned carefully to the capacity of the animal. Beginning with a small and safe quantity, this may be grad ually increased so long as the appetite is vigorous. Once an animal fails to consume its food complete ly, and leaves part uneaten, it is overfed, and the trough should be cleared of the refuse at once. Then food should be withheld altogether for one or two meals, for nothing so soon restores the tone of the stomach as a fast This is far better than medicine. Food that is not eaten palls upon the appetite and creates loathing, which is to be care-fully avoided by one who desires to have thrifty young stock.

Regularity in feeding and accuracy in the measure of the ration are indispensable. A set time for feeding and the measure should never be departed from. This is one of the maxims of the successful feeder, and one of the great secrets of success.

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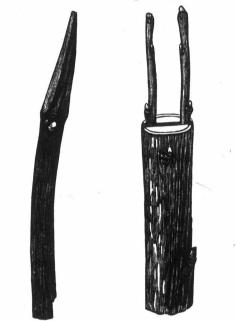
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THE FARMER'S ADVOCATE.

Garden and Orchard.

Grafting Fruit Trees.

Cleft grafting being the method most commonly practiced, it may be performed in the following manner :- Now is the time to get the cions ; they should be cut from twigs of last year's growth, and each sort should be cut separately and tied in



bundles, labelled, and afterwards put in boxes with damp sawdust or moss, and kept in a cool place till used.

One of the most satisfactory labels is made of acutely triangular pieces of waste zinca bout three-quarters of an inch in width at one end, three or four inches long, coming to a fine point. The small joint is bent around the cion or branch to mark the variety.

The zinc will oxydize, while the oxide of lead (of a lead pencil) will remain unchanged for years. The slender coil spreads as the branch grows, without injury to the circulation when neglected, while a wire or cord tied around the tree will kill it if not loosened.

A fine saw, two good knives, one strong and heavy, the other smaller, with a keen edge; a hard-

for the graft, saw off the branch, smooth the cut surface and make a cleft with the knife and mallet. Cut the cion from the twig, leaving two or three buds upon the piece, and sharpen the lower end into a wedge. Open the cleft with the knife and place the cion in carefully so that the lower bud comes at the top of the cleft. The inner bark, or growing layer, of the cion and the stock should touch as much as possible. If the grafted branch is small, a single cion is enough, otherwise put in one on each side. Unroll enough waxed cloth to cover the wound of both stock and cions, and press it on carefully and closely. The quick application of this protection is only a matter of practice. It is well for beginners to start with worthless limbs before doing regular grafting in the orchard. If possible find some one in the neighborhood famil-iar with the process and learn the art from him.

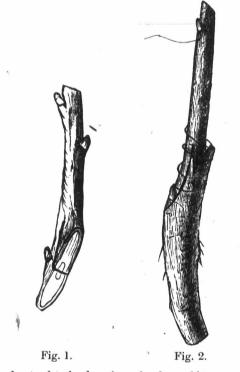
The accompanying engravings show how to cut the cions, and the branch with the cions in their proper places in the cleft and the method of excluding the air and water.

Any good, tenacious clay answers nearly as well as grafting wax if put on thick around the end of the branch, over the clefts, and around the cions, and carefully bound on with strips of cloth about an inch wide and of several thicknesses. Ninetyfive per cent. of cions will grow in thrifty trees when the work is well done and the cions are right, when either kind of wrapping is used. I can see no difference, though the clay makes a little more work.

Grafting Indoors.

BY HORTUS.

February is the month for grafting indoors, and to persons not acquainted with nursery work this operation presents a pleasing and novel surprise. To most people the work of grafting is generally



great nicety of judgment and lightness of hand. The knives are always kept keen as rasors, and as many of the stocks are thick and hard to cut, it is frequently an effort of strength to cut one, and as the pressure is brought to bear the knife glides through and comes plump against the grafter's thumb, just touching the skin without cutting it; you would naturally wonder it did not cut the whole thumb off. It shows how surprisingly skillful these grafters become. In all grafting shops there is always a creditable and honorable rivalry going on amongst the men, as to who can make the neatest graft and the greatest number in a day's work. And, of course, in the old established businesses there is always more or less traditions of the past, of the skill of this man, now perhaps dead and gone, and wonderful quantities another one done in a certain time. These old stories inflame the minds of the young men learning the business, who in turn, as they become useful knifesmen, will endeavor to graft a greater number than they ever heard of. In years past the practice of wrapping waxed paper around the graft called for a strong and even fit. Since the system of tying with waxed thread has been adopted, the strong fitting graft is not necessary, as the thread firmly holds the joint in its place. And will those two things stick and grow together? is the wondering question asked by the stranger in the shops, as he watches the busy grafter defty sticking them together. Upon being assured upon that point he watches with enquiring eyes the rest of the overstime of the start of the sta of the operation. It is explained to him that the great thing to be observed in grafting is, that the bark edges of cion or root must fit evenly on one side, that the liber of both must come in contact or there can be no union ; also that it is not necessary that the cion and root should fit evenly all round, but only on one side or the other. This is the great secret of grafting, and all the art there is in it. This principle applies to the practice in grafting old trees in the orchard. In cutting cions to fit, the grafter makes a sloping cut to him, leaving an oval shaped end on cion; then he turns it in his hand, splitting it in the centre of cut and then cuts nand, splitting it in the centre of cut and then cuts cion off, the length of the piece being regulated by the distance of buds apart, the rule being to leave about three or four huds on cion, as shown in fig. 1. After cutting up some three or four hundred of these the grafter commences to fix them on roots, which is done by squaring the top of root right at collar with neat cut, then making a tongue-like cut on one side and splitting this in tongue-like cut on one side and splitting this in centre to correspond with cion; then are both fitted together and the graft is made like fig. 2, and passed to a boy who ties them. They are then gathered up and packed in boxes in sand and sawdust, and placed in cool cellars until the planting season in May, when they are removed and dibbled into the ground, there to remain till they are fit for sale after three or four years' growth. I have briefly given a description of this interesting work

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wood wedge, six inches long and half an inch thick, and a small mallet, are the implements used in grafting. The wax may be easily made by melting together, beeswax 6 oz., rosin and tallow 4 oz. each, over a moderate fire, stirring gradually until all is melted. Rolls of waxed cloth may be formed from old cotton stuff made thin by wear, and torn into strips two inches. wide. Wind the strips upon a stick and dip them into the melted wax; when the cloth is thoroughly penetrated by the wax, remove, let drip, and put away from dust

understood to be done in orchards on old trees, and few, comparatively speaking, of the public at large know anything of the system pursued by nursery men in propagating the many thousands of young fruit trees annually placed in the market for sale. In preparing for this work the cions are gathered in the fall or during mild weather through the winter, as convenience or urgency demand. The cion used is the wood of the last season's growth, and is cut and tied into convenient bundles of four or five hundred each. These are stored in the cellar for use. The roots or stocks are the young seed lings of strong one year's or two year's growth gathered and stored for use. Although pears, plums and peaches are sometimes grafted in winter, yet their general mode of propagation is by bud-ding; but the apple is thus grafted by the million during the winter season by the various nursery firms throughout the continent. Take a peep into the grafting shop of any of our leading nursery firms, and a busy scene presents itself to our gaze. ready for use. Grafting should be done as soon as the buds be-gin to swell. Having determined upon the place Seated at a bench are many workmen busy hand-ling the grafting knife, and it is really interesting how skillfully they work, for this operation requires

this system of propagating apple trees, but I know it is a valuable one for many reasons. To it we owe nearly all our great orchards, and the cheap price apple trees can be sold at, thus creating a demand, and furnishing the supply; and not the least pleasant feature is furnishing pleasant work in warm quarters to men and boys who would otherwise be idle at this season of the year. Just fancy it—making orchards indoors by a warm stove when all outdoors is bleak, cold winter. Listen to the hum of voices, the click of knife as it cuts in and out in the cion or root, the rattle of the reel as the string is unwound quickly in tying the graft, while outside is the silence and calm of winter, and you will agree with me it is a nice class of work, and something every farmer should understand how to do. It is a pleasing thought to know that those little brown cions and roots, only about six inches in length, lying in heaps, would some day make large, stately trees in the orchard. In fancy you can see the green meadow, the pleasing shade and sunshine amongst the trees, the bending boughs and ripening fruit. These results of skill, labor, time and cultivation call forth our admiration for the operation of grafting, and show that the nursery and farm are near related.

now going on in the nurseries, and I can assure the reader that the graft is made in far shorter time than it can be told. I cannot say who originated

Watering is best done at night, but early in the day will do. Nature never waters plants while the sun is shining. We should learn a lesson from her. Neither does she often sprinkle with ice cold water. We should never forget to temper that which we pour upon ours in pots,

How to Grow Early Cabbage.

February 1883

The Chinese Primrose.

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As a flowering plant, either for the window or the conservatory, this plant is a very useful one. Its growth is one of the easiest character when properly handled, and the various shades of color, from pure white to almost scarlet, with the numerous intermediate shades, in both double and single varieties, render it at once one of the most valuable plants one can have. There is an old doublewhite variety, very pure in color, which can only be increased by cuttings, but is a plant that well repays the care bestowed on it. This plant will come into flower in the early months of winter, and continue until well into the spring months, and is much benefited by keeping the old decaying flowers picked off.

The single variety of Primula that once was but a simple looking flower of two colors, a white and purple, has now sported into a noble flower, symmetrical in shape, often two inches in diameter, beautifully fringed, with varieties that will often come reasonably true, semi-double, as well as single in their respective colors.

There are no home-grown seeds of these flowers equal to those imported. The best comes from England and Germany, each country having distinct strains, that are so fixed that they come nearly true from seed. One house in Germany claims to grow 30,000 plants of this flower for its seed alone. The best and newest variety is quoted at as high as \$20.00 per 1,000 seeds. Seeds, of course, of such value require some care in handling in their young stages, so as not to run any risk of losing them.

The first requisite is a loose, friable soil, and for the seed bed, a well decomposed leaf mould mixed with one-fourth sharp sand, is a good one. The seed should be sown in March or April, and but slightly covered with soil; a good plan is to cover the pot or box after sowing, with a pane of glass, which helps to keep the moisture uniform until the seeds have germinated, and pushed through the soil, when the glass may be gradually taken away. When they show the rough leaf they should be lifted and transplanted into other pots similarly prepared, and set in the soil up to the young leaflets. The use of this is to prevent the young stem from damping off, which they are prone to do without this preparation. They may stand in these pots until they have grown into four or five leaves, when they require transplanting again into thumb pots, where they may stand until the pots become full of roots, from which they are gradualy shifted into pots a size or two larger, as occasion demands, until they are finally given a six-inch pot, which is large enough to grow them to the best advantage.

While in the green-house they require to be within a foot of the glass at all times ; many fail in growing this plant to the highest style from this simple precantion. More particularly is this true with private green-houses, or conservatories which are often lotty structures designed rather for architectural effect than for the utility of growing plants.

I sow the seed of the kinds I wish to grow in February or first of March, in small shallow boxes in forcing pit, hot-bed, or if these are not to be had, a sunny window of the house will do. The boxes I use are eighteen by twenty-four inches, three inches deep; made of one-half inch boards. The kinds of early cabbage I generally raise are Early Jersey Wakefield (best if pure), Winningstadt, Early Summer and Fotler's Early Drumhead. The first two for early; the others for second early I only treated the first two as above stated; the second early 1 sow in common hot-beds from the 1st to the 15th of March. After the seeds sown in boxes are up and about three inches high, it is necessary to transplant them in other boxes like those they were sown in, about one and a half to two inches apart every way; or, put one plant in each pot, and pots close together in boxes, treating the same as if planted in boxes. Pots are better than boxes and I use them largely. About one week or ten days before planting in garden, they must be hardened off by exposing gradually, night and day, in the open air. I set out my plants the end of April or beginning of May. The plants which are in boxes are taken in the boxes to the part of the garden where the ground is ready to plant. Plant Wakefield twenty inches in rows and Early Summer the same; the other kinds twenty-four inches. The rows should be thirty inches apart, so that a cultivator can be used. Early radish, lettuce, spinach, etc., can be sown between the cabbage rows, and be out before the cabbage needs all the room. After cabbage, celery can be be sown on the same ground. In this way other vegetable plants can be raised to advan-tage. In fact, I have raised all the following tage. with success: Early carliflower, early lettuce. early kohlrabi, early savoy, early celery, early beet, early tomatoes, carly cucumbers and early squashes. - [Gardeners' Monthly.

DESTROYING SPROUTS. - Sprouts of orchard trees which spring from the roots are caused by injuries to the roots by plowing among them. Wherever a root is broken, a sprout is likely to appear. Some trees are noted for their habit of sprouting, such as silver maples, soft maples, locust, &c. Sprouts which spring from the base of the stem come from buds, and to remove these so that they will not grow again they should be cut with a sharp chisel close to the wood, removing even the bark so as to be sure no bud is left to produce another sprout. Sprouts from the roots should be cut close to the root, and if they are cut as they appear during the season they will disappear.

The Mpiary.

Bee Notes for February.

An exchange says :-

During this month, there is but little pressing work for the bee-keeper. Bees that are packed e ther in chaff or in chaff hives need no other at tention or care than simply to see that the entrance to the hive does not become sealed with snow or It is sometimes well, also, to drag out the dead bees by use of a slender wire or twig.

Peterinary.

SIR,—Please give remedy for clover bloating ttle, and oblige. R. D. W., Ougal, Ont. cattle, and oblige. [If the case is taken in its early stages, a dose of

baking-powder or powdered charcoal, about a tablespoonful to a quart of water, will frequently give relief. If the case is a bad one, an instrument called the trochar should be inserted in the left side of the animal above the last rib. In the absence of a trochar a hole can be made with a sharp penknife and a quill inserted, taking care that the quill does not slip in, after all the gases have escaped ; stitch up the wound.]

SIR,-I have a fine mare, six years old, that took cold while on the grass last summer. She has had a running at the left nostril ever since. Please tell me what to do for her, and oblige. J. B., Anagance, N. B.

[Apply tincture of iodine with a small brush to the thyroid glands once every second day.]

SIR,-In the December number of 1879, page 277, you say sulphur and salt are good for sheep and horses. Would you please state quantity of dose for each, also how often to give and also what kind of food is best to give it in. S. B., Charlottetown, P. E. I.

[For sheep about one-third sulphur to two-thirds salt should be placed in the salt boxes; for horses, about 1 oz. of sulphur twice a week in bran mash, boiled oats, or other soft food.]

SIR,-I have a horse that rubs his forehead very much, worst just about the root of the ear. He rubs the hair off. Would you be kind enough to mention through your valuable paper what would be good for it.

J. W. H., Hornby, Ont.

[From the description you give it is difficult to say what ails the horse Do you keep poultry in the stable? If so, remove them; or it may be the If it is the skin will be dry and cracked, mange. and the hair will come off. Wash well with soap suds, or it may be necessary to soften first with oil. Remove all scabs, then apply thoroughly with a brush oil of tar 1 oz., whale oil 20 ozs., alcohol 1 fb., and keep the animal well cleaned and fed. Don't use the same currycomb and brush to another animal. Dress the harness and woodwork where the horse has rubbed with a strong solution of potassa and wash the blankets well.]

SIR,-White spots have come on my cattle this winter. Some say it is ringworm. I would like some information through the ADVOCATE how to cure it.

T. C., Seagrave, Ont. [See answer to J. B. in the last number of this paper, page 16.]

Every encouragement must be given in the young stages of growth to produce a fine development of foliage, as on this will depend (in the ensuing fall) a strong flower stem well up above the foliage, and which will then farnish a perfect bouquet of flowers.

The hot summer sun of this country is the trying time with this class of plants, which are natives of mountainous countries.

They should always have abundance of room for the expansion of the leaves, and a situation that can be partially shaded in the norn day, and kept as cool and moist without constant watering, as circumstances will admit.

As the cooler fall weather approaches, there is no difficulty with them, provided they have passed safely the summer menths. It is not of much use to attempt keeping them over a second year, as they seldom do as well as raised from seed each year. Of course in cases of extraordinary fine double ones coming, they can and a e sometimes raised from year to year by means of entings, the same as the old de ble while sort before spoken of. But there are few growids here who have the facilities and time hereevery to make a success of their growth this way, and more particularly as winter, the mortality commenced at an early

If the bees in the cellar keep quiet, they should be left entirely alone. If they seem noisy and restless, the temperature of the cellar should be looked after to see that it be not above the safety l mit : from 35° to 40° F. Often, by bringing the temperature to the proper point, all uneasiness is checked. If still disturbed, then on the first day that is warm onough for the bees to fly, they should be carried out from the cellar and placed on their summer stands, and permitted to indulge in a cleansing flight. At night return them to the

WINTERING IN RELATION TO DAMPNESS.

An examination of the condition of the atmosphere as to the point of saturation, from accurate records taken three times daily, for the past 20 years, shows that there is not the least evidence in favor of the idea that excessive moisture was in any single case the cause of the great losses of bees. It also appears that in all the seasons of bad wintering, severe cold was experienced. It is further shown that when the cold occurred early in the they can be grown so much casier from seed, as period. If late, the bees did not appear diseased an early until near the end of the winter.

SIR,-My cattle are troubled with large blue lice. Can you tell me through your valuable paper a remedy to destroy them.

SUBSCRIBER, Learnington, Ont.

[They may be easily treated by rubbing with sulphur ointment, or whale oil, or with water saturated with coal oil. Clean the building well and paint all cracks in woodwork with coal oil or oil of turpentine, and litter the building with fresh pine shavings.]

Sir,—Will you give a cure for black tooth in igs? W. B., Cornwall. pigs?

[There is no such disease as black tooth in pigs. Black or discolored teeth are caused by an acid deposit produced from a disordered stomach. remedy this give some charcoal, or an ounce of gunpowder, in the food.]

PARASITIC WORMS IN LAMES .- Coughing, running at the nose, coss of appetite, and general pining and dullness are symptoms of the disease known as verminous bronchitis, which is caused by the presence of small, thread-like worms in the throat and lungs. The remedy is to mix one ounce of turpentine with one dram of camphor, dissolv-ing the latter, and add the solution to one pint of raw linseed-oil. Give a tablespoonful to each lamb in the morning, an hour before feeding, every day for a week.

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THE FARMER'S ADVOCATE

Correspondence.

NOTICE TO CORRESPONDENTS.-1. Please write on one side of the paper only. 2. Give full name, Post-Office and Province, not necessarily for publication, but as guarantee of good faith and to enable us to answer by mail when, for any reason, that course seems desirable. 3. Do not expect anonymous communications to be noticed. 4. Mark letters "Printers' Manuscript," leave open and postage will be only 1c. per $\frac{1}{2}$ ounce. We do not hold ourselves responsible for the views of correspondents.

Keep More Stock.

SIR,-There is no better way to restore land to fertility than by increasing the number of animals on it. The majority of the farms in this fair Can-ada of ours (this "Brightest gem in Britain's ada of ours (this "Brightest gem in Britain's beauteous crown") do not maintain more than half of the stock that they could carry over under a proper system of management. If we were to ask the average farmer on one hundred acres of land and practising the almost universal system of mixed husbandry-how many cows do you keep? the answer would be from 4 to 6. Is it not a fact that this is about the average? It should be doubled, and in some instances, three times this number might be more profitable. We do not urge the keeping of more cows than can be well One cow well fed is better than two or three indifferently attended. (One bushel of turnips and one gallon of chopped grain, oats, peas and barley mixed, is our daily winter ration for each cow— with hay and straw). When a farm is once stocked to its full capacity, it is kept in good order by the manure made from the stock, and it is then, and then alone, that farming can be successfully carried on for any length of time. D. W. N., Holstein.

SIR,-I perfectly agree with J. C. S., in his re-marks with regard to the above association. We We are aware that there has been failing and mistakes, but, at the same time, we believe they have, and are, being put a stop to; and who is there amongst us who have not made mistakes and sometimes been a little rash in his own private business? And then I would like to ask who is it that is grumbling but the farmers themselves. I think they should not grumble at the Government giving them a little of their own money back in the shape of prizes, for I feel certain that if the farmers do not get the money the towns-people will, in some shape or I would say, farmers get all you can from other. the Government; double the grant to yourselves, if you can only do it honestly; the towns-people are not grumbling. I be ieve we have got a lot of good men at the helm now who are able to pilot the old Provincial, and make a grand success of it yet, and, I think, if they can confine it more to purely agricultural exhibits than it has heretofore been, like the Royal, of England, where nothing is allowed to be exhibited but that which comesstrictly under the head of agricultural products or is made strictly for agricultural purposes, it would be better for all concerned. Give it up? no, never

Norman Horses.

SIR,-Would you inform us, through your widely circulated paper, whether Percheron and Norman are synonymous terms? My reason for asking the question is a number of Percheron horses are being imported into this section of country of different sizes and colors. To account for the difference of size and general appearance they call one Perch-eron and the other Norman. Are they distinct breeds, or one and the same? By answering you will oblige. A SUBSCRIBER, Kimberly, Ont.

[The Norman horse was the original Norse horse which was so popular all over Europe in the Middle Ages. From this stock all the heavy horses have sprung, and by selection and feeding they have developed different forms and assumed different names. For instance, in France the Brettagne, Boullonais, Ardenais, Aujern and Percheron are all Norman stock; but the district of Perche claims that the present Norman-Percheron horse originated there. They are bred in four different classes, namely the heavy draught, medium draught, saddle and coach horse. Therefore all horses imported from France are Norman horses in the strict sense of the word. We have not space to go fully into the history of the Norman horse, and must refer our correspondents to the "National Register of Norman Horses," published by the Association in Chicago, or to the excellent catalogue of M. W. Dunham, of Oaklawn Stud Farm, Wayne, Ill., who has done so much to popularize the breed on this continent. This will also answer other cor respondents.]

SIR,-Knowing that you are anxious to receive any suggestion which may be of use, I have got 100 plum trees, mostly of the common blue, and seeing that the black knot was slightly making its appearance, I felt a deep interest in trying to prevent my trees being destroyed, and having by practice learned that to keep the tree in vigorous growth was a preventative of most diseases, I set to work manuring heavy with barnyard, both fall and spring, allowing no young suckers to grow from the roots After two years treatment this way, although it did not entirely disappear, I keep it under way, finding them to work well. I tried on, giving them more vigor still. I pruned one row heavy, by way of cutting back, as well as rip-ping the bark on two sides of the trunk and up the main limb, causing a wonderful growth of young timber, and so far I cannot find one knot on this row, and the bark is smooth and free from cracks. I feel strongly of the opinion that allowing trees to get hide bound is the surest way to invite black knot, as the sap is sure to burst out in plum trees that are not ripped at least every third year. I have more faith now than I had in the beginning in this way of treatment, as I notice where trees that are allowed to grow without any care are most affected, and some totally lost. I will report how my trees are getting along for the next season, as I am anxious to learn from your paper all infor mation possible regarding the destruction of that disease.

T. H., Kintail, Out.

Manitoba.

SIR,-Having read with great interest the several remarks, during the year, by several parties, on "The future prospects for farmers in this Pro-vince," and having been brought up on a farm in the Province of Quebec, it might be of interest to you to have my opinion on the question. I, have raised my 4th crop here this summer, and I consider the soil and climate far superior to Quebec for growing grain, if properly drained : and I have early corn ripen here every year; I have grown even tobacco with success by growing the plants in a hot-bed. The hay is everything I could desire for horned cattle, but I should think timothy was hetter for horses ; and, to conclude, it is my firm belief that the Province of Manitoba, at last, is destined to become one of the richest in the Dominion for agricultural purposes.

J. K., St. Norbet, Man.

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Can you tell me of any cure for the eye disease in hens? They all die of it here.

A. P., Middle Church P. O., Man. [It is not eye disease but malignant roup. Sep-arate the affected birds and give them a mixture of whiskey and red pepper, about a teaspoonful at a dose ; pour cold oil on their heads and in their nostrils once a day. Any of the birds that are very bad kill off at once, to try and stamp out the disease.]

SIR,-I am thinking of raising about 12 acres of white beans next summer; the field is on the banks of the river Thames; I thin furrowed it after the wheat came off, and then in the fall I plowed it 8 inches deep, and it is very clean. Will you kindly give me some information as to the following: How should I sow them? and how much seed to the acre? and the best way to har-vest the me and the best way to harvest them, and the best way to thresh them? I have some oats that have heated in the stack ; will they hurt horses if I feed them to them? I am feeding a few to the sheep ; will it injure them in any way? By answering the above you will oblige. A. J. E., Box 1013, Chatham, Ont.

[The best way will be to sow them in drills about 30 inches apart, or of sufficient width to allow the free use of the horse hoe. Sow at rates of $1\frac{1}{2}$ to 2 bushels to the acre; or they can be planted in hills about 2 feet apart, when 8 to 10 quarts seed per acre will then be sufficient. They should be hand pulled just before they are ripe, and threshed in the ordinary manner. Feeding mouldy oats will certainly prove injurious. Scalding them will remove a deal of the fungi.]

SIR,-My lease says I must buy twenty-five dollars worth of manure yearly. Would superphosphate stand law ?

A LANCASHIRE FARMER, Grantham, Ont. [We would consider \$25 spent in superphosphate the same as if spent on barn yard manure, the former containing all the elements of the latter.]

W. L., Aurora, Ont.

SIR,-Having noticed an article headed "Farm Notes " in the December number of the ADVOCATE, I wish to say a few words concerning it. I think wheat does pay at the rate of 90 cents per bushel this year, as there has been an exceedingly good yield over last year's crop, although we realized at the rate of \$1.30 per bushel last year; still there was not nearly so great a yield as this year.

J. R., Chatham.

SIR,-Will you please give me through the columns of your very va uable paper some method for raising both hops and broom corn for marketing. I have never grown or seen either grow, but I think I have got ground that would grow them, if I knew how. By giving me a few hints on the above subjects you will oblige.

A READER, St. Ann's, Monck, Ont.

[Broom corn should be planted and treated in a like manner to ordinary corn, except that the hills should be planted a little closer. To grow hops successfully the land should be in good heart, well tilled and drained, as they will not thrive if the soil is at all wet You would have to obtain cuttings from some respectable nurseryman or hop grower, who would instruct you in the practical method of cultivation.]

SIR,-In your next issue oblige by stating the earliest age a young entire horse should be allowed to serve a mare.

Z. Y. X., Lake Francis, Manitoba, [Too many entire horses are used when young. Three years old is plenty early enough, and even then they should not be allowed to serve a great many mares. Some are used at two years old, and are give too many mares ; the consequence is impotence in middle age.]

SIR,-What kind of soil will the Russian mulberry tree thrive best in? Please answer and oblige. J. W., Burnhamville. [It will grow well on any good soil, but a light

sandy loam is preferable.]

SIR,-Can you or any of the numerous readers of the FARMER'S ADVOCATE tell how I can make a mare that is six years old, and what is called half blood, stand quiet to be loaded or harnessed in any vehicle. She is nervous, fidgety and terrified at a railway train; in other respects she is a good beast. Is there any remedy ?

SUBSCRIBER, St. John, N. B.

[We are afraid that nothing will cure the animal of her nervousness. Keep her away from any-thing calculated to excite her, and treat her kindly. Harsh treatment will only make her correspondent be more definite in as worse.]

SIR,-Is salt beneficial to onions and other vegetables, and how much per acre should I sow? As worms injure mine very much I am intending to try salt to exterminate them.

A SUBSCRIBER.

[Salt is beneficial if judiciously applied. About two barrels to the acre is about the quantity that should be used. I

SIR,-By answering a few questions you will greatly oblige. 1.—Are there any Holstein cattle for sale in Canada? 2.—And, if not, could they be imported from the U.S. free of duty?

J. C., Penetanguishene, Ont. [We are not aware of any dealers of this class of

cattle in the Dominion, but there are plenty in the U. S. from whom they could be procured, and brought into Canada duty free, if for breeding purposes.]

SIR, - I would like to know how to raise turnips: also, something about the application of manures also, something about the application and grass. where we farm for vegetables, grain and grass. W. P., Aylestord.

[The subject is of such wide scope that justice could not be done to it in a short realy. It would take volumes to answer the questions. Would our correspondent be more definite in asking questions ?]

February, 1883

Osage Hedge.

SIR, -What kind of hedge plant is best to grow for fences in Ontario? The osage orange grows well in this county on the high land along Lake Erie, but don't do so well where the land is low and heavy. SUBSCRIBER, Essex.

[An osage orange hedge should be made of one-year-old plants taken from a nursery. These may be procured from a nurseryman for about \$3 a thousand. A furrow is made with a plough where the hedge is to stand ; the plants are set in the furrow and the roots covered with earth and pressed down by the foot. A furrow is then thrown to the plants on each side with the plough, and the ground is kept clean and free from weeds. The shoots should be cut back early in the spring to 3 or 4 inches from the ground to procure side shoots from the bottom, and these are cut back the next year to 1 foot, and so on until a thick bottom growth is made. An old straggling hedge should be cut half through about six inches from the ground and laid down about 45 degrees in the line of the fence, one plant upon another, and the branches should be trimmed into good shape. New growth will then soon fill up the hedges and bind all together in a close mat The new growth should be kept pruned. The winter is the best time to prune an osage orange fence or any other kind when there is leisure to do it well. The best tool is a pair of hedge shears with long handles. A short scythe may be used with a properly shaped handle or a stiff, sharp grass hook or sickle; a corn hook may be also handled so as to do the work well. If the bottom of the fence is too open the clippings may be used to close it; but if a hedge is properly kept it will be close, tight, and wellformed.]

SIR,-Would you please to tell me why my house plants-the blossoms-all blight before they mature? I have plenty of buds but they blight. What shall I do for them? What is the cause? They are mostly geraniums and pelargonias. Oblige an old subscriber

Mrs. G. W. R., St. Catharines, Ont. [It is difficult to answer your questions, but we should say that the temperature of the room is not equitable, and probably the plants are not given moisture at regular intervals, too much at one time and not enough at others.]

SIR,-I noticed in one of your numbers of last year an article on girdling apple trees, but your correspondent left us in the dark, as he did not say how deep we should cut. I have always understood that girdling a tree would kill it We would like to hear something more about it before trying it. Perhaps your correspondent would favor us again. We are trying to organize a farmer's club. Would you kindly give us some information as to how we should proceed. I notice that you do such things, therefore I have ventured to ask the favor. H. C., Gananoque.

[Removing an entire circle of the bark certainly would kill the tree or branch. The object in girdling is to suppress the superabundant flow of wood-forming sap. Make two clean cuts about $\frac{1}{4}$ of an inch apart, and about three fourths round the limb, leaving the remainder of the bark uncut Remove the bark from between the cuts ; the uncut portion of bark will allow sufficient sap to flow into the branch. For rules, &c., for forming a farmer's club, see December number of the ADVOCATE, page 319.]

SIR,-I ask for some information in regard to logs, as I am a new subscriber to your paper. Will you be kind enough to inform me-through your valuable paper if there is a breed of hogs called the white Berkshires, and if so where could I purchase a male pig with registered pedigree at a reasonable price, not more than 5 or 6 weeks old, farrowed any time between the first of March and June next, 1883; or I would buy a thoroughbred sow, with pig, by a pedigree hog, at a reasonable price. If there is no such breed of hogs as the white Berkshire, I would buy a thoroughbred Suffolk pig, but must have a registered pedigree with any one I buy. By answering the above you will much oblige, and state also what price I would likely have to pay for a pig of the above descrip-tion, or sow, with pig. P. S.—I have the black Berkshire pigs, but want a change. F. M., Trenton.

[There may be a breed called the white Berkshire, but we have not heard of or seen any in this country. These are not classed in any of the principal fairs in this or any other country. For breeders of pigs see our advertising columns.]

SIR,--If I am not too troublesome I would thank you for some information for growing the fodder corn, as I believe many of your readers, especially on this island, are quite inexperienced in its culture. I have a piece of sod or lay land. Would it be fit for it, and how should I prepare it; also, what quantity of seed to the acre and how it should be cultivated and harvested, and if this does not comprise the ensilage, what does? W. D., Mayah, P. E. I.

[Drilling is the best, if done with a machine. Take out every other tube ; it may be sown broadcast. It would not be advisable to sow it upon sod, as the land should be well cultivated. If you have no other land but the sod, plow it up and plant the corn in every other furrow. About two bushels to the acre is the quantity of seed.]

SIR,-Having bought forty acres last year that had been cropped pretty hard and run down, I was thinking of summer-fallowing most of it next year, and not having manure enough for all, how would it do to sow buckwheat on it and give it a small manuring? What time is best to sow the buckwheat and how much to the acre? I thought of ploughing just after seeding it (as it is all ploughed now), and manuring and sowing the buckwheat so it would be big enough to plough down to rot and then rig up for fall wheat. As I have never done any, please give me your advice. I believe in mixed farming, raising good grade cattle, keep them well from calves, not letting the calves run down in the fall. Feed them on hay, chaff and roots the first winter, the second winter feed chaff and roots or cut straw and roots, and the next winter fatten them for the English market. By this process you have some cattle to eat your rough feed as well as your good. J. C., Clinton, Ont.

[Sow the buckwheat about the middle of June, about two pecks to the acre, and plough under when in full bloom.]

SIR,-Your journal comes to hand with great regularity. I have not missed a copy since first subscribing, and consider it ne plus ultra in the agricultural class of publications, and therefore to us dwellers by the sea, contending with the ad-verse influences of a rugged soil and rigorous climate, indispensable. It is pleasing to note that the silo-ensilage business is becoming practicable to the average farmer; more so to us, from the fact that even in New Brunswick we have repeatedly obtained—for soil feeding— as large yields of cornstalks per acre as is claimed by ensilage writers for what we have been accustomed to regard as more favored parts of the Dominion, at least from a corn*ucopia* point of view. During the summer of 1882 one of our go-ahead farmers built, as an experiment, a silo of 30 or 40 tons capacity, and in September filled and weighted in the usual manner, and about New Years, when opening it, was gratified to find the contents tolerably well preserved, and is since feeding with satisfactory results He has also recent y procured from Great Britain a first-class bone crusher, which will be put in operation in March, and it is reasonable to anticipate, from this new departure, beneficial results to our farming community in the near future; but as Mr. W. is a patron of the ADVOCATE, you will doubtless hear from him personally, and, Mr. Editor, if you could induce him to join destinies with one of your fair "bill of fare" essayists (pardon me for suggesting No. 3), he would doubtless soon be enabled to appreciate the sentiment embodied in the couplet,

"Not for herself was woman first create, Nor yet to be man's idol, but his mate.'

The fair essayist reciprocating,

"That in the just and generous heart of man,

The place she holds accords with heaven's high plan."

Thus, your prize offerings would evolve the gratifying result of a number of persons becoming winners of inestimable prizes.

In December's issue of the ADVOCATE, "A Prac-tical Farmer" evidently thinks there is too much muchness involved in fare essay No. 5, and after dubbing it an "exquisite satire," also suggests a bill, but so narrowed down that it reminds me of what a harvest hand said in my hearing, in the old Empire State, a quarter of a century ago. He had quit service in contempt with his employer's bill of fare, and when pressed to itemize, said : "For breakfast we had pork and beans; we had pork and beans for dinner; and for supper, by George Washington, we had pork and beans." Evidently the objectionable item occupied the same relative position in his fare as "porridge, bacon, and lots of gravy" in the fare of "A Practical Farmer," and there is too much homo in both, to satisfy your quondam correspondent.

D., Sussex, N. B.

SIR,-Will you be so kind as to answer the following questions, viz: When is the best time to apply salt to fall wheat? Would you recommend putting a covering of straw on fall wheat during the winter when it is covered with snow; if so about what quantity of straw should be put on ? F. W, Beaverton, Ont.

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SIR,-Please inform me through the ADVOCATE of the best way of keeping cabbages through the winter, also how to destroy the worm that eats off the root close to the surface just before cabbages begin to heart.

A SUBSCRIBER, Shediac, N. B.

[A good method of keeping cabbage will be found in the FARMER'S ADVOCATE of Oct. last, page 254 A handful of shorts mixed with a little salt, and sprinkled thickly round the plants, is a good preventative.]

SIR,-I would like to know in your next paper which is the best way to feed oats to horses, from colts to eight years old, ground, raw or boiled. I should be very glad to know the best way

C. G., Brooklin, Ont.

[For horses in first-class condition the best results are obtained from feeding oats whole. sults are obtained from feeding oats whole. As there is no rule without an exception, it would be advisable to feed the oats scalded, and mixed with a little bran oc ionally.]

SIR,-I would like to know through your valuable farm paper if I can get ear rings with name and number, or address, for marking sheep. Is there any place in Canada where I could get them and what price ?

P. W., Wilsonville, Ont. [There are none made in Canada, but you can procure them in the United States. See advertisement on page 32, January ADVOCATE.]

SIR,-Please let me know where I can get the patent milk stand pictured in your January number.

W. H., Reabon, Ont. [Any wheelwright or carpenter would be able to make one for you]

SIR,-I saw a communication in the January number of the ADVOCAAE from S. S., inquiring about French wheat. 1 purchased three heads of the above wheat while at the Toronto Exhibition in 1879. Now I have ten bushels of clean, plump grain, being proceeds from the three heads in three years. I have grown it in the same field with other varieties, i. e., Redfern, Gordon and Fyfe, and in every case it came out clean and plump, while the other varieties were all badly rusted.

A. M., Bowmanville.

According to the season ; when the plants have well commenced to grow, about 200 pounds to the If the wheat is covered with snow it will acre. not be advisable to mulch with straw, but if there are any bare spots, then cover with straw. If straw had been used before snow falling it would have been beneficial.]

SIR,-I wish to know through the ADVOCATE what is the matter with my chickens and how to treat them. At first they curl up their toes, then lose the use of their legs and gape and finally die. If you can tell me what to do for them I shall be very much obliged, and am pleased to sign myself A SUBSCRIBER, Grand Pre, U. S.

[From the insufficient description of the symptoms we are unable to say what is the matter with your fowls. Probably they are kept in a damp place and not fed properly.]

SIR,-I enclose pedigree of a cow and bull, in order to get the calf, which is six crosses, regis tered. The printed regulations sent me require in the May number of the ADVOCATE, page 124. As Mr. Wade is keeping the Government Herd Book, I think my calf should be registered, or how

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THE FARMER'S ADVOCATE.

can I get it when I have the seven crosses. May I trouble you to give me such information as you may think I require.

H. R. W., Winona, Ont. [We have submitted your pedigree to the Secy. of the British American Shorthorn Association, and he informs us that neither your animals or any of her progeny can be registered in any of the herd books, and that in future no animals can be entered in the Canada Shorthorn Herd Book unless bred from imported cows to imported cows or cows al-ready registered in the first six volumes having This change is analagous to thet brought about in the American Herd Book in 1882. It will therefore be useless for the farmers of the Dominion to breed grade animals with the idea that they can be entered in any of the Shorthorn Herd Books.]

SIR,-I should like very much could you inform me of the following: 1st.—Is there any set of farmer's account books published in this country? 2nd.-Could you tell me where I could get a selection of different forest tree seeds for planting? 3rd.—If Allen's "New American Farm Book" would be of any use for farming in Manitoba. 4th.—Price of Vol. for 1882, FARMER'S ADVOCATE, bound. J. C. J., Bulah, Manitoba. [A correspondent to a contemporary gives the fol-

lowing excellent plan for keeping farm accounts : SIMPLE DIARY AND ACCOUNT.

In the farmer's life there seems less need of bookkeeping than in most callings. His sales are comparatively few, and his purchases of such large articles as are well remembered by their importance, or he deals with men who keeps books and he trusts them. Yet if he keeps no record he will be often perplexed to know where and for what the money went, that he received for grain, beef, wool or butter. It would also be a satisfaction to him to know each year whether his work was as well advanced as at a similar date in previous years, or whether his barns at mid-winter or at any other date had as much fodder for stock as at

a similar date in past winters. I have kept a daily record of work and a careful account in income and expenses the past twenty-five years. I have used books of various sizes and hve years. I have used books of various sizes and with different methods, but like my present way best. I have a blank book about 7x12 inches, and with 236 pages. On each page are thirty-seven lines below the headline. As the book is open I use the right-hand page for a diary record of work and use one line a day, so after dating thirty lines for a month's calendar I have six or seven lines for general memoranda. I find one line will contain general memoranda. I find one line will contain several items, and give room for a word about the weather or figures representing temperature. The left-hand page is for accounts, and during the past two years I find every month that the one page is room enough to give every sale and every purchase, even when I retail vegetables and buy groceries in small quantities.

As we open the book we have the history of a month before us. The pages are ruled so that two columns of dollars and cents can be placed on the that is farming intelligently and the man that is right of the page, so that it is just as well to fill the page with transactions as they occur and place the money in its proper column as received or paid out. Some credits may not have the amounts carried out. The month's accounts may in this way be ready to add up and balance, and if the income and outgo is not alike, it tells the reason why. It is best to write this book with good ink. It may be well to have other books to note the work, fer-tilizers, seed and harvest of any or every field. Such note book and pencil may be in daily use, but for the main thing I like my present way b st. Either W. H. Brown or R. R. Keith, seedsmen, Winnipeg, will supply you with any forest tree seeds you may require. Allen's American Farm Book contains information that would be useful for any kind of farming. Price of FARMER'S ADVO-CATE bound for 1882 is \$1.50.]

SIR,—What is your opinion of the Russian white at? B. F., Arran P. O., Ont. oat? [The Russian oat has appeared under various names for several years back; there is nothing very remarkable about it, either in production or

SIR,-In your next number I would like to know if lime will pay as a fertilizer at \$1.75 per cask, and how much to put on an acre of heavy clay soil for oats, wheat and potatoes. My land is in poor condition; cuts from $\frac{1}{2}$ to 1 ton of hay per acre. A. M. N., Moncton, N. B.

quality.]

[It would not pay to lime your soil at the price you name, as to do any good at all it would re-quire 60 bushels to the acre. We are inclined to think such a heavy clay as you mention would not require lime, any way. Give your cultivation, drainage and plenty of manure.]

SIR,-It is some time since you had any corres pondence from this part of the Ottawa Valley, so I thought I would try to send you a few lines. Well, sir, I will begin by letting you and your numerous readers know a little about the yield of our crops, as we are through threshing. Our wheat has far exceeded our expectation, giving about 25 bushels in many places. Coarse grain also done well. Hay about 11 tons, but prices being low, farmers, on the whole, will not make as much as last year. By the way, sir, I wish to tell you that we have to thank the ADVOCATE for the advice of selling as soon as ready after threshing. Now, sir, am a subscriber for I think ten years, and, sir, I assure you I would not willing want its monthly visits. I am now going to relate a little anecdote that happened between myself and an agent by way of warning to my brother farmers and a recomway of warning to my brother farmers and a recom-mend of the ADVOCATE. The man referred to called to my place, represented himself as selling the best wheat that all the world and garret ever saw. Well, sir, it was Egyptian; I said, "what is your price?" He said if I took 6 bushels he would let me have it at \$6.00 per bushel; I said I would wait till I saw what the ADVOCATE said about it has said. "U can tall you all about that. My He said : "I can tell you all about that. Mr. Weld went to a man last year that had a quantity of the wheat he wanted—500 bushels—the man would not give it to him, so he turned about and wrote against it, so the same man came the next fall and told him he could have a quantity for speculation; then he turned and wrote in favor of it." "Well," said I, "if that is the case he is no farmer's advocate at all." Well, sir, in a few days I received a copy of the ADVOCATE; it was the first note I looked for. To my satisfaction, here was the warning verbatim : Beware of the Egytian wheat ; there are a great many agents handling it, and sharp ones at that; it has done well north of Collingwood, but no place else. I relate this story in hopes that it may encourage some brother farmer to subscribe, for I am certain it is worth twice its value to me or any man that is making a living by farming. Of course a man may hang on to a farm, but there is a difference, and a great one, between the man only a hanger-on. I assure you, sir, that locality you can, in passing through, almost tell the farmer that takes the ADVOCATE. 1 see by the number of questions you receive and answer monthly that you never tire. Please let me know in next number what it would cost to start 1/2 acre of a hop garden, that is for roots and poles, say you could get the poles within two miles. Please give all particulars, if you can, what sort of soil best adapted, if it would require to be very rich, how far the poles would need to be apart, how many hands it would require to attend the patch. I also want to get a plan of a barn, say 40x75. I want to know whether on a hundred acre farm it would be better to build one 40x80 and have the cattle stable beneath; or 40x75 with cow house attached, ground level. J M., Tanmeure. [We cannot answer your question about the cost of the poles for hop-growing, as the price will vary according to locality. The plants will have to be placed $5\frac{1}{2}$ feet apart each way ; 5 plants are gener-ally planted in each hill thus 308, and three poles used for each hill. It will take 720 plants for $\frac{1}{2}$ an acre, and 2,160 poles about 16 to 18 feet long. They will require to be tied to the poles as they grow. The plants being male and female, one male must be planted to each 10 female plants. The number of hands required will altogether depend upon circumstances. Women can do the work as well as men. We would prefer having the cow stable under the barn-it would be warmer and more convenient.]

SIR,—I have a horse five years old in the spring, that does not thrive as well as I would like; is growing well; has a good coat and spirits when not at work, but a very little work reduces his flesh and makes him dull; is well cared for and not worked much ; is crazy for oats, but minces over his hay; is tall and narrow, but round in the body. I feed timothy hay and 8 quarts of oats, in three regular feeds, with about 2 quarts raw potatoes at night, 3 or 4 times a week. R. M. M., Moncton, N. B.

[Give a pint of raw linseed oil once a week, as a drench, and give a powder every night, made of sulphate iron two drachms, gentian two drachms, in some boiled barley, and leave off giving raw potatoes.]

SIR,-I would like to get some of the Rouen duck eggs; where could I get them? I see in the April number, 1881, that Charles Weld advertises them; has he got them now? An answer would oblige. Would they come safe for setting by ex-press. Get him to answer by post card if he has them, and how much they are per dozen. W. T. F., Cumminsville, Ont

[See our advertising columns. The eggs, if packed properly, will come safely by the express.]

SIR,-I wish to ask the following questions : 1. A man has a bull, thoroughbred, and advertises 4.00 for the season, calf or no calf, and he allows his bull to have 170 or 180 cows ; a large majority of those cows have not held. Can the owner collect pay in full for all those cows? Also is there any specified number of cows that a bull should have? 2. A man's stock of cattle is infected with the ringworm ; he wishes to know how he may cure it ? S. K., Wingham.

[We are of opinion that you will have to pay uness it was stipulated the number of cows to be served. For ringworm see answer to J. B. in last month's ADVOCATE.]

A number of letters are unavoidably crowded out of this issue, but will appear in our next.

Farmers' Clubs.

THE KINGS AND WESTMORELAND FARMERS' CLUB-HOW TO MAKE AGRICULTURAL SOCIETIES MOST EFFECTIVE.

PETITCODIAC, N. B., Dec. 28.

The Kings and Westmoreland Agricultural So-cieties' Farmers' Club held their first meeting at the residence of Mr. D. Horsman, near Petitcodiac station. Mr. J. H. Morton acted as chairman and Andrew Smith as secretary. Mr. O. E. Flewell-ing, the President, read the accompanying paper The next meeting will be held at the residence of Mr. Flewelling, Pleasant Grange, when all farmers and others interested will be cordially' re

ceived.

"HOW TO MAKE AGRICULTURAL SOCIETIES MOST EFFECTIVE."

The object of our Farmers' Club is the greatest

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SIR,—Please answer through your columns of the next month, if possible, what is the best plan of fitting up a stallion to travel this season? What kind of food is best to feed ? What time should you begin to feed up? Is it necessary to give any kind of drugs in the busy season in order that they be capable of serving more mares? If so, what kind and what proportion given? F. E. H., Ont.

[Feed well on good oats and plenty of the best timothy hay, with carrots once a day; let him have moderate exercise every day with thorough groom-ing. You should begin to feed him up now. No stimulants or drugs should be given.]

good to the greatest number, but how to bring it about is the question. A wise provision of our Government has placed in the hands of the farmers certain amounts of money to be used for the benefit of their calling, under certain restrictions, which are not at all rigid, and why is it that our farmers will not, one and all, avail themselves of the opportunity to use for their exclusive benefit, at least, a part of the moneys which are extracted from them in the way of taxes? The farmers should answer that question.

In dealing with my subject I will first examine the importation of horned cattle.

To do this most successfully, let us look about us, and see what results have come from previous efforts ; .and whether Shorthorns, Ayrshires. Devons, Jerseys, etc., have given the best returns, what effect climate has had upon pure individuals or crosses, and which breed has given the greatest percentage of useful animals.

In this we must be guided by our wants, whether for beef, or dairying, and make our selection accordingly.

When we have decided what breed we want, send our best men-by this I mean men who under-stand something of the various breeds and their peculiarities; also, the laws of breeding, men who know what constitutes a good Shorthorn, Ayr-shire, etc., to make the selection, and, although approving of economy and money saving, I do not think best to confine your committee to small figures in buying, for eventually you will receive

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more real good from one first class animal than two or three inferior to medium sizes.

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I would say buy only pure sires. We frequently notice that grades exceed the pure bred animals in production of both milk and beef, but by pure sires only can we get the grades.

When we have secured suitable animals, I approve of selling, under certain restrictions, which may be varied according to locality, etc., and as a rule, I think that the man who is willing to pay the highest price will take the best care of the animals. The same rule will apply in general to sheep, swine and horses.

1 might notice here that if the members would be more particular in the selection of dams, we would see more marked improvement, and thereby create a greater interest and stimulate our farmers to further efforts.

Change of seed is very desirable, and the agricultural societies should use their influence to introduce new and improved seeds; also improved farm implements and machinery. It would be within their province to suggest experiments in the several branches of farming and to encourage im-

provements in every reasonable way. Our local exhibitions, "although in many in-stances laudable," fall farshort of what is intended. Are the prizes always taken by the best farmers? or is it some extraordinary growth, where the average is below par, that carries off the palm ? Would it not be better to husband the resources

say for two or three years, and offer good prizes for first-class stock in each department, also for best average yield of grain from a given area, best half acre potatoes, etc., etc., with clauses requiring the grower to give the manner of cultivation, amount of manure used per acre, quality of soil, cost of cultivation of land, etc? I believe this course would tend to advance agriculture, extend our knowledge, increase the interest and make our societies more nearly what we wish them.

An occasional plowing match would give many valuable hints to the mass of our farmers, who I fancy I hear some say that the poor man will

be prohibited from competing at our shows; to a certain extent he may be, but I ask will not the advantage in the end more than counterbalance the loss ?

In our stock list we might require the competitors to tell how the beef cattle and cows were fed, the average yield per cow in the dairy, the cost of beef, mutton and pork

I would suggest that we be very particular not to give prizes except to worthy animals and products

Not to let subscribers compete for prizes unless they paid all arrears previous to sending in returns to the Board of Agriculture, so that we may avail ourselves of the quota from Government is, I think, a desirable rule. I suggest also that only efficient judges be appointed in the stock department par ticularly.

I approve also of holding farmers' meetings occas ionally, during the winter evenings, for the discussion of agricultural matters, to be under the auspices of the agricultural Societies, and trust our feeble efforts may be productive of much good.

An address on agricultural topics once or twic

with advantage. They speak for themselves, and need not be recapitulated here. If every district in the Dominion would form clubs of some kind, and each member contribute what he could to the common fund of agricultural knowledge, then, in deed, intelligent farming would receive a most valuable impulse.

Oshawa Farmers' Club.

The President, Mr. A. Annis, in opening the meeting, said he was very much pleased to see so many of the intelligent farmers of the county present. He congratulated the club on the abund ant crops during the past year. Prices had not ranged so high, it was true, but on the whole the rand crop had more than compensated the farmer for his loss. He thought the club should inquire into the merits of the binding machine, as he thought it a grand invention, and would pay every farmer to have one. He advocated sowing barley early, tending it well, binding it at once as soon sible. He followed this plan closely, and found it paid him well. He remarked that there was a splendid representation of our best grain growers cattle breeders, horticulturists and dairy men present to give some good points. If we follow the advice of our club we need no government official to show us how to prosper. He would have great pleasure in calling on Col. McGill for a few remarks on horticulture.

Mr. McGill said he supposed this was a general review meeting of the past season's work. There was very little discussion on horticulture last year, and he had nothing to review. He had been asked by a friend if he found horticulture a paying business. He answered that perhaps it did not pay him quite so well as raising grain, but there was a great deal of pleasure and comfort in it. The delicious fruits were very tempting, and he thought every farmer should cultivate this branch to some extent. With regard to the failure of the plum crop, there were two causes. One was the insect which stung the blossom; the larvæ of which, as the plum grows, remains inside, and after a while destroys the fruit. The second was the fruit knocking together, bruising and causing decay. He did not think, however, that the clusters decayed any sooner than the single plums, as he had experimented. With regard to ashes, he had heard a large fruit grower across the border say that the best thing possible for fruit was ashes. He would prefer a bushel of ashes to a load of manure, because they are extremely beneficial to the fruit.

A member asked Mr. Lick if he could account for the report through the papers that there was nothing more exhausting to the land than dairying. Mr. J. S. Lick said if he was to answer such a

question he would say, coming to experience, he found that every farmer had to govern himself and his arguments by the class of land he possessed. He fancied that dairying was not so exhaustive, because, for instance, there was nothing in butter to enrich the land. Consequently everything that exhausted the land went back on it again. It might be a little different with cheese. Take a piece of land and plaster it, raising cattle on the the same piece, and it will be improved instead of impoverished. A friend boasted that we could not raise so good a crop to the front as they could further back. That was a sign that the land along the front was becoming impoverished. It is an easy matter to allow your land to run down, but you will find it very hard to bring it back to its old standing again. His land was better fitted for dairying than for grain. He admitted that a butter factory was a benefit to a few in its neighborhood, but it would have a tendency to turn out poor butter and run down the price of the good material. He was still of the opinion that dairy ing improved the nature of the land. Mr. Camplin, being called, said : We lose a great deal of nutriment by not cultivating our land. It should be turned up and kept well worked. He always found the more the soil was worked the larger and more productive were the crops. He had had a small piece of pasture where he kept his calves, and it never turned out like the other parts of his farm. He said he placed a quantity of bones under a manure heap last summer to see if they would rot, and the plan worked first rate. A knock with a shovel would crumble them all to nieces. He said he placed about five tons of manure, bone dust, scrapings from his hen roost, etc., on about eight acres of land. He had an excellent crop of turnips, some of them as large as a pumpkin. He used Bartlett's Turnip Harvester

in taking them up, and he found it worked very well, indeed, and gave him every satisfaction, taking up the entire crop in one and a-half days. He would not be without the machine for anything now. He thought his crop of turnips was over 600 bushels to the acre, and he had eight acres.

It was asked if there was any waste with the

machine in cutting off the roots. Mr. Camplin said there was no need of waste. His was done as well as if taken up by hand, and he thought the machine answered every purpose. The turnips were also topped very evenly, and without waste.

The President thought Mr. Camplin's testimony to the turnip harvester a very good one, and he did not think there was a farmer in the county who was better able to judge of its merits, or whose opinion was thought more of.

Mr. D. Hinkson said last years crop could be told to a furrow where the salt had i een sown. Within a few days of cutting the grain that had no salt on it fell. It did not seem to be strong enough to stand up, while the crop that had the salt stood up firmly and was easier to bind. He noticed fine-colored barley down east, and they, to a man, said it was because it was cocked up well on the same day that it was cut. He thought that we should work up to our principles with regard to taking care of our land. Pastures will run out and the grass die out. He thought pastures should be changed every three or four years

and be turned up. Mr. John T. Gould said there was great difficulty in getting farmers together. This was unfortunate for the farmer. If we paid strict attention to our affairs we would get together like the mechanics, lawyers, doctors and other bodies of men. He thought feeding cattle paid. He thought if the farmers sold less of their rough feed, and fed it to cattle, it would be an advantage. Manure should be taken care of and mixed with bonedust and other ingredients. He thought raising cattle was the best way to improve land, and at the same time prove a remuneration to the farmers. Markets were very good during the past year, but it was a risk, as Liverpool butchers were as bad as Montreal butchers for clubbing together. He would prefer going into raising sheep, if he could have a say in the matter. During the past year a large number of sheep in England have died from diseased liver, and the demand will be large this year. We should look out for a good sheep suit-ing wool as well as mutton. So far as sheep raising is concerned, in the west it is very profitable, indeed, if you have a good man to look after them. He paid a good figure to a man to look after his sheep. If he was a young man he would go there and raise sheep.

Mr. Grierson wanted to know which he thought est to raise here-sheep or dogs.

Mr. Gould said he appreciated Mr. Grierson's sarcasm. He thought something should be done to save the sheep from being slaughtered. In Kansas they use the shot-gun. Mr. Grierson said our barley market is in the

United States. Here, if they have a mind to run down the market they can do so. If we can retain our barley in the Province and have our own market here, we can overcome the difficulty, and that is the only way we can do it. They take care to send men to Cana la to estimate the Canadian crop. Our hundreds and millions of bushels are sent all over the States. All our different grades of barley emanate from the United States. It is a practice in Chicago and other American cities. If we could only adopt a plan to keep the barley here instead of shipping it, we would reach our purpose, and he hoped a meeting would be called at an early day to discuss the matter. He found that his land always yielded a good crop of turnips. He always put lots of salt on the land. He could always see the spot where salt was sown. Ile always sowed salt just as the grain came up — about one ton to seven acres, and he paid \$5.50 a ton for it. Mr. T. E. Washington said he was strongly in favor of a meeting to discuss barley He never saw salt make such a difference on barley as it did the past season He did not think it always af-fected the land as it did this last year. He could not understand why the baeley market should be so much lower here than in Toronto, there being nearly ten cents difference during the past year. He thought it would be difficult to follow out the idea of Mr. Grierson, with regard to holding the barley in this Province, but he hoped it could be done. It was decided to hold the next meeting of the Club on Saturday afternoon next, the 27th inst. Subject to be discussed, "The Raising, Cultivation and Grading of Barley.

each year by a competent lecturer would, I think, influence some of the cold outside farmers to join our ranks, would awaken them to the great necessity for increased vigilance. Why will not every farmer in the land come boldly to the front and ioin our band and assist by all means to work out this great problem ? Don't stand aloof and throw cold water on the work ; don't grumble and find fault bccause you did not get more prizes than your neighbor; don't predict a downfall; don't complain of the workings, but when you see an error speak of it and suggest an improvement; thus will you assist a good word and promote a better feeling.

There could not be a more reasonable subject of discussion than that which occupied the attention of the farmers' club, whose proceedings we publish. There is no doubt whatever that many of the Agricultural Societies are not working to the best advantage, and that with some of them the aim of the organization is more of a grab game than of an honest attempt to stimulate agriculture. Large sums are given out in prizes, but you could lay your hand on many a district in which these prizes are distributed, in which there is no corresponding improvement in agriculture.

The paper lately read by Mr. Flewelling, him self a most skilful and progressive farmer, in N. B., is a step in the right direction. There is scarcely one of its suggestions that might not be adopted

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THE FARMER'S ADVOCATE.

Stock Notes.

Messrs. Miller & Beattie's stock sale took place at "Thistle Ha'," near Brougham, Ont, on the 17th Jan'y, and was well attended by breeders from all parts of the country. Among the company present were Messrs. Haggar, M.P.P., of Plantagenet, Ont.; John Hope, of Bow Park; John Dryden, M.P.P., of Brooklin; Arthur Johnson, of Greenwood; W. Mulock, M.P., of Newmarket; T. C. Patterson, of Eastwood; T. Cowan, of Galt; John Holdernees, Russell, &c., &c. It is needless to say that the great crowd was entertained with the utmost hospitality by Mr. Miller and his family. The sale commenced with the swine, which were in fine shape; 18 were sold, averaging \$18 each, V. E. Fuller, of Hamilton, taking the choicest. The sheep were next offered, and a large number disposed of at an average of \$45 for all kinds Shropshires, Cotswolds and Oxfords. The Galloways were the next and were disposed of at an average of \$300. The Shorthorns were then offered, and the females, eight in all, were sold at an average of \$372. The sale of the bulls then began, and sold at an average of \$290. Mr. R. Sandusky, of Indianapolis, bought Victor Regalis, the pure Mantilini bull, for \$600; H. & I. Groff, of Elmira, took Lord Monteith for \$400; D'Alton McCarthy, Q. C., M.P., Barrie; bought Deaden 2nd for \$235. The event of the sale was the disposal of the well-known colt, "Strathbogie," winner of the first prize for yearlings at Toronto and Kingston in 1882. After very spirited bidding, he was knocked down to R. A. Roe, of Freedom, II'., for \$1,610. As the snow was falling heavily and the day closing in, it was impossible to sell any more, so Mr. John Miller has still a good many heifers on hand, and Mr. Beattie a number of superior Clyde stallions unsold. The sum total of the sale was \$17,893.

The sale of Messrs. Heron & Son's Shorthorns, which took place at "Dalmore Farm," near Ashburn, Ont., on the 18th ult., was a success, although the prices realized were not as large as we used to see, yet they were, upon the whole, very satisfactory. An immense crowd gathered from all parts of the country. Among the strangers present were noticed the Messrs. Groff, of Elmira; Snider, of German Mills; Shore, of London; Bell, of Athelstane, Que; Thompson, of St. Mary's; Cookson, of Illinois; Isaac, of Bowmanton; Rowe, of Illinois; Sowdorosky, of Illinois, besides a number of other American gentlemen, whose names we did not learn. 14 cows and heifers were sold at an average of \$192. The highest price paid for a single animal was \$400, for a roan cow, "Duchess of Gloster 4th," calved Oct. 15th, 1879; four bulls were sold at an average of \$151.

Henry Arkell, of Arkell, Ont., has recently made the following sales of sheep: Cotswolds— To Wm. Priestly, Greensburg, Ind., 10 ewes and 5 rams; to Jno. Moore, Malton, 2 imported ewes; to Thomas Hume, Burnbrae, 2 imported ewes; to Valentine Vitch, Woodstock, 1 ram, imp.; to Jno. Kirby, Guelph, 1 ram lamb, imp.; to L. J. Lewis, Copenhagen, New York, do.; to Augustus Derrick, Merrickville, do. Also the following imported Oxford Downs: 7 ewes and 1 ram to Henry Longworth, Prince Edward Model Farm; 1 ram and 1 ewe to Jno. Mackenzie, Presque Isle, Ont.; 1-ram and 2 ewes to H. W. Woods, Sarnia, Ont.; 1 ram and 1 ewe to J. F. Knapp, Philipsville; 1 ram to J, S. Watt, Salem; do. to Smith Evans, Puslinch; do. to A. Preston, Newboro. Several California horses lately died from the effect of sand in the stomach, taken in feeding on very short grass.

Mr. Edmond Horsey, Hingham, Mass., doubts if the silo system will be "profitable to the common farmer." "A hundred bushels of corn could be taken from ground necessary to raise forty tons of ensilage."

Mr. Hugh Nelson, of James Nelson & Sons, Liverpool, is now in the United States arranging for the sale of his imported Polled-Angus cattle, in cennection with the Geary Bros., Bil Bro Farm, London, Ont.

The steamer Lord Clive, of the American Line, on the last passage, had on board 100 head of cows and heifers, consigned to A. M. Harkness & Co., of Philadelphia. Several of these cost over \$500 each, and are English bred, of the blood of Coomassie Regina, Farmer's Glory, Lord Beaconsfield, and other fashionable strains The bulls are one of Coomassie blood, being a son of Si. George, which realized \$5,000 in New York last summer, and the other a son of Forget-Me-Not, which was sold for over \$3,000. For the year ended Dec. 30, Mr. E. J. Arnold has exported from Jersey 935 cows and 49 bulls, Mr. Le Brocq 925 cows and 36 bulls; other shippers, 155; the grand total for the year, 2,080.

The British Quarterly Journal of Agriculture says :-- "The horses of Normandy are a capital race for hard work and scanty fare. Have never elsewhere seen such horses at the collar. Under the diligence, post-carriage, or cumbrous cabriolet, or on the farm, they are enduring and energetic beyond description. With their necks cut to the bone they flinch not. They keep their condition when other horses die of neglect and hard treatment." The superiority of French stallions for crossing on the common mares of America is established. This fact has caused the development of the largest importing and breeding establishment in the world, M. W. Dunham, of Wayne, Ill., having imported and bred nearly 1,000 and has now on hand some 400.

We know of many well-to-do farmers, inen who have well-stocked farms, who do not slaughter a sheep during a twelvemonth, yet who kill a pig every month in the summer season and in the fall "put down" pork enough to last every other month during the year. This is a nation of meat eaters, but it confines itself too exclusively to pork and beef. It is better to sandwich in a little more mutton. A few sheep for family consumption, even when they are not kept for sale or for wool, will be found a most excellent investment on all farms.

Plenty of clean water is essential to all fattening animals, sheep no less than others. The idea that eating snow is sufficient should never be tolerated. A large portion of the bodies of all animals is water, and unless it is supplied the constant waste by evaporation will cause loss. As sheep become fattened, fat takes the place of water, and sheep will not drink so much, but what little they do need is as important as if it was more Fifty sheep will empty a five-pail tub daily if allowed to run to it. The water should be placed under shelter so that sheep can get it in stormy weather without exposure. Sheep will endure severe cold if kept dry; but exposure to storms, either rain or snow, is very hurtful. The water remains in the wool and in an atmosphere little, if any, above freezing, it chills the body a long time. It is for this reason that an open winter is generally unfavorable for feeding sheep. If kept housed they are too warm, their appetite fails and they lose flesh no matter how fed The coarse-woolled sheep are more impatient of wet than the fine-woolled, the heavy oily gum on the wool of the latter keeping the water from penetrating to the skin. The mutton of a well-fed sheep of every breed, from the Downs and shires down to the little woo ed Saxony, is palatable and healthful. None of the objections urged against the use of pork can be brought against that of mutton. It never has been known to impart scrofu a, trichinæ or tape worms to the consumers. The sheep does not thrive in the mire nor does it consume garbage or vermin, or decaying meats or vegetables. It does not wallow in the trough it feeds from; but it is a dainty and a careful feeder, and as cleanly as needs be in its habits. Mutton is more easily and cheaply produced than beef, is just as nutritious, and may be served in as great a variety of forms. As a steady food it is far superior to poultry and costs no more.

Breeders have frequently found some difficulty in marking pedigree cattle, and in the absence of any reliable method, experiments have been conducted by the Rev. John Gillespie of Mouswald, editor of the Galloway Herd-book, and Mr. Cranston, Holestane. They recommend the tattooing of numbers or letters, or both, inside the ear of the animal at the part where there is almost no hair. This is done with a tattooing machine, by which any number from 1 to 9,999 can be clearly and permanently marked on the ear specified. The numbers are formed by very small lancet-like points. The figures are easily fastened in the machine. This is applied to the ear, and after the incisions have been made, Indian or other permanent ink is rubbed into the wound. After these are healed over, the numbers are plain and legible.

Montreal papers report a fair demand for desirable horses on American as well as on local account. A number of American buyers are still in the market, but they claim it is difficult to secure the quality of animals desired. Sales were reported to day at the College Street Market of three horses at \$395 and one for \$112. Uther sales were reported of a fine carriage mare, six years old, standing 16 hands, and weighing 1,200 pounds, for \$200, a black mare for \$1.0, and two common workers for \$60 and \$75 respectively.

Wm. Rolph, of Glen Rouge Farm, Markham, Ont., reports the following sales: To A. M. Mc-Lean Howard, Toronto, "Rioter's Beauty", "Rioter's Sylvie", and "Sovereign Lady." These three beautiful heifers are deeply related to Eurotos, that made 778 lbs of butter in one year. "Lady Frankland" to W. B. Heward, Toronto, one of the handsomest Jersey cows I have yet seen, and a good butter cow. The bull "Lorne", also a bull calf to Hon. D. Reesor, Rosedale, and the following cows and heifers to same : "Minette", "Moss Rose", "Impt Beauty" and "Impt. Favorite", all good ones. Heifer calf, "Helen Rex", combining the celebrated Rex and Rioter blood, also a Rioter bull calf. To Mr. Clure, Brampton, the young bull, "Champion", whose dam gave twenty quarts of rich milk with second calf. He finds the demand for good Jerseys on the increase in Canada, and is satisfied that the more they become known the greater the demand will be.

(Continued on page 6.4.)

Notices.

CORRECTION.—On page 44 of this issue, first line of "Fort Qu'Appelle," for "left-hand" read right-hand.

Ellwanger & Barry, Rochester, N. Y., Descriptive Catalogue of ornamental trees, shrubs, hardy perennial plants, new revised edition, with a beautiful colored frontispiece of *Weigela candida*. The pamphlet containe a condensed and clear description of all the mot t desirable hardy ornamental trees and shrubs, together with valuable directions for planting, pruning, and general treatment of them. Our readers will find Messrs. Ellwanger & Barry most reliable men.

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James I. Davidson, of Balsam, whose card we insert, has been an inspector and breeder of Cruickshank cattle for the last eleven years. Mr. Cruickshank's herd is one of the oldest in the United Kingdom. The herd having been commenced in 1838, and the various tribes which are now at Sittyton, are those which, after the experience of many years, having been retained on account of their practical usefulness.

A detailed statement in the Banffshire Journal says that during last year 434 pedigreed Polled-Angus and Aberdeen cattle were sold at auction for the gross sum of £24,171 10s 2d, the average being £55 13s 10½d, or say \$270; the increase in value is reckoned at $77\frac{1}{2}$ per cent. over 1881.

It is quite evident the "Duchess" family of Shorthorns are appreciated in Australia, as the "Duchess" bull "Eighth Duke of Frequenter" has recently changed hands for about \$21,000 (over 4,000 guineas). Not since the York Mills sale in the States and Lord Dunmore's sale in England has such a price been realized for one of the family. Ho! FOR THE WEST.—The Ontario and Qu'Appelle Land Company have decided to place upon the market over 250,000 acres of rich and fertile land in the Qu'Appelle District of the N. W. Territory. The terms are reasonable, and the district in which the land lies is one of the most favored in all that great territory. It is plentifully watered; has a favorable climate, and is intersected by the Canadian Pacific Railway, with daily trains each way, as well as the navigable water of the Qu'Appelle River. The time from Toronto is only 76 hours, by rail. This is one of the finest wheat sections in the world, and no more opportune chance to purchase land will occur to settlers going in this spring.—COM.

SUGAR CANE.—The Department of Agriculture has received at Winnipeg a beautiful sample of syrup from a sugar-cane raised in the Province. It was raised by Mr. William Clendenning, and was shown at the annual exhibition of the North Dufferin Agricultural Society at Carman City.

The Simcoe Poultry, Dog and Pet Stock Association have announced their first exhibition for the 14th, 15th and 16th of February-

A few of our subscribers are still in arrear for 1882. "He who gives quickly, gives twice," almost applies to prompt paying subscribers. Some, we know, are trying for our premiums, and the rest will only need this hint.

February, 1883

The Bousehold.

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Home Training.

How shall it be conducted? The first, an indispensable requirement, is to obtain the confidence and love of our children. Then they are ready to receive our teachings, and the mind becomes in-delibly impressed with the truths furnished. We must be the companions of our children-their every-day associates. Nov let it be remembered that we rarely make our children better than we are ourselves. Our example is constantly before them, and they are ready imitators. Then, by example, as well as by precept, we should teach selfgovernment ; not to yield to evil passions, not to speak evil of others, but to bear their faults with patience and forgiveness. Honesty should be daily impressed. It is an indispensable quality to success in any pursuit. The young are very apt not to see this at once, hence the greater necessity to show them clearly that a single dishonest act may effectually debar them from a lucra tive employment that would have made their fortunes. In buying and selling, nothing adds more to success than a character for honesty. To know from the character of the vendor that the article is just what it is represented, and just what is wanted, goes far toward obtaining a purchaser and a good price. The honest man has a decided advantage over the dishonest one in the market. Honesty has become the rarest quality of the present time. Talent is abundant, capacity for business is not wanting, but honesty is a rare article, and is of priceless value. The government is in want of honest officials. Corporations of every kind-banks, railroads, manufacturers, merchants, and farmers-every business is seeking her honest employes, and they are almost of priceless value. Temperance must be taught with ceaseless care. Precept and example must be combined to secure success. Intemperance is a sure destroyer. Itsodium must be presented in the strongest light day by day. This vice is very often innocently intro duced by the use of what is supposed to be health restoring bitters, or other medicines ; too frequent ly by physicians, some of whom recommend it for all diseases, and we innocently acquiesce, until the demon has its sure clutches upon us. But we by no means propose an enumeration of all the vices and a means of meeting them. The above have been alluded to on account of their enormity and their too general prevalence. But we may, we trust, be permitted to allude to some general means of protection against all vices, and at the same time act as strong inducements to a virtuous life We have already stated that the most important part of one's education was that obtained at home, and I here add that home is the greatest security against vice. How shall we, then, be made keep-ers at home? Home must be made attractive. There should be neatness in all its arrangements, as well as convenience in its fixtures. Cleanliness in the dwelling, and in the barns, adds greatly to the enjoyment of home. All can not have large buildings and large farms and great herds, but these are not necessary to make home attractive. Some of the most attractive spots that ber having seen were log cabins-made so by their exquisite cleanliness and the judicious surround ings of trees and flowers. One such I remember to have seen in Kansas, and another, many years ago. in our own country. These cheap elegancies are worth more than gold ; they beget a love of home where no pernicious vices have been permitted to But this is not quite sufficient. engender. Children, as has been before hinted, are not to be treated harshly, nor unduly burdened. Love in such a home should be conspicuous in every face. How can home be attractive where there is no love. Harshness and ill-nature make it repulsive. A very common error, and one that tends to render home repulsive, is the over-burdening of our children with work. They are worked all day, and at the common hours of rest there are a dozen things thought of that they are ordered to run and No rest is permitted until poor nature is do. exhausted, and is willing at last to accept any other place than home, where rest may be obtained.

their paper; and nothing is more instructive than well selected papers. I know a farmer with a dozen children, and he averages about fourteen papers a week. This is no extravagance. No money is laid out so profitably. These so com-pletely occupy the attention that there is little de sire for company. And if the papers are wisely selected, they are imparting the most useful lesselected, they are imparting the most useful tes-sons in history, biography, morals, and religion, besides the current events of the day. But this is not enough. Books should be added—history, biography, etc., etc. But I am alarming some. Perhaps this is thought too much ; that it is extravagance. Too much cannot be done to educate and elevate our children. They are truly all we have that is worth anything. They are also the country's; its welfare depends upon them. These free institutions and their perpetuation is with these children that we are training. They are our country's ; they are God's.

COMPANY.

This is a great source of good or evil. If the company we permit is vicious, all other efforts will be unavailing. Carefully let us select that which, at least, is virtuous, and let it be intelligent if possible. Company is a great enjoyment to the young, and very profitable when well selected; still too much becomes a source of idleness. And just in this connection we may allude to the dress of child-They should be well and genteelly clothed ren. It is highly embarrassing to the young to be poorly clothed. Dress them well and genteelly. Still this should not be the leading thought with the young. Knowledge is worth much more. Study to appear genteel, but place the affections on higher objects-knowledge and the obligations that are owed to God and man. Industrious habits should be carefully and perseveringly taught. We have alluded to over-work, but over-indulgences are a much worse evil; it is the parent of every vice. Drunkenness, gambling, larceny and murder all come of it. Let the too indulgent parent remember it. Teach to labor and to accumulate. There is propriety in making money fairly and honestly; it is good to do so. Too great a love for money is an evil; but to accumulate by industry and fair dealing is honorable and praiseworthy. No one should be content with poverty when he has the power to remove it. It would extend our remarks much beyond the limits we have allowed ourselves to speak of that education for our children that is obtained in high schools and colleges. These will be regulated by the ability and inclination of par-But I am happy to have lived to see in this ents. delightful country of ours a school system adopted by which every child may receive a respectable education -- one that will fit him for any of the ordinary vocations of life. By a due attention to rendering home attractive, and the proper attention to home education, a very injurious practice will be greatly arrested, that is apparent with too many of our farmers' sons—the seeking of business in our towns and villages. It is quite a mistaken notion to suppose that a clerkship for a dry goods merchant, or to be a "runner" for some wholesale grocer, is more respectable and more profitable than the labor of the farm. He who has a neat cultivated farm with orchards, barns. neat ings, tasteful grounds, flocks of Leicesters and Cotswolds, Berkshires and Shorthorns, may well be envied by those who procure a precarious subsistence in city or village life; and those are within the reach of every farmer's son. There are other duties to ourselves that deserve at least a passing notice. We allude to the great and general uprising of the farmers now witnessed in almost every part of the Is it real, or is it imaginary? country. this tumult for real cause, or is it for nothing ? 15 I there is real cause, you owe it to yourselves at least to make proper inquiries to ascertain the facts. These associations being formed for the purpose of ascertaining the evils from which we suffer, and of remedying the same, differ in their organizations, but seem to aim at the same objects. --[Dr. Stevenson.

Family Oircle. A SOCIAL FAILURE.

CHAPTER I.

It is a disastrous thing for a man to be a social failure. Worse, ladies, than for one of yourselves. Hear my con-fession.

It is a disastrous thing for a man to be a social failure. Worse, ladies, than for one of yourselves. Hear my con-fession. Three years had elapsed since I, a would-be gay thing of a bachelor, started in chambers in Mayfair, and there was no more blinking the truth. Society had jilted me cruelly— indefatigably though I continued to court her. Intro-ductions, good family name, unblemished character, private means, excellent intentions, had all failed miserably to float me on the tantalising sea of pleasure, fashion, flirtation, that surged around me. The fourth May came, bringing with its spring blossoms magnificent crop of spring gaieties—but not for me, John Anstruther. Thirteen posts passed my door daily, nor left me so much as a card for a ball. I had ceased even to dream of invitations to dinner. Why was I 'dropped' thua? I bitterly inquired. Had I not invariably gone when invited, arrived pucctually, and called within forty-eight-hours? For society, ladies' society, was to me the one sweet thing that made life worth living. To dally awhile in the 'rosebud garden of girls,' deliberately select thence the queen rosebud I should prefer—such was my heart's hope quenched, my youth's ideal unconditionally denied me. My disappointment, which amounted to despair, broke out one day to my friend and fellow-lodger, Francis Barry, whose brilliant butterfly life wretched I had once inspired to emulate. The mere sight of his mirror sturg me to frenzy. It was a maze of pretty notes and cards—my Lady This, and the Hon. Mrs. That competing for his precious company at dinners, dances, fetes, water-parties and every conceivable variety of alluring entertainment. I saw names that sent a thrill to my bosom; addresses—I would have forfeited a gold ming for the right to enter those walls. 'Favofite of Fortune,'I cried enviously, 'what a "heaven is earth for a Prince Charming like you !' He is a fool who complains to a handsome and popular fel-low that he is neither one nor the other. But passionate long-ing bore down self-res

Francis twirled his black mustache, and asked with affected

ing bore down self-respect. Francis twirled his black mustache, and asked with affected surprise, 'What's wrong with you, Johnnie ? 'I should like to know,' I rejoined with grim irony. 'What-ever the cause, I'm a failure. Barry, a dismal failure, in the society to which I was born. If I were a convict, or an idiot, or deformed, they couldn't give me up more unreservedly. Compare our lots (pointing eloquently to the mantel-shelf). 'Yet you are not, like myself, a Government Office young man? Are not our families on a par?' I spoke generously, for my father was colonel of a crack cavalry corps, Barry's but an officer of marines. 'Rank's not everything now-a-days,' he reminded me. 'All depends on - circumstances,' leaning lis tall spare figure back against the chimneypiece, his black hair and provokingly good features displayed in a becoming frame of invitations to dinner. Circumstances? Ha, ha! He sang like a bird, did Barry; acted like Charles Matthews rediving: and decorated any room he was in. I could not sing, stammered intermittently in my talk, and spoilt the only farce I ever played in by speaking my part-Dinner is on the table'-in an inaudible voice. My shyness, intensified by repeated rebuffs, was like a demoniacal possession that seized me when in company. I never opened my lips now but to say the wrong thing-never made a step without stumbling, or treading on some one's best gown. 'You look ready to cut your throat,' remarked Barry,

"You look ready to cut your throat,' remarked Barry, laughing—the villain ! 'I am. Other fellows would fall back on low company.

'1 am. Other fellows would fall back on low company. I shan't do that; but I'm tired to death of my own.' 'Take my advice,' he said. 'Cut Vanity Fair. Try the opposition shop—the ladies of intellect and learning, the camp of the Amazons, the emancipated. Don't make faces. I knew a man much in your predicament last year, who now enjoys the reputation of a lady-killer among the sister-hood.' 'The shricking sisterhood of suffrageous spinsters,' I broke in savagely. 'They will put up with blockheads like me because the fellows like you detest them.' 'Oh, I'm told they've crowds of pretty and charming women among them now, and that shy fellows like you get

AMUSEMENTS.

Children need amusements. "All work and no play makes Jack a dull boy." Nothing is more amusing to children, and especially those who are compelled to labor a great part of the day, than well selected newspapers. Each child should have its own paper ; and it is astonishing how anxiously they await the time each week for the arrival of

Conversation is the daughter of reasoning, the mother of knowledge, the breath of the soul, the commerce of hearts, the bond of friendship, the nourishment of content, and the occupation of men of wit.

A Philadelphia boy was asked if he ever prayed in church, and answered :

"Oh, I always say a prayer like the rest do, just before the sermon begins.

"Indeed," responded the querist. "What prayer do you say ?

"Now I lay me down to sleep."

women among them now, and that shy fellows like you got on there like a house on irre,' he pursued, chaffing on heart-lessly. 'Her's the very thing for you-a ticket Lady Gay has sent for the *conversazione* of the Ladies' Athenaum to-night at the Cassandra Rooms, with a note-'1 have promised to scatter these cards. Help me, if you have any old frumps of friends...to send to the Cassandra Rooms Don't forget that you dine with me at 8. The Duchess has promised,'etc. 'Well,' tossing me the card, 'how about Cassandra? Won't you go and see the land?' 'Confound Cassandra and her club.'' I exclaimed, striding out in a rage, and I heard the scoundrol laughing behind me.

you go and see the land? 'Confound Cassandra and her club '! I exclaimed, striding out in a rage, and I heard the scoundrol laughing behind me. That night, inishing my solitary chop at the club, I had a vision. I saw Francis Barry dining with a duchess, charming her with his empty talk, peeling a peach for her. My brow burned. As I drew out my handkerchief, a card fell on the floor. I read 'Cassandra Rooms_Ladies' Athenæum.' I had pocketed the hated thing unawares in my distraction. 'I'll go,'I said madly. 'If I stay here, I shall cut my throat in good earnest.' I entered the Cassandra Rooms, my mind made up for a bad dream of plain women with cropped hair, neutral attire, and spectacles. But there was a lion in the path to be faced first, namely a lady by the door doing the honors. She glanced at my ticket—I had filled in my name—then at me. Wretched experience has made me morbidly acute to the 'first impression' I make. Was it possible that this, for once, was not unfavorable? I felt a strange soothing sensa-tion. And she was not so uncomely a matron, and rather well dressed.

well dressed.

well dressed. 'You are a stranger here, I think, Mr. Anstruther?, she said kindly, but with no exasperating pity. 'Let me intro-duce you to our socretary, Miss Priscilla Hale.' Introductions are my moments of supromest anguish. My stammer comes on, my brain evaporates. I rack the ro-mains of it, but no words or ideas will come. A film crossed my eyes. Then a loud cheerful voice said, 'Are you in favour of ladies' clubs?' in a braoing tone, that somehow gave me nerve to articulate intelligibly. 'I call that a question for the ladies. What are your views, Miss--'

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THE FARMER'S ADVOCATE.

Confusion! There—I'd forgotten her name! ' Priscilla Hale,' she replied calmly. 'Well, I hold that f our clubs mostly fail it is because they are too mixed. Put butterflies with bees, they will fight. The Ladies' Athe-næum admits workers only. This brilliant assemblage' (I stared) 'is an auspicious inauguration. Oh, you're quite among the blue-stockings to-night, Mr. Anstruther. Shall we walk round? I can tell you who's who and what's what, if you care to know.' I did not object—I never can. Were a lady to say to me, 'Shall we jump out of the window? I should acquiesce. As we paced the rooms she made good her word, and proved besides a most amusing cicerone. 'That angel-faced, golden-haired creature is Mrs. Hallard, the grand bulwark of female suffrage. The fat little old per-son, whose gray hair is coming down, is "Zephyrine," who writes such passionate romances. The pretty girl behind us is Janie Somers, a great Greek scholar, and the translator of ''Agamemnon." Those glass cases contain a collection of fly-ing dragons, fossil fungi, and a gold beetle from Yucatan said to attain a fabulous age. Here comes Professor Omnium, who is going to lecture ns upon them by and by

to attain a fabulous age. Here comes Professor Omnium, who is going to lecture us upon them by and by.

who is going to lecture us upon them by and by. Here was my partner dancing gentlemen, so to speak, piloting, protecting, instructing, entertaining me. I ex-perienced a beneficial effect. My self-consciousness, my worst enemy, relaxed, and I began to 'take notice' By Heaven, there was no lack of young and pretty girl-faces, and the men present were not of Barry's superclibous s amp. I hazarded a remark, then a joke or two—jewels that I grudged to Miss Hale, a stout spinster of 45, which was base ingrati-tude to this sister of mercy who first drew me out. I was answering her with a fluency I could not account for, when, half-way in a sentence, I broke off, coming to a dead stop. In answer to her look of inquiry, I faltered out: 'Miss Hale, who is the lady at the door?'

Dr. Victoria Vivian, the very best authority on diseases of

the brain.' 'And the lady shaking hands with her—she who introduced us?' 'Lady Crookshanks, president of the Ladies' Athenaeum

[•] Lady Crooksmanks, presented to an end of the committee.' [•] Who is she now crossing the room ? This was a girl just come in, whose face fascinated my graze, lover, helpless lover, of brilliant beauty that I am ! Her finely-shaped head, exquisite features in a frame of curiously-cut brown hair, and her large earnest eyes, thrilled me with a never yet experienced admiration. Miss Hale geplied simply:

a here is a simply:
a 'That is Beatrice Arne.'
b 'Arne? I knew the name—fashionable friends of Barry's.
c 'What is she doing here?' I ashed inadvertently.

Miss Hale stared. 'Ah,' she said, 'then you know about her, and how her family disapprove of her devotion to science. They want to make a professional beauty of her, but she won't hear of it. See Professor Omnium rush up to her. She is his pet pupil and private secretary. Now she has come he will read his paper on the "Ancestral Ant. But suppose we go to the re-freshment-room for a cup of tea instead ? I acquiesced, though I was longing to stay and watch Beatrice Arne.

I acquiesced, though I was longing to stay and watch Beatrice Arne. We found the refreshment room empty—the tea cleared away, the ice just come in. I supplied Miss Hale, and, at her bidding, myself. At the first mouthful I barely restrained an interjection. Trembling I watched her; for I knew if she ate hers, I should not dare to hint at anything amiss with mine. I should swallow the nauseous compound. 'Good Heavens?' To my relief she laid down her spoon. 'What is this? Salt?' Exactly. Owing to accident or negligence in the freezing

'What is this? Salt !' Exactly. Owing to accident or negligence in the freezing process the sweetstuff had been sent up saturated with brine. 'Horrible!' she pursued. 'Take it away! But,' with sud-den consternation, 'it is our staple refreshment to-night. The soire is ruined. It will be all over London to-morrow that the Ladies' Athenaeum gives salted ices! Our enemies will make us the laughing-stock of society. It might be fatal to the club at its birth.' to the club at its birth.

⁴ Can I do nothing? I stammered, touched by her distress. ⁴ You can save us. Jump into a hansom—Graves', the con-fectioner's, is not far. Be back with a fresh supply of ice in a quarter of an hour, before the Professor has done. Then no one need ever know.

one need ever know. It was years since a lady had appealed to me, or given me a chance of distinguishing myself. Now if I can't originate, I can obey. In five minutes I was at the shop. An ice-man was just leaving with a supply for a ball. By an inspiration worthy of Francis Barry, I bribed him to take his load to the Cassandra Rooms by mistake. We arrived just as they were applauding the Professor up stairs. Miss Hale, white with suspense, was on the look out. At the sight of the ice-tins her face beamed. I was breathless, my tie untied, my boots splashed, my hair awry; but she shook both my hands, say-ng warmly, ng warmly, 'Thanks, a thousand times !'

their dressmakers' bills, claim the notice, consideration and devotion of sensible men? A world where a shy, timid, modest and unassuming young gentleman like me is not inmodest and unassuming young gentleman like me is not in-stantly lynched—nay, in which his diffidence counts rather for than against him—and where my *debut* had not been a complete *faseo*. And to this world belonged the loveliest girl I had ever seen belonged Booting Amed

belonged Beatrice Arne

—belonged Beatrice Arne ! We me—'twas in a school lent to the society for their lec-tures. Deal benches, glaring gas-jets, and some thirty sclemn looking Field Naturalists' faces constituted the *mis en scene*. I thought, with a pang, of the maze of fair smiling counten-ances, the flutter, dance-music and flower-scents of the intoxiances, the inter, dance-infusic and nower-scents of the intext-cating atmosphere where the London man seeks his ideal. On the other hand, none of these people seemed thinking of at-tracting notice, or of cutting up their neighbors. Attention was monopolized by certain mysterious objects on the table— powerful microscopes, said Miss Hale, under which were the compound eye of a snall and the pro-leg of a caterpillar.

compound eye of a snail and the pro-leg of a caterpillar. Suddenly Beatrice Arne, like a blaze of beauty, entered the room. She took her place in front of mine. My evil genius was on me now. I fidgeted till the bench creaked, my um-brella dropped on the floor with a loud noise, at which the Field Naturalists frowned; for the lecturer had just begun to enlighten us on the interesting subject of 'Snails and Slugs.' He was a young man with angular features and carroty hair. Beatrice's limpid eyes were fixed on him with an ardent ex-pression that would have transported me to the skies. He was short-sighted, and his mind's eve was intent on his slugs. By and by a snail inside a glass eylinder was handed round, that we might admire its wonderful method of locomotion—passed from Beatrice's firm white hand to my nervous fingers.

from Beatrice's firm white hand to my nervous fingers. 'Beautiful !' she murmured, looking earnestly at me. 'Oh, beautiful !' I responded—she would think I meant the

[']Oh, beautiful!' I responded—she would think I meant the snail. Of the lecture I heard no more. I thought of a thousand brilliant things to say to Miss Hale for Miss Arne to overhear, of various ingenious ways of approaching the latter, and was far ahead in my imaginary courtship, when continuous ap-plause announced that the lecture was over. Now was my opportunity': for Miss Hale and Beatrice were talking to-gether. And I shrank away and turned my back, and pre-tended to be studying the illuminated texts on the wall. When I mustered courage to look round, Beatrice was gone. Miss Hale, who was returning to her home at Richmond, asked me-to walk with her to the station. En route she rai-lied me playfully at my evident admiration in a certain quarter.

quarter. 'Am I the first,' I asked mournfully, 'to discover her ex

'Am I the first,' I asked mournfully, 'to discover her ex-traordinary beauty?' 'By no means. All the professors at X—College adore her; they say it is for her devotion to science, and the imaginative mind she brings to bear on the subject; but I think the eyes she brings have also some part in it. However, Miss Arne is charming in every respect. Why did you run away? I would have introduced you.' 'Heaven forefend 'I cricel- energetically. 'Fly what you admire, is the wisest maxim for a wretch like me. Oh, Miss Hale, if you only knew!'

admire, is the wisest maxim for a wretch like me. Oh, Miss Hale, if you only knew !' 'Tell me,' she suggested; and I told her all—my sad social history, my aspirations, and my woes, culminating in this monstrous malady of self-mistrust that clung like the gar-ment of Nessus. Doomed to be ridiculed depreciated, left out—and all for a luckless manner—to see the most idiotic Adonises, the most worthless sons of Mars, preferred before me. Miss Hale seemed to consider my modesty excessive me. Miss Hale seemed to consider my modesty exce

Then she remarked pertinently, 'Neither Adonis nor Mars could have any start with Miss Arne. They could have no sympathy with her favorite scien-tific studies.' 'Nor I: they were omitted in my education,' said I in a

ful way. 'It is not shyness that hinders you from removing that bar-

¹ It is not shyness that hinders you from removing that bar-rier,' she said. A hint. If I could not lead a cotillion, act in a comedy, or sing sentimental songs, had I not other qualities a faire valoir? Next day I sent for a bushel of books—Darwin, Huxley, Wallace: all the newest and best works on science henceforth peopled my shelves. Novels and plays were ruth-lessly ejected. I buried myself in the 'ologies, forsook theatres, paid no calls, forgot the way to the Park. The Museum became my lounge, the Royal Institution my Hur-lingham. It is incredible the rapid progress you can make even with a serious study if you give your mind to it. In Miss Hale I found my first lady friend, and under her wing stepped into new circles, where I took a fresh departure in Iadies' society. She was a fady of good family, whom neces-sity had compelled to spend her youth in teaching "Later a small inheritance had set her free to devote her middle age to her ruling passion for astronomy. She had a snug little singli inheritance has been her youth in teaching "Latter a singli inheritance has been free to devote her middle age to her ruling passion for astronomy. She had a snug little house at Richmond, where she gave snug little dinners, and kept two large telescopes on the lawn, where she spent the summer nights sweeping for stars and calculating nebula. She was kindness itself to me; and here, in the company of Dr. Victoria Vivian, Mrs. Haller, and others, new social possi-bilities in myself were revealed to me. I felt I was getting on; I stammered less, nearly got rid of a nervous twitch in my eye. I found out that my forehead had good points, and took care to display them; carried myself upright, and ven-tured again to look people in the face. Beatrice I only saw at the society's lectures, where I held aloof, and solemnly forbade Miss Hale to introduce me. Meantime, what a mercy not to think of her as twirling round a ball-room in Barry's arms, a gazing-stock for supercilious fops! If she was looking lovingly at anything, it was at the lineaments of an innocent lizard or some exquisite gem of a spider; if leaning on any one's arm, that of some wizen-faced professor, full of wisdom and years. and years. One lecture-night the lecturer made a grave mistake, as ecturers do sometimes, which passed unnoticed, as mistakes ill, by the best-read audiences. He called the mistletoe a perfect parasite, the dodder an imperfect one. It electrified me. Like a schoolboy before an examination. I had all my little knowledge at my fingers' ends. At the end of the lec-ture I ventured to rise, and respectfully ask what he meant. Did not the mistletoe, by means of its own leaves, supply it-self with carbon, while the leafless dodder sucked the sustensen with caroon, while the leafless foodder sucked the susten-ance for its flowers from the plant it clung to, and always killed? Sure of my ground, I spoke fuently, and elicited ap-plause. The lecturer courteously admitted his error—a slip of the tongue, of memory. I saw at least a dozen ladies beholding me with respect and interest. Several members addressed questions and observations to me. I answered readily, and finally felt two dark-blue eyes fixed on me in eloquent approval.

Such a favorable moment had never in my life 'turned up before. But, with all my newly-acquired aplomb, I was diff-dent now, and dumb, till her low grave voice said, 'Are you going to Epping with us on Friday?' 'Us,' was the Field Naturalists. The excursion was to be headed by Professor Omnium, who would hold extempore lectures on common wayside objects. 'That I am.' I returned promptly ; and there our conversa-tion ended. I went home, and dreamt of Friday next. It was the Eton and Harrow match-day at Lord's. Barry had his choice of six drags to lunch on. 'Coming, old fellow?' he drawled, meeting me on the stairs.

stairs.

'Engaged,' said I. 'Eh?' incredulously.

'Eh?' incredulously.
'To 'Epping Forest'
'Epping fiddlesicks! Are you mad?'
'As an hatter,' I returned, tripping past him downstairs, Barry casting a mystified stare after the butterfly-net and collector's box I carried with me.
For I had become an ardent student. Once enter 'the fairyland of science,' once dip into the mysteries of 'Life and its children,' from whatever motive, and you will soon grow as sincere an enthusiast as the veriest beetle-maniac and fungus-fanatic, as rapt and absorbed in their speculations as any poet or lover of the universe.
A score of us field naturalists met at the station. A num-ber of ladies crowded round me, cager to learn the result of cer-

as sincere an entrusisat as the veriest beetie-manae and fungus-fanatic, as rapt and absorbed in their speculations as any poet or lover of the universe. A score of us field naturalists met at the station. A number of ladies crowded round me, eager to learn the result of certain experiments they knew me to have been lately trying with ants. I suspected Sir John Lubbock of underrating the colorsense of these insects, and whilst testing it in novel ways, had made some interesting observations which I managed to impart to my fair hearers with lucidity, though Beatrice was listening. An advance. Only I dispaired of ever venturing to accost her; my social accomplishments, after all, fell short of a great occasion. Crumbs of comfort there were. Among the gentlemen of onr party was a young barrister. I had met long ago in 'society.' He was in love with 'a sweet girl-graduate, studying for her natural-science examination, who was one of those most clamorous to hear about my recent investigations. He looked at me so jealously that I could have hugged him. No one had ever looked jealously at me before. The more he scowled the lighter my spirits. I never dreamed of trifling with him *innanorala*. I am no flirt. But what a relief to my strong sense of instice to be no longer doing myself an injustice, everlastingly, as of yore ! You are changed, Johnny Anstruther, you are changed. Why, how, was a mystery; the fact was patent. In the general conversation that followed I took my full share. Our talk, reader, was not of the Grosvenor, the French play, the last ball, or bit of luby gossip, but of light, heat and magnetism, electricity, organic germs, atoms, molecules, comets and skies. I won't say no flirtation went on; but Beatrice had no part nor. lot in this, and my most dangerous rival was certainly Professor Mad succes sively lectured us on a Dead Nettle, a Newt, Cockchafers, and the Skelton of a Crow. We then got scattered, and vance ensouted resolutely from assisting her, merely waiting ready to rescue her if she sho

spider's nest? 'Where, where ?' Springing up, she came eagerly to look. I had to hold her hand to keep her from falling as she leaned over to scrutinize the silken coccoon under water I had been so fortunate to dis-cover. Only last night I had been reading up 'spiders,' and I had quite a little lecture (which I took care to spin out) ready on my tongue about this curious insect that builds its 'nest in the water and hering down supplies of all from the curies. the water, and brings down supplies of air from the surface in bubbles with its hind-legs, illustrating the principle of the diving-bell. And as we stand thus, hand in hand. I had a vis ion of Lord's. I saw Francis Barry flitting from drag to drag, smiled on by all the greatest beauties in London (all but one), and felt that not for worlds would I stand in his shoes.

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I thought her beautiful for a moment. Now the company came trooping down-stairs. The ice was ready for them. The beauty came with the rest, on the old Professor's arm, thank heaven, not a Barry's. He was talking to her earnestly, but all about the physiology of the nervous system of the cray-fish. I kept apart, a prey to a return of despondency, and should have slipped away, but Miss Hale detained me. 'Pray, don't go. I must speak to you when the soiree is over. So I waited till all had dispersed but Miss Hale and the lady president who had introduced me as the existing of the

over. So I waited till all had dispersed but Miss Hale and the lady president, who had introduced me as the saviour of the evening, with a lively account of the mishap I had helped to avert. Hope revived had worked miracles on me that night; but a reaction had now set in I felt myself under criticism, and shook with a palsy of nervous awkwardness. I held on like grim death to a chair with one hand, clutching with the other at some papers on the table. I fumbled at one, and pored over it so fondly that Miss Hale imagined I was interested in its contents. and said : its contents, and said :

"Would you be inclined to join? The subscription is only

I awoke to the fact that I was perusing the prospectus of the Field Naturalists' Scientific Association and their periodi callecture meetings. The list of members was alphabetica

There is a lecture to morrow night, said Miss Hale. 'I can introduce you as a friend, and you can judge if you oare to become a member.'

care to become a member.⁴ I accepted with alacrity, and withdraw. I felt like a coun-try after the shock of a revolution, like Columbus on sighting a new world. Was there then a world, new to me, outside the world of spoilt beauties, over-dressed dolls, and flippant coquettes, who, without having done anything all their lives but smile and look pretty, and ruin their male relatives by

eloquent approval. 'Now, Mr. Anstruther,' said Miss Hale,' I really must in troduce you to Miss Arue.'

"How much you know? said Beatrice, gravely. Profes-r Omnium himself could not have explained it more Professor clearly

Solution of the second state of the second of the second state of the second

beetle, the monster horns, and the spotted rosechafers filling

beetle, the monster horns, and the spotted rosecnaters ming the air with the hum of their wings. Then we came back to our English pond, and the dragou-flies darting over its surface. 'Look there,' whispered Beatrice, pointing to a leaf farout, whereon lay a chrysalis, whence the lovely-winged insect was just going to emerge. 'You would like to watch it,' I said, and vowed to secure it,

ud and wet notwithstanding. I did so, and her glance of ¹⁰ attude rewarded me for the ruin of my best clothes. ²⁷ Women of the world, 'though you rush through fire and ater for them, will haugh at you the next minute, if you have

ater for them, will haugh at you the next minute, if you have wot your hat battered, your hair singed or your coat splashed gn the ordeal. Not so Beatrice Arnie. I We bent over the plant I had plucked. The 'demoiselig crept out of its sheath slowly; then, clinging to the stalk, drank in the sunlight with its wings, spread them, and flitted away, leaving us the husk on the leaf.

Our eyes met and we laughed irrelevantly; then remarked relevantly how different it is to read of a thing and to see it, and how only when seen it becomes a reality. "What are you doing, you two? cried the voice of Miss Hale from afar, 'Here is the Professor delivering a delightful ad-dress on the 'Transformations of Tadpoles.' You will lose it all if you don't make haste' 'Let us go' said Beatries emiling divinely.

Let us go,' said Beatrice, smiling divinely. And I followed in her steps.

II.

For months Barry and I had not met, except on the stairs. One night, at a brilliant soiree at old Lord Crookshanks', given by electric light, the scientific principle of which I was busy explaining to some ladies, we suddenly confronted each other.

"How on earth did you get here?" he asked spontaneously. 'I should rather think you had come by mistake,' I retorted;

"I should rather think you had come by mistake,' I retorted; you look so bored." "I am,' he owned." I don't know any of these people. One day he knocked at my room door. Absorbed in an ex-periment, I did not hear. I had lately taken up 'gnats,' and desirous of observing, by means of a powerful magnifier, what went on during a sting, was coaxing a mosquibo to settle on my hand. They won't when you want them to. I was just about to receive the solicited wound, when Barry's entrance put the insect to flight. "What the deuce are you doing? he asked. "What do you wan't? I said, vexed at the interruption. Sauntering carelessly forward, he stumbled over an object in the path. "Confound it, Anstruther? why do gyou keep slop-pails standing about?"

standing about ? standing about? Slop-pails !' indignantly. It was a bucket of water I kept for observing the genesis of gnats. 'Why don't you look where you tread? I returned, peering in anxiously, to see that the larva had not been disturbed. 'I wan't to know if you'll come down the river to-morrow version?

vening.' Delighted if-taking out my engagement book. 'Sorry. I dine to-morrow at Richmond It's for the cen-tenary of the discovery of the planet Uranus.' 'Wednesday, picnic at St. Albans with the Archmological.

'Wednesday, then?' 'Wednesday, picnic at St. Albans with the Archæological. Thursday afternoon, Mrs. Haller's last "At Home." Dine there and go with them to the House. Friday, to the Zoo, with a party, to see an undescribed species of cassowary just arrived Saturday, garden-party at Kew. Dine with Lady Crookshanks, and take her and her daughter to the *conver-*sations at X—College.' 'Well, upon my word!' he ejaculated. 'How about to-night?

"Well, upon my woru: no ejacutation night?" "Oh, to-night,' I blushed—a bad habit I retained—'I've a particular engagement—friends at home, as they say.' 'Lady friends? he asked banteringly. I retaliated. 'Exactly. Two from the 'opposition shop,' the 'Amaz-oas' camp'-ladie. of intellect and learning. Short hair, Barry, my boy'—Beatrice's hair was short. 'Bloomer cos-tume and spectacles.' My altered manner piqued his curi-ceity.

tume and spectacles.' My altered manner piqued his curi-osity. 'Have you been preparing your room for a reception? he asked. 'I don't know them again. What's the drawing there—where Adelina Patti's portrait used to hang? 'That's a crocodilian jaw from the Coral Rag at Weymouth. It's no use you looking for the picture of Gladiateur and Mdlle. Nadine. That, Barry, represents the inside of a star-fish; that, a fragment of bath-sponge magnified a hundred times; that, the ideal section of a praw. Don't lift that glass, it contains a live pet wasp I'm keeping under observation. If it were to sting you it would die.' 'You are a lunatic,' he said; 'I shall inform your rela-tions.'

'On the contrary. Last season I was a lunatic, pined for the world of fashion. Now I'm a philosopher, and have re-

the world of fashion. Now I'm a philosopher, and have re-nounced it, as you see.' My gaiety, alas, left him fatally inquisitive. I had let my spirits run away with me, for Beatrice had consented to come with Miss Hale and a few other friends to my room that even-ing, to see a valuable collection of leaf and stick insects, t opical beetles and spiders, made by my deceased grand-uncle in the West Indies and Malaccas, and which I had found oonsigned to the lumber-room at my parents' home as rubbish! It brought Beatrice to my roof! My guests included some eminent men, who brought a mint of information to bear on the treasures exposed. Beatrice enchanted wise and unlearned alike by her original comments, her imaginative speculations. She and Miss Hale lingered, and were the last to leave. Three minutes afterwards entered Francis Barry, dressed for a ball.

ventured to aspire to the hand of one so rarely gifted; and here was Barry, the sort of fellow to adventure anything, and carry his point

carry his point. I went to dinner at Richmond in the lowest spirits. Beatrice was not there. It was all I could do to sustain my rising reputation as an agreeable member of society. Miss Hale, struck by the languid interest I displayed in her dis-covery of a new comet, detained me, after her guests were gone, to ask what was the matter. I confessed: 'A friend of mine has seen Beatrice on the stairs, and fallen in love with her, and I am in dispair. For he is a dangerously good-looking fellow, and his name is Francis Barry.'

Barry.' 'Barry l'she repeated ; 'doesn't he sing, or something.' 'Oh, he sings, and plays, and wins, and acts, and dances, and flirts. He is accounted irresistible, and means to compete with me for Beatrice's affections. Can you wonder, Miss Hale, that I am half wild ? Why do you smile? 'I am thinking,' she said, 'how last year you described yourself as a no-account man—out of the race altogether— and now we find you on the list as a rival to one of the most brilliant figures in London society. Really, Mr. Anstruther, that ought almost to satisfy you, even should he carry off the prize in the end !

that ought almost to satisfy you, even should he carry off the prize in the end!" 'It ought, I acknowledge. Last year no wanderer in the desert was more out of sight or mind of 'society,' more shelved, than I was. Now I am *repandu*, befriended, invited, and my prospects brighten every week. Hut I have fallen in love by the way, and I feel that if Beatrice Arne accepts Francis Barry I shall be miserable for life." Miss Hale made me promise not to despair. I wrung her hand and departed. On my return home I met Barry whistling expressively on the stairs, with a look of com-placency that rendered superfluous his statement that he had contrived to see Beatrice and get introduced. Three weeks now ensued that I had looked forward to as a spell of enchantment, seeing that they held out seven distinct opportunities of meeting Beatrice Arne, beginning with a rendezvous of the Field Naturalists at the Zoo, and ending with a grand dinner at Lord Crookshank's, in honor of a famous foreign botanist on a visit to our shores. Those twenty-one days proved a period of unremitting exercise for the most Spartan qualities of my nature. When we Field Naturalists met at the gates of the Zoo, Beatrice joined us with three gaily dressed girls she intro-duced as her sisters and escorted by Rary.

the most Spartan qualities of my nature. When we Field Naturalists met at the gates of the Zoo, Beatrice joined us with three gally dressed girls she intro-duced as her sisters, and escorted by Barry. Never once did he leave her side, or relax his marked attentions. And I must bear it all, hear him pretend to be interested in the casso-wary, and provoke her to laughter by his nonsensical jests. It was small consolatation to reflect that last year I should have shrunk into the background and collapsed, whilst to-day I blazed out as a star among the rest of the ladies of the party, and created quite a sensation in the aquarium, by delivering off-hand a monograph on the Manifestations of Fear and Anger in Fishes. Barry would not allow Beatrice to listen ; he kept whispering jests to her and her sisters, to upset their gravity. Finally, when the time came to adjourn to the lecture-room, where Professor Omnium was to hold forth, Barry, to my discomfiture, announced that he and the Misses Arne meant to 'cut' the lecture 'I don't even know what it is,'I let fall hastily ; whereupon Barry read out, with malicious emphasis : 'On the Geographical Distribution of Gulls.' I passed a bad night. Next day was the garden-party at Kew. Beatrice came with Miss Hale. A blessed chance brought

Kew. Beatrice came with Miss Hale. A blessed chance brought us on the lawn at the same moment. She was charming as ever, and eager to hear about an article I had been writing on the Shapes of Leaves, and which was shortly to appear in print. To account for my indifference about it, I complained of

"Will you come to tea at home on Saturday afternoon,' she asked, 'instead of working?' My sisters and I expect some friends.'

asked, inscend of working i my discus and a super con-friends.' 'I accepted with effusion. Even as I spoke, the figure of Barry, lurking Mephistopheles like among the trees, checked my spirits and dashed my felicity. Up he came and drew Beatrice into conversation. I struck a critical attitude. listened to his brilliant superficial talk, and longing to cry out, 'Oh, Beatrice Arne, that fellow is no better than an animated puppet!' I would not stay to be shunted, but devoted myself to Lady Crookshanks and her daughters, solacing myself with dreams' of 'Beatrice's birthday. It would be my first visit to her house. I had my birthday gift ready. Hearing Beatrice express a wish to examine that marvel of brute architecture, a squir-rel's nest, I had rushed down to my home in the country.

rel's nest, I had rushed down to my home in the country, sixty miles off, to procure the desired object, and all but broken my neck in the effort to secure it intact from a fir-top. It was a splendid specimen. I arrived punctually, but Barry was beforehand with me. It was well I had brought no bouquet, as his would cer-tainly have outshone mine; well, too, I had left my little gift in the hall, as the moment was unfavourable for its bestowal. Barry engrossed Beatrice, leaving me to enter-tain her sisters, who bored me, as I may have bored them, for with one ear and a half I was straining to catch the dia-logue of the other two. By and by came a pause in our

found them yield to his flattery and persuasion? How well he is playing his game, which is to win Beatrice by storm ! He is a fellow who charms the universe at first sight. Let qualities

February. 1883

Of a Johnny Anstruther,' she put in pointedly.

I groaned, conscience stricken. 'I deserve it. Savage jealousy makes me unjust, and I am savagely jealous.'

am savagely jealous." Ascot week began. Absence, under the circumstances, was torture. To drown thought I went incessan!ly into society. Excitement stimulated my newly-developed social faculties, and I had to defend myself against the flattering attentions of assthetic heroines and sprightly Girtonians. I spent after-noons reading Greek poetry with Miss Janie Somers, and translated a love-song of hers into Latin. I fear I flirted shamefully with pretty Mrs. Haller, whom young ladies, as a rule, did not like, and thought too advanced. My social suc-cess was becoming too emphatic and with it my misery of was becoming too emphatic, and with it my misery

soul. The third week was one of despair. Beatrice had returned The third week was one of despair. Beatrice had returned home radiant. We met at two or three soirces, Barry in-variably at her elbow. A coldness had arisen between Miss Arnc and me. I was steeling my mind for what was impend-ing. Hollow for consolation proved the blandishments showered upon me by an increasing number of fair acquain-tances. Mothers with daughters had now discovered I was me divible neutrinoit of the source of th showered upon me by an increasing number of fair acquain-tances. Mothers with daughters had now discovered I was an eligible parti, and I had invitations to country houses to last me all through the summer. I scarcely looked forward beyond the dinner at Lord Crookshank's, in honor of the il-lustrions French savant, where, perhaps for the last time this season, I should meet Beatrice Arne. It was a brilliant affair; to conclude with a large evening party, at which Royalty, it was whispered, would be represented. But the compliment of the invitation was spoilt for me, since Barry, Heaven knows only how, had contrived to get invited too. 'Que Diable allait'il faire dans cette galere'' I muttered beforehand. I was answered when I came in, and saw him standing by her side with the complacent look of an ac-cepted lover. Little he wrecked of the distinguished scien-tine guest, treating him with the patronizing amiability which young sparks of his school disp'ay to the greatest worthies of art anter literature, if less polished than themselves. It was Barry, of course, who sat by Beatrice at dinner. I was opposite with Mrs. Haller; and whits pretending to devote myself to my fair neighbor, had the full benefit of his in-sinuating conversation. My triumph, which came on after the ladies left the room.

myself to my fair neighbor, had the full benefit of his in-sinuating conversation. My triumph, which came on after the ladies left the room, I found insipid as Beatrice was not there to behold it The illustrious stranger desired to be introduced to me. He had seen my paper on the 'Shapes of Leaves,' and had been pleased with it. He kept me in conversation then and in the drawing-room, talked while Barry was singing (which I did not mind), talked on and on. Here was Johnny Anstru-ther monopolizing the lion's attention, the envied of all observers' I twould have been delightful at any other time; but I had seen Barry, with Beatrice on his arm, wander into the pam-house; the garden was thrown open, and I was fiercely impatient to go wandering there after them. At last I was released. Several charming eyes were raised to mine encouragingly. I cursed my ambition, cursed uny fas-tidiousness, that drove me to turn away, regardlessly, to see if Barry and Beatrice ware in the palm-house still. They were, and alone Beatrice was they. Barry stood by her side, bending down to speak, and looking so much more serious than usual that I needed not to play spy on him another moment. I hurried into the garden, where it took me a quarter of an hour to recover my senses. My determi-nation was take no not the spot—to cut my country engage-ments and leave Europe for a time. Feeling calmer, I then went indoors to take leave of my hosts. I passed the palm-house with a firm step, and cast a firm glance toward that bench. Beatrice had not stirred; but Barry had left her for the moment, and she was alone. Her face, turned toward me, was so beautiful, so nobly expressive, that all my bitter resentment evaporated, and I acknowledged that Barry might be a better fellow than myself—nay, that he must be, if she thought him so. Children and angels have true in-tuitions. I approached, and said with forced self-possession, 'I take this opportunity of finding you alone to wish you good-bye, Miss Arne.'

'I take this opportunity of finding you alone to wish you good-bye, Miss Arne.' 'Good-night' she said. 'You are leaving early.' 'Good-night aud good-by,'I said 'On Monday I start for

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¹¹ Isay, Anstruther, who's your friend? ⁴ Miss Priscilla Hale, assistant astronomer to Sir John Ogle, "It hought you knew the Arnes,' I said stiffly. 'Her name

is Beatrice.

'Beatrice.' 'Beatrice Arne !' he repeated, amazed. 'So, that's Beat-rice-the blue one! She never appears, you know-never goes out. Good Heavens, Anstruther, her three sisters are all considered beauties; but she leaves them nowhere.' 'Well' said I provide a function to the second second

all considered beauties; but she leaves them nowners. 'Well,'said I provokingly; 'why don't you make haste to your ball? Don't you wish to engage her for the first dance? 'Such a glorious creature as that to bury herself alive in dusty books and fossils! Hang it all ! Someone should tell her to fing all that nonsense to the devil. I've a mind to

her to fing all that honsense to the derivative and myself." "Hullo, Romeo!' said I; what's this? Love at first sight?" 'Not exactly,' he said. 'I was in love with all her sisters in rotation; but I see now it was Beatrice I had in my fancy Upon my life I never knew what blue eyes were before." 'Do you now? I inquired. 'A blue eyes as Miss Arne could tell you, is simply a turbid medium.' 'Her complexion would kill all the reigning beauties with isolongy.

'Her complexion would kill all the reighting beauties size jealousy. 'The hue being caused by the extinction of some of the solar rays by the coloring matter of the cheek, the residual color only being seen. Oh, Francis Barry, I think I see you, with that brilliant whorl of abortive common people called flowers in your buttonhole, listening whilst Professor Omnium explains how consciousness of love is associated with a right-handed motion of the molecules of the brain, of hate with a left-handed motion...'

motion of the molecules of the brain, of have when a weak handed motion—' 'i don't,'he said; but I shall call on the Arnes to-morrow.' Words that fell on me like a *douche*. Now first I precived I had ventured to hope. My best ground was a conviction that Beatrice was not in love with anyone else. But one reason for this might be that none of the swains around her

logue of the other two. By and by came a tittle-tattle. Very distinctly Barry was heard to say, in tones of entreaty

*Now you will come, won't you ?
*Well,' said Beatrice, ingenuously, 'I will.'
*Where, where ? cried the Miss Arnes and I, in a chorus of curiosity.

'To Ascot,' said Barry triumphantly; adding, for my separate benefit, 'The Miss Arnes are going down for the race-week and wiss Beatrice has graciously yielded to my sug-gestion that she should accompany them, to ascertain if it is as delightful as I tell her.'

That was a broadsider for me, as he saw. The sisters laughed, and congratulated him on his victory over the obdurate girl-student. He had the impudence to ask if he should not see me down

He had the impudence to ask if he should not see me down there. I replied I was too busy. Withal that my notes on the Shapes of Leaves were passing through the press, I had a wild notion of being true to my colors, and making Beatrice ashamed of her desertion. Nor should I have bettered my position by turning renegade, in imitation. But Barry's star was in the ascendant. I left, taking my squirrel's nest away with me, and feeling as if a great gap had sprung suddenly between Beatrice and myself. Most probably it had been there all along, and I was a fool. So the spell was broken, and Beatrice would become a professional beauty after all. My bitter feelings broke out to Miss Hale, 'Barry has not the slightest faith in women caring for any-thing serious seriously; and no wonder. When has he not

Colorado.

Colorado.' 'Colorado !' 'Sir John and Lady Ogle, Miss Hale and a few other scientific friends are making up a party to go and observe the total eclipse next month, visible from the Rocky Mountains I have decided to join.'

'Invertiend to join.'
'Isn't it a sudden plan?' she said, surprised.
'Very sudden, but not the less irrevocable for being made but five minutes ago.'
'I could not take such a sudden resolution without a strong motive,' she said naively; and I thought you did not care much for astronomy.'

"I have a strong motive,' I owned, 'and it has nothing to dowith the stars. Your friendship, Miss Arne, has made me very happy—too happy, it appears, for I feel as if I could not bear to stay and see your happiness with another.'

I kept it up as well as I could, but my voice betraved me. Looking into my eyes, Beatrice said, with the inimitable childlike gravity and impulsiveness that characterized her

Dear friend, did you think I could care for the man who

manner: (*) Dear friend, did you think I could care for the man who was here just now? (*) Everyone cares for him, I cried, stammering for the first time these three months. (*) You are mistaken, 'she said. (*) No one ever will care very much. But it does not matter—he loves himself well enough for all. (*) But he loves you, I know,' I urged excitedly. (*) Do you mean to say he has not told you so? (*) I think he was going to, 'she said archly : (*) but the Prince of Kleinstadt, whom he knows, passed by, and stern etiquette fored him to go and pay his respect. (*) Where is he now? I said, stepping into the place where I had seen him stand. (*) With the Prince. Presently he will come back to apologize.' (*) Shall 1g op i whispered significantly. (*) There's not room here for us both.' (*) Oh no,' she murmured. (*) I don't want him ever to come back now.'

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THE FARMER'S ADVOCATE.

'Beatrice,' I said, overjoyed, clasping both her hands, 'tell me you love me and will be my wife.' If a woman's first duty is obedience, Beatrice fulfilled it implicitly.

The woman's first duty is obedienos, Beatrice fulfilled it implicitly. A torrent of playful recriminations followed. I taxed her with encouraging Barry. She protested that the idea that he could be in earnest never had entered her brain till to-night—that she had not known how to shake him off, and I had never helped her. She confessed she had been jealous of Janie Summers and Mrs Haller. Why had she gone to Ascot? I asked. Why should she not go to Ascot? she retorted. Had I never been to Ascot? Were people like ourselves, who enjoyed hours in a library, never to spend hours anywhere else? Why had I not brought a single flower for her birthday? I told her about the sourrel's nest, and she made me promise to bring it next morning. Suddenly she whispered, 'Here he comes!' and I saw Barry hastening for-ward looking extremely foolish. I beat a pretended retreat, and, screened by a palm, actually escaped his notice the first moment. 'I am so sorry,' he began. 'Could not possibly leave the

moment. 'I am so sorry,' he began. 'Could not possibly leave the Prince before. He was so affable, he would not let me go. Can you forgive me? 'Oh, willingly,' she said, with a spontaniety that took him aback

aback. 'Then you will let me take you down to supper ?' he pur-

'Then you will let me take you down a service state sued. But I had stepped forward to her side, and Beatrice, sliding her arm in mine, replied with simplicity, but not without significance, 'I cannot—I am engaged.' I brought down the news to Richmond the uext day. How express my gratitude to Miss Hale? how discharge my un-speakable obligation to her, who had laid the corner-stone of my fortune? She had been the first to revive my expiring considence in myself.

Never so long as I live, will I allow a sneering word to be Never so long as I live, will I allow a sneering word to be spoken in my preserce against strong-minded women, against lady doctors, lawyers, orators, students of all sorts. I boldly affirm that their evolution has been a perfect god-send to a large proportion of mankind—diffident men like myself, whom fashionable mothers and coquetish daughters intimi-date into agonies of distrust, fostering a shyness, awkward-ness and taciturnity that might become organic and incurable. Let not such luckless society lovers despair since my ex-ample shows how the most complete social failure may some-times be redeemed. Beatrice, however, scouts the idea of any alleged natural deficiency in assurance or fluency of expression. U shyness

Beatrice, however, scouts the idea of any alleged natural deficiency in assurance or fluency of expression. Of shyness she declares she never saw a trace, and when I persist she quotes against me my proposal of marriage, which, for a shy lover, she maintains was the boldest ever made.—{London Society: Society.

Minnie May's Department.

MY DEAR NIECES :- Let us have a little talk about home. Not merely a home which so many, from force of habit, call home, but a real home. in which love and order are the predominating features. A real home does not consist alone of a fine house, with all the modern improvements, good servants, tasteful furniture, rare pictures and beautiful ornaments; these and many other attractions, pleasant to the eye and very conducive to physical comfort, assist, but never would constitute a really happy home, without those two grand qualities, love and order. Each of these qualities is beautiful, but insufficient of themselves to us all; each within the reach of the humblest as well as the highest; each a corner-stone of happiness, and forming together the very foundation of peace. Let every one who possesses a home of any sort or condition whatever, look round and observe how far it is governed by those twin sisters. Consider well if affection is the ruling principle, and punctuality the ruling practice of every day life. It is the personal interest of every individual to make his or her home the brightest, pleasantest, and most attractive spot on earth to every one near and dear to them. There should be no place like home.

man, are to a very great extent the laudable object of their ambition.

Men, as a rule, are far more impressed and influenced by order or its reverse than is generally supposed. Even when personally untidy they like neatness and regularity in oth rs. When a business man returns home evening after evening and finds everything out of place, he begins before long to feel out of place too, and seeks some more congenial atmosphere in which to spend his evenings. Disorder has driven many men to destruction, for the masculine is essentially a well regulated, methodical, systematic mind, though often an intolerant one. Man makes few allowances for the multitude of little things a woman has to see to, and of which he really knows nothing. Love, no matter how devoted, cannot without order make any home really happy, and order without love makes home into a sort of prison.

When we find merry voices, shining faces, ringing laughter, or gentle, hushed, still not suppressed enjoyment, when we find sympathy and companionship between parents and children, when we find the head of a family don his slippers and curl himself cosily up in his easy chair when he comes home from business, when we see his sons, if he has any, gathered eagerly about him, or engaged in some intellectual pursuit, when we find the fireside supply amusement enough for a winter's evening, we may rest assured that we have seen a happy home.

But how all these things are to be obtained is a serious question with many an anxious and weary mother. "Only by order and the most rigid economy of time," by good management, resolution and good humor; go right to work with a will, perform if possible the most disagreeable duties first, getting them out of the way. As a general thing, if you work all day you can afford to rest in the evening. Do not attempt to work all the time, devote a few hours to cheerful conversation, music, or some innocent amusement with your children; you will feel morally and physically better, though you may have to work extra hard the next morning to make up for it. Or if there be no children; devote yourself to your husband, study to interest, amuse, and make him happy, and your attempt will not be lost on him.

Woman must be the home-queen, for these read sons: she conforms more readily than man to circumstances of all sorts, is more observant, too, and soon reads a man's character, and understands his tastes, habits and disposition.

Now let me say a few words to the husband. Do not fail to give a little encouragement to that loving wife, by a kindly word, a pleasant speech, a cheerful or sympathetic look, a touch of the hand in the old tender fashion of the courting days, a stroking of the cheek, and the soft movement of the palm over the hair. All these some may con-sider very foolish tricks, but she alone can tell how they spur her on and brighten her many irksome duties; and they cost you nothing. Once you did not think them foolish tricks, and you were wiser then than you are now that you have dropped them. A little more courting in married life would keep married life what courtship is. The more foolish you are in these directions the happier will your home be. The above remarks are just as suitable for sons and brothers Your mother and sisters are as well able to appreciate your little attentions as a wife, and a good son or brother is sure to make a good husband. It is a very singular thing that, in all our ideas of home life, man is a very prominent feature. Women, no doubt, can get on very comfortably together; but there is a want of stimulant and energy, a sort of easy calm-pleasant, but apt to grow a little monotonous where the household is entirely composed of ladies. Let the husband, father, or brother, come but once in a week or month and his advent is regarded as an event to be looked forward to and prepared for. There is nothing in the whole world better to see than the anxious, busy, careful preparations of a loving wife or tender mother for the coming of him she loves. How many final glances are given round his room to be sure that nothing is forgotten ; how many final touches are given to her own hair or

mirror to convince herself that she is looking her very best. It is indeed good to see how she watches for his arrival, remembers all his favorite dishes, anticipates his wants, and waits upon him with a graceful air of proprietorship. This letter is just as much for my younger

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nieces as for the married ones, for they are equally important in the home, and there is no end to the ways in which you can add to the happiness of that home, if you only try, and every one of you may at some time have one of your own. Therefore, you should know how to preside over it as a good, lov-ing wife and mother. So begin early in your childhood's home to form the habits of love and order. MINNIE MAY.

Answers to Enquirers.

H. A. W.-Certainly you are entitled to compete for the prize ; your father takes the ADVO-CATE.

KITTY.-A proper trimming for a mourning dolman is tape fringe, or if preferred, folds of crape may be used.

A. V. M.—When growing hyacinths or other plants in water, should the water be changed ? No, but you may add a little more as it dries up.

J. M.-How can freckles be taken from the face ANS.-Wash the skin with buttermilk, rubbing it well in, then wash with pure soap and water, and rub with a coarse towel for five minutes. Do this every day, until the skin is clear. Or take one drachm of caustic potash, and dissolve it in one quart of water, add one ounce of pure almond oil, and shake well. Add a tablespoonful of this to some soft water, and wash the face with it. All these remedies act by dissolving the surface of the skin, and so removing the coloring pigment which causes the freckles. This exists only in the surface skins under which are two other layers. When the surface skin—the epidermis—is re-moved, it may be free from the fine freckles—and then it may not; it is only a chance.

John Perry asks :-- "Can you tell me of any dressing for clothing that will make them turn the rain ?" We know of nothing. Perhaps some of our readers can tell John of something.

E. L. W.-1. We think that to take a teaspoonful of powdered charcoal with water, half an hour before dinner, is a good prescription for those suffering from taint in the breath. 2. An inexpensive piece of jewelery like a scarf-pin would be in good taste to give an intimate gentleman friend.

MOUNTAIN ASH.—In congratulating a newly married couple, it is customary to speak to the bride first There is no need for congratulations to be given to the united family. As the bride would not wear her wrap during the ceremony, she might assume any she liked afterwards. A wedding present is usually sent with the card of the giver accompanying it.

FORGET-ME-NOT.-i. When a gentleman has specified a certain hour for the drive, the greatest politeness is shown by your being entirely ready when he calls, so that he may not be left waiting

Few persons fully realize how essential a really happy home is to man. Numbers of them find home less attractive than the stately club, exciting billiard room or insidious bar room. Having admitted that, according to theory, "be it ever so homely, there's no place like home," they immediately turn their backs upon it and seek enjoyment elsewhere.

The first and essential duties of the home devolve upon woman; she requires a patient, cheerful, energetic, hopeful, loving nature to make home happy and keep it so. There are two things to be avoided in order to please the average man, viz.: disorder, and prim inartistic formality. Women may say what they like to the contrary, but the praise, esteem, friendship, affection and love of collar; how many half-shy, half-proud peeps in the gulf of destruction.

2. Costumes of cloth or flannel should never receive elaborate decorations. Machine stitched edges or braid garnitures are in much better taste for their finishings.

SUBSCRIBER.-1. If you are so ill at ease in company, the more reason for your accepting invita-Try to forget your own presence and study tions. the ease and grace of some one of the guests, and you will soon become less embarrassed. 2. Trim your wine colored cashmere either with chenelle fringe or silk embroidery of the same shade. White kid gloves are not in good taste for either street or church wear.

Oh, that world of thought within us! That turmoil of restless activity which boils beneath the calm surface of every day life! We sit and we calm surface of every day life ! talk ; we walk and we drive ; we lie down to sleep and we rise up again the next day as if life offered nothing to rouse the utmost passions of the soul, as if hopes tremblingly cherished were not dashed to the earth ; as if fears we scarcely dare to define were not hovering near our hearts, and resolutions were not formed in silence and abandoned in despair; as if the spirit of darkness were not prompting the soul to deeds of evil, and the hand of God was not stretched out between us and the yawning

February, 1883

Recipes.

60

BOILED CODFISH-SALT. Soak two pounds of codfish in lukewarm water over night, or for several hours; change the water several times; about one hour before dinner put this into cold fresh water and set over the fire; let it come to a boil or just simmer for fifteen minutes, but not to boil hard, then take out of the water, drain and serve with egg sauce, or with cold boiled egg sliced and laid over it, with drawn butter or

cream gravy poured over all. CODFISH BALLS.

Take four cups of mashed potatoes, three cups of boiled codfish, minced fine, add butter, mix well together, then add two well beaten eggs, beating hot lard and fry the same as doughnuts.

MISS MOLLIE'S CAKE.

Three cups of flour, two of sugar, one cup of but ter, two-thirds cup of milk, the whites of seven eggs well beaten, two teaspoonfuls baking powder, sifted with the flour, and the juice and rind of one lemon. Beat the butter and sugar together till it is creamy ; add the lemon, and a little milk. Beat in the eggs and flour by degrees. Take out about two tablespoonfuls of this dough, add one teacup of seeded raisins, one-half cup of molasses, onehalf cup of flour, and spice to taste with powdered cloves, cinnamon and nutmeg. You thus have a nice loaf of plain, and a loaf of fruit cake.

The practice of smoking in the society of ladies in public or in private places, whether driving, walking, sailing or sitting, is an act of positive disrespect which no lady should tolerate. There are preux chevaliers who would be honestly amused if they were told they did not behave like gentlemen, who, sitting with a lady on a[®] piazza, or strolling in a public park, take out a cigar, light it, and puff as tranquilly as if they were alone in their rooms. Or a young man comes upon the their rooms. Or a young man comes upon the deck of a steamer and blows smoke in their faces without even remarking tobacco is disagreeable to some people. A man, when he unconcernedly sings false, betrays that he has no ear for music; and a man who smokes in this way shows that he is not a gentleman.—[Harper's Magazine.

It is Well.

"Is it well with thee, and with thy husband, and with the child?" And she said, "It is well."—Second Kings, ix.: 26.

Yes, it is well ! The evening shadows lengthen ; Home's golden gates shine on our ravished sight :

And though the tender ties we strove to strengthen Break one by one-at evening time 'tis light.

"Tis well! The way was often dark and weary : The spirit fainted oft beneath its load ; No substine comes from skies all gray and dreary, And yet our feet were bound to tread that road.

"Tis well that not again our hearts shall shiver Beneath old sorrows, once so hard to bear ; beside Death's darksom

An Old Story.

Fisherman John is brave and strong, None more brave on the coast than he ; He owns a cottage and fishing smack As snug as ever need be.

And, what is truer than I could wish, Fisherman John loves me.

Often and often when day is done, With smiling lips and eager eyes He comes to woo me ; in every wav

That a man may try he tries To win me ; but that he can never do, Though he woo me till he dies.

Fisherman Jack is a poorer man; He owns not cottage nor fishing smack, But a winning voice and smile are his,

And a manly grace. Alack ! It will not break my heart to tell

That I love Fisherman Jack.

He loves not me ; but every night He sits at the feet of Kate Mahon ; Never a heart has she for him-For she loves Fisherman John,

Who cares no more for love of hers Than the sea he sails upon.

Often we wonder, do Kate and I, That fate should cross us so cruelly. We think of the lover we do not love, And dream of what life would be, If only Fisherman John loved her, And Fisherman Jack loved me.

CARLOTTA PERRY.

English Tea-Making.

That the English are pre-eminently a tea-drink ing nation is an accepted fact. That they should excell in the preparation of their favorite beverage as naturally follows, and a cup of English tea al-ready takes rank with a cup of French coffee, delighting those who taste. But to thoroughly enjoy the charm one must see the English breakfast table -its silver urn, radient with careful polish; the dainty service of pure white china, or Moulton or Worcester ware, sprinkled or wreathed with flowers; the low silver tea-pot of our grandmother's The sugar-bowl, milk-jug and slop-bowl, to time. match the cups, are prettiest, but when all of silver they intensify the whiteness of the damask table-cover, and gleam bright in the morning light, which is too often a dull one from English skies. This is the still life of the breakfast room.

Now comes the touch that vivifies the whole. A light-footed attendant fills the urn with water, and hight-rooted attendant mis the urn with water, and touches a match to the spirit-lamp beneath. The reader of the morning paper comes in and shakes it rustling from its folds. The tea-maker enters either mother or daughter—and with her morning greetings busies herself among the cups. The little tea-caddy (pretty enough for such grouping) is opened, and the regulation "tcaspoonful for each erson, and one for the pot.' measured out into the empty tea-pot. Enough of the now boiling water is drawn from the urn, to cover well the fragrant leaves, and at last that popular English in-stitution the "tea-cosy" is called in requisition.

Sittle Gues' Column.

Over the Snow.

BY S. W. H.

All wrapped in furs and blankets, Over the sparkling snow, On a merry Christmas sleigh-ride The happy children go.

The chiming bells and the voices In the distance die away, As if the joyousness were lost In the brightness of the day.

It was only the glowing sunset That brought them home once more, To pass with its last red glory The shade of the open door.

And with dancing eyes, and voices Ringing with eager glee, To tell their tales of wonder

Around their mother's knee.

"Oh, mamma ! the fields were shining Like silver—only white— And sparkled until I thought my eyes

Were blinded with the light ;

"And all along the old stone walls, In waves and wreaths, the snow Was caught, as if it had been piled For some kind of a show.

"And the trees ! Why every little twig Stood out as fine and high, As if you had taken a pencil And drawn them on the sky.

- "Oh ! we saw such lets of bird's-nests Piled up brimful of snow,
- And all day long in the winter wind They are rocking to and fro.
- "Little Amy felt like crying. She said, to see them there, With the birdies gone and the branches Stretched out so cold and bare.
- "But Charley laughed and told her Birds like their new homes best, And would not give a 'thank you,'
- In the spring for a last year's nest.
- "There were some brown leaves that rustled, And would not let go their hold, But clung right tight to the bushes All through the wind and cold.
- "I am sure they loved the bushes, And could not bear to go And leave them cold and lonesome, But Charley don't think so.
- "He says they'll be sure to scatter

Inat Shall we deplore the good, the loved, the fair.

No more from tears, wrought from deep, inner anguish,

Shall we bewail the dear Hopes, crushed and gone ;

No more need we in doubt or fear to languish ; So far the day is passed, the journey done !

As voyagers, by fierce winds beat and broken. Come into port, beneath a calmer sky.

So we, still bearing on our brows the token Of tempest past, draw to our Haven nigh.

A sweet air cometh from the shore immortal, Inviting homeward at the day's decline ; Almost we see where from the open portal

Fair forms stand beckoning with their smiles divine.

'Tis well ! The earth with all her myriad voices Has lost the power our senses to enthral; We hear, above the tumult and the noises. Soft tones of music, like an angel's call.

'Tis well, O friends ! We would not turn-retract ing

The long, vain years, nor call our lost youth back; Hadly, with spirits braced, the Future facing, We leave behind the dusty, foot worn track. J. H. -[Chamber's Journal.

Fancy a double-wadded cup of some woolen material, flannel or cloth, either of bright color or made gay with braiding or other ornamentation, a generous oval on one side, straight on the other, drawn over the tea-pot, completely covering it like an extinguisher, and shutting in the heat while the green leaves unroll, and all the delicate flavor is extracted.

Five, ten or fifteen minutes pass. The cups are half filled with hot water, and stand warming through and through, sending little clouds of steam into the air. The urn sings low. A little group gathers about the table, and pleasant things are said across it by gentle-voiced and gentle-mannered English girls. The toast appears, and eggs, with perhaps thin waferlike slices of well-browned baor the national beefsteak, and the simple con, breakfast is ready.

Now the blessing asked, the tea cosy is lifted the tea-pot filled with the proper amount of boiling water, the cups, emptied into the indispensible slop bowl which accompanies every tea service, are filled with the aromatic decoction, sugar and milk are added at pleasure, and English tea is made.

fore the first spring breeze, For the green leaves of hot summer Are packed in the trunks of the trees.

"But everything looks so lovely, And we've had such a happy day, Don't it seem almost a pity To have winter go away ?"

Nimble Tongue Exercise.

Our young readers will find amusement, and, perhaps, profit in practicing some of the short say ings arranged for the purpose of cesting one's abil ity to rapidly and correctly pronounce words with slightly different combinations of sounds. Try repeating each one of the following, five times, rapidly

> Black bug's blood. She sells sea shells.

Shoes and socks shock Susan. Six tall, slim, slick saplings.

"After reading a number-eight or ten-farm papers, I consider THE FARMER'S ADVOCATE ahead of all.' J. K., Arkona, Ont.

THE FARMER'S ADVOCATE.

Alncle Tom's Department.

MY DEAR NEPHEWS AND NIECES,-Which of you boys and girls have a pair of old skates lying around home besides the new ones given you last Christmas ? Lots of you, of course ; but does it seem hardly fair while you see lots of your poor school-mates stamping, shivering around trying to keep their toes from freezing, watching you skimming and cutting over the ice on your new skates,

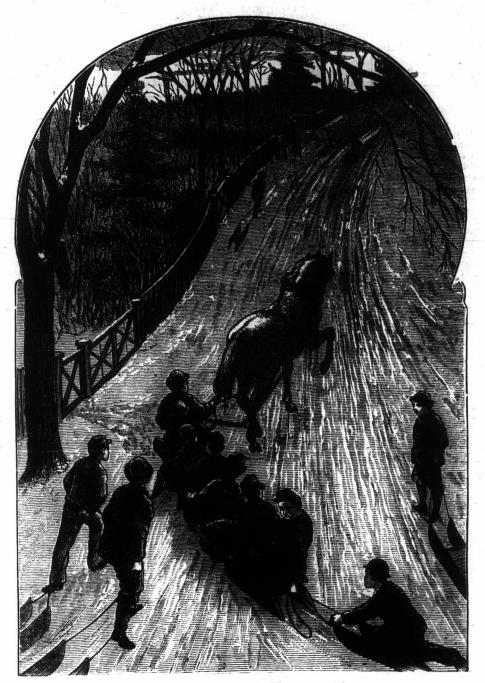
feeling as happy and warm as birds on the wing. It doesn't seem just right to have them lying idle at home, does it? Skating is the most exhilarating and graceful amusement when one "knows the how," and most of our boys and girls now think their education incomplete without this knowledge. Almost every town or village has its pond, river or creek, and boasts of its superior skater, but often this distinction has been dearly bought. It requires long continued practice and great perseverance to become thus skilled. But few ladies. have the endurance to acquire this reputation. A young lady in a neighboring city, who belonged to a family in high social standing, became so fascinated with the amusement and so proficient in the art, that she would remain for hours on the ice. Her skates were strapped on very tightly and the result of one afternoon's exercise was a paralysis, which laid her upon her bed for months, and will doubtless make her a cripple for life. Her distinction was bought at too dear a price. You cannot be too cautious about taking cold when out skating. To sit down when you are very warm is al-most sure to give you a severe cold. Always have a thick extra garment to throw about you the moment you stop skating; do not sit down at all, but walk about to restore circulation and prevent being chilled. It is safer to walk home than to ride. In the city covered rinks it is very different. There you can always go into the cloak room to rest, where there is a good hot stove. Perhaps

jokes and tricks are played, and you must be very

I am quite delighted with the large number who have again placed their names among my list of nephews and nieces. I hope, though, to receive more and better original puzzles for next month. It is not too late yet to try for the prizes, so I hope to hear from a great many others. UNCLE TOM.

How Billy Goes Coasting.

Billy is a gray horse kept by a family in Dorchester. When the boys and girls go out coasting,



that, as the snow is soft and nobody is hurt. The picture is drawn from life, and presents a scene that is well known to some of our readers. The boys always keep a guard at the foot of the hill while they are coasting, so that no harm can be done to the people who are passing by. The hill is steep and the sleds come down with great speed; but the track is always cleared when the word is given. Nobody is so surly as to stop the boys' fun. The above is a true story. UNCLE TOM.

HUMOROUS.

A raw-boned Irishwoman entered one of the

National Banks in Provi-Actional banks in Provi-dence the other day and presented a cheque at the cashier's desk. The cashier looked at her and said politely: "Madam, you must get identified." "Faith, an' what's that?" "Why, you see, you are a stranger to me. I don't know you." "Will thin, I'm not too proud to intro-duce myself to yez. My names Sary MacFlinn, an I'm not ashamed of it.' "Well, but you see I can not tell whether you are not tell whether you are the person whose name is on the cheque," said the cashier, too polite to tell her that perhaps she was lying about it. "An' what did ye say I must do?" "Identify yourself. Bring some one here that knows you." "Indade! An' who knows me better than 1 knows me better than 1 know myself?" The cashier paid the cheque without another word.

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A citizen called recently at the Water Registrar's office and introduced himoffice and introduced him-self and his business by saying: "I'm Misther Jerry Muldoon. My cellar is full of water, and my hins will be drowned if it isn't fixed; so I want you to fix it." Mr. Muldoon was informed that nothing was informed that nothing could be done for him there. Two or three days later he reappeared. "I come again reappeared. "I come again to see about that cellar," said he; "it's worse than ever." "But we told you the other day, Mr Muldoon, that we can do nothing about it here." "Yes, but

some of you have never seen a carnival on ice, so I will try and describe one that I witnessed a few evenings ago. It was in a large covered rink, well lighted up with gas, and the band playing at in-tervals throughout the whole evening. There were about two hundred persons, composed of men, boys, ladies and children in costume, each one representing some character in history, novels, nursery rhymes, fairy tales, in fact anything such as kings, queens, clowns, negroes, gipsies, winter and night; the latter would be a dress of entire black, covered with gold stars and a half moon. Some of the costumes were rich and lovely, and others very trashy, just as the character repre-sented required; they nearly all wore masks, which made them look the more absurd, but it is most amusing for the skaters trying to decipher who each one is and then coming up and calling them by name, ask them to go for a skate; they in turn try to find out who their escort is. Of course great HOW OLD BILLY GOES COASTING.

he goes out with them to take part in the sport ; that is to say, the children have the sport, and the

horse does the work, as you will see in the picture. The boys have a long "double runner," that carries a good many of them at once. It is fine fun to coast down the long hill upon it, but hard work to drag it up again ; so they harness Billy to the sled, and he drags it up for them.

the sled, and he drags it up for them. Sometimes they all get on and ride up, and even take some of the single-sleds in tow; but usually the boys walk up, as they need the exercise to keep them warm. When they get to the top, they throw the reins on Billy's back, and he jogs down to the foot of the hill and waits for them to come down again.

Billy seems to enjoy the sport as much as any of them. Sometimes a party of merry boys and girls get on the "double-runner," and drive all about town. If the snow is deep, they are pretty sure to be upset once or twice; but they don't mind about it here." "Yes, but my cellar must be fixed or my hins will be drowned." "Well, Mr. Muldoon, did you see the Mayor about the matter?" "Indade and I did," replied Mr. Muldoon. "And what did the Mayor say?" "What did he say, is it? 'Misther Muldoon,' says he, 'why don't you kape ducks?"

"I doan' know vhat I shall do mit dat telephone of mine," observed a citizen as he entered the headquarters of the company yesterday and sat down in a discouraged way. "Out of order, is it ?" "Some-times it vhas, und sometimes it vhas all right. If I go to speak mit der coal man, or der City Hall, I go to speak mit der coal man, or der City Hall, or der butcher, it vhas all right, und I can hear every word. If somepody vhants to order my peer, I get de name shust as plain as daylight." "And when does it fail ?" "Vhell, shust like two hours ago. A saloon man he owes me \$18, und I rings him cop und calls out; 'Hello ! hello ! I likes dot monish to day !' Den he vhants to know who I am, und he says he cap't catch der name. I tell him und he says he can't catch der name. I tell him deal in waterme.ons, und by he calls oot dot he doan' deal in waterme.ons, und dot if I call him a dandy again he'll proke my head If sometings doan' ail my telephone, it may be ash my voice is giving out. I wish you would examine me und see if I had better let my shon doder talking und I keep der pooks.'

t, and. ort say e's abil ds with Try times,

stled

—farm VOCATE Ont.

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FARMER'S ADVOCATE. THE

PUZZLES.

1.--WORD SQUARE. 1. Dismal. 2. Article. 3. A quantity of paper. 4. A girl's name.

MAGGIE ELLIOTT.

2.-My first guides the sailor in the dark, my second is part of a farm, and my whole is the name of a statesman now dead.

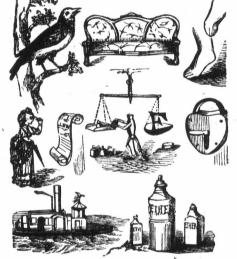
THOS SIMPSON. 3.—DROP-LETTER PUZZLE. G-V-M-L-B-R-Y-R-I-E-E E-T.

E. A. R. 4.—DIAMOND.

1. A consonant. 2. A boy's name. 3. A Span ish title. 4. Bright. 5. Exchange. 6. A number. 7. A consonant. MAGGIE F. ELLIOTT.

5.-ENIGMA

First in vat, not in tub; Second in wheel, not in hub ; Third in Ned, not in Dan; Fourth in girl, not in man; Fifth in cat, not in dog; Sixth in eel, not in frog; Whole is the name of a city. ADELAIDE E. ARMAND. -ILLUSTRATED REBUS.



7.—ENIGMA.

My first is in ugly, but not in pretty; My first is in ugly, but not in pretty; My second is not in ugly, but in pretty; My third is in old, but not in young; My fourth is not in old, but in young: My fifth is in good, but not in bad; My sixth is not in good, but in bad; My seventh is in mean, but not in base ; My eighth is not in mean, but in base ; My ninth is in nice, but not in nasty; My tenth is not in nice, but in nasty eleventh is in stingy, but not in

3.—Spinach, rose, Singapore. 4.—(1.) Anglesea, (2.) Oldham, (3.) Seringapatam, Pondicherry, Pekin, Bagdad. 5.—Gladstone.

•	-Soap-bubble.
•	-Missouri.

Names of those who sent Correct Ans wers to January Puzzles.

Esther Louise Ryan, Addie V. Morse, Minnie Tegart, P. Boulton, Richard Kingston, Maggie F. Elliott, Harry C. Woodworth, Thomas Simpson, Maud Dennie, Eliza J. Howell, Jas. Perry, Ade laide E. Armand, "Meta," Jessie Stewart, Charlie aide E. Armand, "Meta," Jessie Stewart, Charlie Smith, J. H. Cunningham, Ada Moore, Dick John-stone, Willie Leslie, Mamie Morris, Tila A. Law-rence, Cora Leonard, Tom Pepler, Harry Guston, Ed. E. Morley, Ida Knowles, Minnie Hammond, Arthur Gibson, Geo. Siddons, John S. Martin, Francis J. S. McCormack, Arthur H. Mabee.

Sommercial.

THE FARMER'S ADVOCATE OFFICE, London, Ont., Feb. 1, 1883.

The month of January has indeed been all that could be well desired in most sections of the Dominion. Cold, steady weather, with good sleighing, which is a very important factor in the pros perity of the country.

WHEAT.

This article has moved a step upward and awoke from a long season of quietness and lethargy. We fancy the "bulls" and "bears" have had a quiet time of it the past two months. Bad weather throughout Europe, and the damage done by the floods in Austria and Germany, have had something to do with the improved feeling. The amount of wheat in sight and on passage to Europe is much larger than this time last year. The California crop will soon begin to arrive off the coast of England, and with the present stock in sight and afloat, we do not see anything to warrant very much advance. Another very important factor in the price of wheat and other grains is the through rate of freight. This time last year the steamship com-panies were anxious for grain tonage at one penny per bushel, and during the months of March, April and May they actually paid the owners of grain in the elevators at New York and Boston one penny per bushel for the privilege of carrying that grain to Liverpool. To day the steamers are quite firm in their rates, at 7 pence per bushel. This differ-ence alone would be 12 cents per bushel. The stocks of flour in England are very heavy; the market is pronounced decidedly overstocked in this article.

PEAS

rule very quiet but steady, and the same remarks applies to them as to the freight rates on wheat. The demand for seed was so good last spring that many are holding back in the expectation of mak-ing more about seeding time. We do not look for the demand there was last spring for seed peas. We

		Febru	ary,	1883
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	butter in the following cities on Ja	n. 1, and a yea ^r
۱,	previous :	
	Jan. 1, 1883.	Jan. 1, 1882.
	New York, pkgs 85,000	75,000
	Boston, pkgs 62,000	26,000
	Chicago, pkgs 12,000	15,000
	Liverpool, pkgs 8,000	27,000
	Total	143,000
e		undermentioned
e .	places on Jan. J, compared with t	hose of a year
,	ago are approximately as follows :	
-	Jan. 1, 1883.	Jan. 1, 1882.
e	New York, bxs 166,000	233,000
1	Boston, bxs 32,000	37,000
-	Chicago, bxs 15,000	25,000
,	Canada, bxs 45,000	75,000
,	Liverpool, bxs	77,000
,	London, bxs 61,000	90,000
-	Total	637,000

BUTTER

has declined considerable in the States the past few weeks, and there seems to be plenty of butter in this country for home trade. The fact is there is any quantity of poor butter, and many farmers are working this poor butter over, perhaps churning it with a little fresh working into rolls, and taking or sending it to market, and expect to get the out-side price for such goods. We want to tell all such that the day for that sort of work has gone by, unless the party is very expert. We know a party who is sending some 45 to 50 pounds per week to a dealer in this city, representing it to be fresh made butter, but the last box in was so badly mixed that the dealer had no trouble in tracing two or three colors in each roll. Had this butter been fine the dealer would have had no trouble in making 25 cents for the lot, but on showing it to-a buyer he at once decided to take a tub of medium butter in preference. Another buyer, who had had one or two lots of this same butter, when informed that he could get some more from the same party, at once replied "he had quite enough of that man's butter."

FARMERS' MARKET.

LONDON, ONT., Feb. 1st, 1883. Per 100 lbs

				1				
Red wheat	\$1 45 to	\$1	65	Dressed hogs \$7	50	to	\$8	25
Deihl	1 55 to	1	62	Eggs, small lots	28	to		30
Treadwell	1 50 to	1	60	Potatoes, bag	65	to		75
Clawson	1 40 to	1	60	Apples	00	to	1	50
Corn	1 05 to	1	10	Roll butter	20	to		25
Oats	1 12 to	1	18	Tub "	16	to		18
Barley	1 00 to	1	15	Crock "	18	to		22
Poultry (Dres	sed)-			Cheese, lb	10	to		11
Chickens, pair		0	70	Onions, bush.	60	to	0	80
Ducks, pair		0	70	Tallow, clear	7	to		8
Geese, each		0	80	" rough.	4	to		5
Turkeys, each		2	00	Lard, per lb	14	to		15
Poultry (Und				Wool	18	to		20
Chickens, pair		0	00	Clover seed,	00	to	8	00
Live Stock-				Timothy seed., 2	2 75	to	3	00
Milch cows	35 00 to	50	00		8 00	to	10	00

My twelfth is not in stingy, but in liberal.

In this puzzle you'll find a name of twelve letters.

(Few enough, of like merit, were found 'mong his betters).

Politician and statesman, and orator too, To his country's interests he proved himself true, And though not considered by men a cannibal. Was named by his parents after an animal, And by them was intended to enter the church, But at school he deserved a fair share of the birch,

When an accident happened and frustrated their scheme-

His eye-ball was pierced by a cutting-machine. A Freemason also. We were sorry to hear That his life went out with the obbing year. H. A. WOODWORTH.

Answers to January Puzzles.

1-"Here lies our sovereign lord the king, Whose word no man relies on, Who never did a foolish thing, And never did a wise one.'

M

2.—Diamon l

	S	0	В			
	S I	N	A	Ι		
\mathbf{M}	0 N	A	R	\mathbf{C}	н	
	$\mathbf{B} \mathbf{A}$	R	G	\mathbf{E}		
	I	С	E			
		\mathbf{H}				

think farmers will plant more corn.

OATS

keep very steady, and the demand is good. BARLEY.

There is a good deal of complaint made by maltsters about the irregular sample of much of the barley coming to market and the indifference of farmers about the quality of the seed they are sow-ing from year to year. We refer to the mixture of two and six-rowed barley. Maltsters will not pay as much for mixed samples, and the sooner farmers turn over a new leaf on this score the better it will be for them. It will pay a farmer to buy his seed every spring if he cannot keep his sample up to the mark any other way. The fact is, farmers would make money by changing their seed much oftener, and barley is no exception to this rule. In fact, it is more important.

CLOVER SEED

is steadily moving up, and we think is nearly as high as it can safely go; as high as \$8 to \$8.25 has been paid for choice seed. Farmers will do well to sell their seed at these prices.

CHEESE.

There is nothing new to report. Stocks are light, both in England and on this side. The following are the stocks in the several points on the dates mentioned :

STOCKS OF BUTTER AND CHEESE.

The following are the approximate stocks of

Apples, brl.... 1 50 to 2 25 Tomatoes, bu.. 0 00 to 0 00 Beans, bu.... 1 25 to 1 50 Onions, bag... 0 80 to 0 00 Hogs, per 100 10 8 20 00 0 80 Potatoes, bag.. 0 75 to 0 80 GRAIN AND PROVISIONS. MONTREAL, Jan. 31st.

Wheat-Can spring, \$1 08 to \$1 09 Red winter 1 12 to 1 14 White 1 08 to 1 10 $\frac{22}{21}$ 78 to 80 35 to 36 Peas. 89 to 90 Flour
 four superior ex
 4 95 to
 5 00

 Superfine...
 4 75 to
 4 80

 Strong bak
 5 00 to
 5 40

 Pollards....
 0 00 to
 3 50
 Bacon..... Cheese..... $\begin{array}{c} 13 \text{ to} \\ 12\frac{1}{2}\text{to} \end{array}$ 131

CHEESE MARKETS

Liverpool, Eng., per cable, 67s per 100 lb.

LITTLE FALLS, N. Y., Jan. 29.—Cheese—Sales to-day, 152 boxes at 10c. @12c; sales of 360 boxes at 13c. Butter— Sales of 42 packages at 22c @ 25c.

· · · · ·			
883	February, 1883 THE F	ARMER'S ADVOCAT	ге. 63
nd a yea ^r	LIVE-STOCK MARKETS BBITIBH MARKETS, PER CABLE.	NEW ADVERTISEMENTS.	
1, 1882.	CATTLE	UNRESERVED AUCTION SALE	J. A. SIMMERS'
75,000	Liverpool, Jan. 22, 1888.—With brisk demand and moderate supplies the market was fairly active at fully former rates.	-OF THE-	Cultivators' Guide and Priced
26,000 15,000	Prevailing prices are as follows : Cents # fb	CELEBRATED FLOCK	Catalogue of
27,000	Choice steers. 17 Good steers. 151		RELIABLE SEEDS
143,000	Medium steers. 141	SOUTHDOWN SHEEP	
entioned	Inferior and bulls	the property of the late Daniel Perley, com- prising 75 head Imported and Canadian bred,	contains the largest variety of Field, Garden and Flower Seeds
a year	reckoned.] SHEEP.	will be sold at his late residence, Evergreen Stock Farm, three miles south-west of Paris, Ont.,	N. BNow ready and mailed free to
1 1000	There was a good, active sheep market at prices fully up to the rates of last week. Offerings moderate and of fair quality,	ON WEDNESDAY EERDIIADY 28 1883	intending purchasers. J. A. SIMMERS,
1, 1882. 233,000	though for choice sheep the demand exceeds the supply. Cents # 1b	ON WEDNESDAY, FEBRUARY 28, 1883.	206-c 147 King St. E., Toronto, Ont.
37,000	Best long wooled 171/2@20	This flock is well-known throughout the Do- minion, having been successfully exhibited at all	
25,000 75,000	Seconds	the leading exhibitions for a number of years, taking the Gold, Silver and Bronze Medals at the	CHOICE, FRESH AND RELIABLE
77,000	Inferior and rams 10@13 [These prices are for estimated dead weight; offal is not	Provincial Exhibition held in Ottawa in 1879. The above flock consists of 40 Ewes, 17 Ewe	
90,000	reckoned.) GLASGOW, Jan. 22.—Our foreign arrivals this week consisted	Lambs, 2 Aged Rams and 16 Ram Lambs.	SEEDS
637,000	of 133 States cattle. The cattle were landed in bad order, 16 head being lost on the Italia and 42 head on the Phœnician,	Bills of Sale on application. A. D. PERLEY,	Forwarded by mail to all parts of the Dominion and
	the others in a bruised condition. We quote trade quiet at a	206 Box 145, PARIS, ONT.	
past few	shade lower prices for cattle, and for sheep about the same as last week.	" SARNIA AGRICULTURAL IMPLEMENT M'F'G Co	Safe Arrival Guaranteed!
utter in there is	ظا اله. Good American steers @ 8½d.	(Limited.)	We will send to all applicants FREE the finest illustrated catalogue in Canada.
mers are	Medium American steers	MANUFACTURERS OF	It contains volumes of information and a com- plete list of everything for the
hurning	Good Canadian steers	Keapers, Mowers, Binders and Threshers	Farm and Garden.
d taking the out-	Good Canadian sheep	See the DOMINION SEPARATOR before you purchase. The easiest running, simp-	Don't fail to send your name and Post Office address for a copy before ordering your supply.
tell all		lest and most durable machine in the market.	STEELÉ BROS. & CO.,
gone by, a party	NEW YORK, Jan. 31st.	Live Agents Wanted. Address GEO. A. ROSS,	206-b Seed Merchants, Toronto, Ont.
week to	Flour- No 2 \$2 45 to \$3 50 Potatoes 2 25 to 2 62	General Agent for the Northern Route, 206-c GODERICH, P. O., ONT.	OFFDOL OFFDOL
oe fresh o badly	Common 3 85 to 4 50 Eggs—State 27 to 28 Good 4 60 to 7 00 Pork—	Supernhachhata \$28 per ton. Fre ^e	SEEDSI SEEDSI
tracing	West'n ex 6 25 to 7 00 New mess 18 37 to 18 75 Wheat— Cut meat— Cut meat— Cut meat— Cut meat— Cut meat—	Juper pilospilate. on cars.	FOR 1888.
butter	No 2 red 1 11 to 1 13 P'kl'd hams 11 to 113	Cotton Seed Meal. ^{\$36} per ton. 100b. bag \$2.	Keith's Gardeners Assistant and Illus- trated and Descriptive Catalogue
uble in g it to-a	Corn-No 2 67 to 71 Lard	Onion Seed. Red Wethersfield & Yellow Dan- vers \$1.50 per fb. Free by mail.	for 1883.
medium	Oats- Butter 20 to 32 Mix'd white 44 to 48 Cheese 8 to 14	PEOPLE'S PACKET OF FLOWER SEEDS, Containing 25 beautiful va-	Now ready and will be mailed to any address free on application. Special attention given to all
had had nformed	White 45 to 52		kinds of Seed Grain. Having grown a number of varieties on my Seed Farm, and fitted up my
e party,	Dogrou Magg. Jap. 21 1990	ILLUSTRATED SEED CATALOGUE FOR 1803.—Free by mail, \$1.	warehouse with mills and machinery especially adapted to the re-cleaning of Seeds and Seed
at man's	Возтол, Mass., Jan. 31, 1882. Flour, west sup \$3 25 to \$3 75 Common \$0 23 to 0 27	206-C W. H. MARCON, SEED MERCHANT, CUELPH.	Grains, can safely recommend them.
	com. ex 3 50 to 4 00 Cheese— Corn meal . 3 25 to 3 50 Best factory0 13 to 0 14	LINSEED CAKE	GEORGE KEITH, SEED GROWER AND IMPORTER,
	Oatmeal 5 50 to 6 00 Eggs Eggs 0 27 to 0 30 Oats	AND	124 KING ST. EAST, TORONTO,
t, 1883.	Hay- Coarse, ton17 00 to 18 00 Hand picked2 85 to 2 95 Mediums2 25 to 2 60	Linseed Cake Meal	Seed Farm—"Fern Hill," Scarboro'. 206-b
1. 00 of	Butter— Common1 25 to 1 50		SPRING PLANTING
to \$8 25 8 to 30	Creamery0 37 to 0 38 Potatoes per bl.0 80 to 0 90 Dairy 0 27 to 0 30 Onions 0 00 to 0 00	The Best Food Known for Stock. For sale by the Manufacturers. Quality	SPRING PLANTINGT
5 to 75 0 to 1 50		guaranteed pure. Quotations for	GOLD MEDAL NURSERY STOCK !
0 to 25 6 to 18	HALIFAX, N. S., Jan. 29Choice pastry, \$7 25 @ \$7 75; su-	any quantity sent on applica-	
8 to 22 0 to 11	perior extra choice, \$5 85 @ \$6 00; superior extra, \$5 40 @ \$5 50; extra superfine, \$5 10 @ \$5 25; spring extra, \$5 25;	tion. Wright & Lowther Oil and Load Manf's Co.	100,000 Apple Trees; Grape Vines; Pear, Plum and Cherry
0 to 0 80 7 to 8	strong bakers, \$5 85 @ \$6 10 ; superfine \$5 10 . HALIFAX, N. S., Jan. 27.—Extra State, \$6 10 @ \$6 30. Corn-	Wright & Lawther Oil and Lead Mani'g Co.	Trees: Small Fruits: Orna-
4 to 5	meal—Yellow k. d, \$4 15 @ \$4 20 ; fresh ground, \$4 @ \$4 10. Oatmeal, Canada, \$5 @ \$6.	206-1 Chicago, Ill., U. S. A.	mental Trees, for Lawn, Street Planting and Shelter ; Flower-
4 to 15 8 to 20	Chartenst Consumed to G And	CHANCE of the SEASON !	ing Shrubs: Roses: Dahlias.
0 to 8 00 5 to 3 00	AMERICAN.		AC., AC. DEST NEW AND OLD VARIETIES.
0 to 10 00	New York, Jan. 29.	2 FARMS ON EASY TERMS.	Descriptive Priced Catalogue (illustrated) free to all applicants.
	Beeves—Good and prime, 1c lower than last Monday. Com- mon to prime sold at 91c to 111c. Sheep—Receipts for	Seventy-five acres in Bayham Township, close	Ar We advise early placing of orders, as the supply of nursery stock throughout the con-
eb. 1st.	the week, 32,000, to day. 9,000. Market firm; sales of sheep at 5c to 6 ³ / ₃ c, and lambs at 6 [§] / ₈ c to 7 ¹ / ₂ c. Hogs-Market	to village of Straffordville; 65 acres cultivated; soil sandy loam; frame house, barn, orchard, etc.	tinent will not meet the demand the ensuing
to 2 25	firmer; common to prime, \$6 45 to \$6 95.	One hundred acres in Bayham, half mile from	GEO. LESLIE & SON.

Seventy-five acres in Bayham Township, close ovillage of Straffordville; 65 acres cultivated; to village of Straffordville; 65 acres cultivated; soil sandy loam; frame house, barn, orchard, etc. One hundred acres in Bayham, half mile from Griffin's Corners; Post Office, good frame house, barn, sheds, etc. Either of these farms will be sold with a small payment down and the balance at 6% interest. Discount off for cash. Write at once for particulars to **M. J. KENT**, 206-tf 439 Richmond Street, LONDON, ONT. to village of Straffordville LAMB'S SUPERPHOSPHATE OF LIME - AND-FINE BONE DUST. ar Send for Price List. PETER R. LAMB & Co., Fertilizer Manufacturer, 206-с TORONTO, ONT.

n. 31st. to 5 00 to 4 10

day, 152 Butter—

Market sheep at 5c to 6gc, and lambs at 6gc to 7gc. Hogs-Market firmer; common to prime, \$6 45 to \$6 95.

nrmer; common to prime, \$6 45 to \$6 95. East Buffalo, N. Y., Jan. 29. Cattle—Stock light; run of through cattle correspondingly heavy; market ruled slow at a concession from last week's prices of 10c to 15c per cwt.; stockers in light supply and request, bulls steady and milch cows unchanged. Sheep and lambs—market opened very steady at about last week's closing prices with a good demand. Fair proportion offerings found sale. We quote fair to good sheep a, \$4 75 to \$5 35; choice, \$5 40 to \$5 90; western lambs, \$5 50 to \$6; one load of extra Michigan, \$6 65; Canada lambs, \$6 25 to \$6 50. Hogs—Mar-ket steady and firm; prices at full last week's closing figures; sales of Yorkers, good to choice, \$6 60 to \$6 75; light, \$6 45 to \$6 55; good to choice mediums, \$6 70 to \$6 80; mixed mediums and heavy, \$6 90 to \$7; one load of extra average, 400 lbs., \$7 25. Pigs, \$6 25 to \$6 40.

"The independence shown in the columns of THE ADVOCATE has been such that every farmer in the Dominion should read it. You have, as you say, been true to the name. May THE FARMER'S ADVOCATE still continue to improve and prosper, for it has done good service. I would rather read for it has done good service. I would rather read one of its pages than a folio of the abortive attempts to deceive that are palmed off on the public under the name of agriculture in political papers. The articles in them contain some useful information, but the interest of farmers is only of secondary consideration. They wish to use us farmers as tools—they try to blind and deceive us. Long life to THE ADVOCATE."—J. W., Strathnairn, Ont. Ont.



1

February, 1883

MATTHEW'S SEED DRILL

THE STANDABD OF AMERICA.

STOCK NOTES.

64

Pea-straw is of more value as fodder than the straw of any other cereal. If well-saved it makes capital fodder for all descriptions of domestic ani mals.

If you want "Randall's Practical Shepherd," the best sheep book out, price \$2 and postage, you can have it as a gift, by sending us seven new subscribers to THE ADVOCATE at \$1 each.

Green Bros., of Oakville, Ont., write: We have sold "Cavalier," 100. sire Royal Brampton, im-ported (32,996), dam imported Columbra, to Mr. John Weir, West Flamboro', Ont.

A good guide for feeding grain to cattle is one pound to each hundred of their weight. Most animals eat in proportion to their weight, and an animal weighing 1,000 pounds may receive 10 pounds of grain per day.

Readers of THE FARMER'S ADVOCATE who purchase stock, &c., advertised in this issue, will help THE ADVOCATE and often help themselves by stating that they saw the advertisement in this journal

In regard to grinding grain for feeding, it has been shown in every case in which a test has been made that meal is worth about one-third more than whole grain. The same is true, too, of hay, of which 15 pounds fed cut into chaff and fed with meal is equal to 20 pounds fed in its natural condition.

There are in the world sixty five valuable breeds of cattle, of which, says Dr. A. S. Heath, in his book on "Breeds of Cattle," we have as yet appropriated only eleven, and, even of this sixth we have, most of them we possess so sparingly that we cannot supply one-tenth of the males needed from which to breed grades.

The cause of diminutive size of Jersey cattle as stated by Professor Arnold strikes one as being adequate and satisfactory. The large animals of the Hereford, Durham and Devon breeds roam at will in well hedged pastures : one never sees a tethered cow in their native districts, even on the roadsides, where cattle must not stray.

A good suggestion is that about choosing, as apresent for a boy or girl living on a farm, a colt, calf, lamb, pig or fowl. And a better suggestion yet, is that of strict carefulness not to forget afterward whose it is. Let it be something that the child or youth can take care of, and take pride in, an | will derive substantial benefit from, and good will result for all life, in more ways than one.

A ram will usually get from 800 to 1,000 lambs during his brief life-time. A good animal will eat no more than a poor one, but every one of his progeny as stock-getters and producers of mutton and wool, will be worth a great deal more than the progeny of a poor one. If, then, a farmer buys the latter and saves five dollars, or twenty dollars, how much protit will he make in two years by the operation?

T. & A. B. Snider have lately sold the following







Field, Garden, and Flower Seeds mailed freeto all intending purchasers upon application. Bis the handsomest Gatalogue published in Canada, and sinvaluable to all who wish to hav PORE FIRSH BYP. Social structure of property Mixed Grassys for Period attention given to preparing MIXPD GRABERS I **PERMANENT PASTURE.** ices and full marticulars will be found in Catalogue WM. RENNIE, Feed man, TOROLTO





BRUCE'S FARM, VEGETABLE & FLOWER SEEDS have been before the Canadian public for 32 years, and we claim that they are unsurpassed in quality. Our **Descriptive Priced CATALOGUE** beautifully illustrated, containing all necessary information for the successful cultivation of Vegetables, Flowers, Field Roots, Potatoes, &c., is now published, and will be mailed *free* to all applicants. appli

JOHN A. BRUCE & CO., Seed Growers, Hamilton, Can. 206-a



Was brought from 49° north Lat. in Europe, and introduced into this country by Russian Menon-ites, many of whom settled in Nebraska several years ago. The trees are of a distinct variety, do not degenerate from the seed, are of rapid growth, and after the third year from the seed are con-tinual bearers of a fine fruit, which much re-sembles the Blackberry in form and color, and is somewhat similar in taste. This tree is very hardly and tenacious of life. Utility and orna-ment could not be better blended in any tree. ment could not be better blended in any tree. For further particulars and price list of this and other specialties, address

HYDE & MILES, DEWITT, NEBRASKA, U. S. A. 201-f

FOR SALE

Six young Shorthorn Bulls, sired by imported British Statesman (42847). Four of their dams-were 1st or 2nd prize winners at the Toronto In-dustrial and Provincial shows at London in 1881. Awarded first at both places for Herd of Bull and five females, and Breeders' Herd of five females at London; also three of their dams; 1st, 2nd and 3rd at Toronto Industrial in 1882.

JAS. RUSSELL, Richmond Hill P. O., Ontario, Canada. 205-b



Agents wanted.

71 Yonge St., Toronto. 205-c

The Victory

CORNMILL

THREE SIZES.

A complete success in ,rinding Cob and Corn together, also ALL other

grains, coarse or fine.

Self-sharp ning plates, and warranted in every respect. Send for circu-ars. D. F BUCHAN-AN, sales - agent for Ont., Forest. 205-b

stock: To Geo. Ackroyd, Scarborough, a half-bred Percheron stallion, two years old, for \$425; to Miles Pexley, Spoffordton. half-bred Percheron mare, two years old, for \$225; to Donald Crerar, Shakespeare, eleven months old bull calf, Baron Beaumont, for \$175. Messrs. Snider have an exceedingly fine lot of heifer calves from eight to twelve months old.

The steers Canadian Champion, King of the West, and Young Aberdeen, exhibited by the Messrs. Groff, at the recent Fat Stock Show, in Chicago, Ill., were purchased by Messrs Miller, Armour & Osgood, and sold by them to Mr. John Ford, of Chicago, for Christmas beef. He has kindly furnished us with the following figures: Canadian Champion dressed, 1,635 lbs., his hide weighing 110 lbs. King of the West dressed, 1,622 lbs., the weight of his hide being 103 lbs. The tallow of these two was not kept separate, but weighed, in one lot, 310 lbs. Young Aberdeen dressed 1,383 lbs., the weight of his hide being 81 lbs., and of the tallow 185 lbs.

Every stock raiser in the land ought to have a copy of Prof. Law's "Farmers' Veterinary Adviser" in his home ; it may save ten times its cost each year Price \$3 and postage. We will send it free for eight new subscribers to the ADVOCATE, at \$1 each.

(Continued on page 66.)





Intercolonial Railway.

66

tin

The Great Canadian Route to and from the Ocean.

For Speed, Comfort & Safety is Unsurpassed.

Pullman Palace, Day and Sleeping Cars on all through Express Trains.

Good Dining Rooms at Con-venient Distances.

No Custom House Examination.

Passengers from all points in Canada and the Western States to Great Britain and the Contin-ent should take this route, as hundreds of miles of winter navigation are thereby avoided. Importers and Exporters will find it advantage-ous to use this route, as it is the quickest in point of time, and the rates are as low as by any other. Through freight is forwarded by FAST SPECI-AL TRAINS, and the experience of the last two years has proved the Intercolonial route to be the quickest for European freight to and from all points in Canada and the Western States. Through Express trains run as follows ; Through Express trains run as follows ;

GOING EAST.

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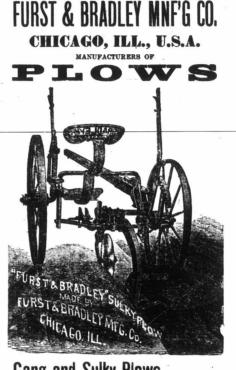
E. DE LAHOOKE Ticket Agent, No. 3 Masonic Temple, London.

Ficket Agent, No. 3 Masonic Temple, London.
 R. B. MOODIE,
 Western Freight and Passenger Agent, 93 Rossin
 House Block, York St, Toronto.
 GEO. TAYLOR,
 General Freight Agent, Moncton, N. B.
 A. S BUSBY,
 Gen'l Passenger and Ticket Agent, Moncton, N. B.
 D. POTTINGER,
 Chief Superintendent, Moncton, N. B.

Railway Office, Moncton, N. B., 28th November, 1882. 205-tf



DICTIONAR



Gang and Sulky Plows, Wheel Cultivators. Sulky Horse Hay Rakes,

Harrows, &c., &c.

We manufacture over 150 styles and sizes of Steel Plows, adapted for every variety of soil. Our "**Peacemaker**" Breaking Plows, for break-ing up original prairie, have been extensively used in Manitoba, and have given excellent satis-faction. Have also sold a good many Sulky plows there, which are well liked. They are well made, of good material, and do their work easily and well.

M Send for Price Lists and Terms.

FURST & BRADLEY MANUFACTURING CO., Office: 63 N. Desplaines St., 204-c

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FERTILIZER.

Cheapest and best in the world. Gypsum or Pure Land Plaster White or Grey, in bulk, bags or barrels; prepared by patent process. **\$100 to \$200 profit** on every ton of Gypsum used is the result of numer-ous experiments. Send for circular to GRAND RIVER GYPSUM CO.,

TORONTO, ONT. 205-f

IMPORTANT to FARMERS!

USE ONLY CURD & CO.'S CONCENTRATED

February, 1883

STOCK NOTES.

We have received from the Secretary of the B. of A. & A., the 6th vol. of the Canadian Shorthorn Herd Book, for which we are under the usual obligacions. The work is simply got up, but shows marks of considerable labor on the part of the energetic Secretary, Mr. Henry Wade.

John Jackson, of Abingdon, Ont., has sold five Southdown ewes and a ram lamb to John Renton N.W.T.; also three imported two-shear ewes and a ram lamb to J. W. Bussell, Hornby P.O., county Halton, Ont.

Many of the prize cattle at the Smithfield show were sold to the butcher. The first prize Polled ox, shown by Mr. Cridlan, Great Malvern, which was adjudged "the best Scot in the hall," went was adjudged "the best Scot in the hall," went into the hands of Messrs. Cridlan Bros., South Kensington. Six of Lord Lovat's crosses fetched prices ranging from £80 to £42. The second prize ox, shown by Mr. M'Kenzie, Alness, was sold for £63; while the three heifers sent by Mr. Reid, Greystone, fetched from the butchers £50, £47, £40

At the Christmas show and sale at Castle Douglas, Scotland, the other day, a first-prize, two-year old Galloway bullock, belonging to Mr. J. Bell Irving, of Whitehill, was sold for $\pounds 50$. The animal was, however, subsequently purchased by Mr. James Cunningham, Tarbreoch, to be sent to America with the view of being fed and exhibited at the next winter fat stock show there.

Since our last issue we have been informed that Mr. H. Y. Attrill, of Ridgewood Park, Goderich, and of New York city, has decided to hold the sale of his Princess Shorthorns at Dexter Park, on the 17th April. These cattle are from the celebrated Col. John B. Taylor herd and their dispersion will be an item of great interest.

Dairy Notes.

Anything which frets, disturbs, torments, or renders the cow uneasy, lessens the quantity and vitiates the quality of her milk.

At the half-yearly meeting of the Goat Society it transpired that the Duke of Wellington was a great breeder of goats, and that his two choice animals were called Billy Gladstone and Billy Doux. The contrast in tempers has given rise to their names.

Mr. Barrie, Professor at the Government Dairy School of St. Marie, Beauce County, reports there are at present in the Province of Quebec 278 cheese factories, 47 butter factories, and 28 combined butter and cheese factories.

According to German authorities, the average cow increases in milk from the first calf to the sixth. After that there is a gradual diminution till the tenth season, when the quantity is about the same as at first. From the tenth to the fourteenth season there is further diminution, and after the fifteenth calf the product is seldom more than one-fourth of an average.



Specimen pages sent prepaid on application. G. & C. MERRIAM & CO., Publishers, Springfield, Mass., U. S. A.

205

Ontario Veterinary College

TEMPERANCE STREET, TORONTO.

The most successful Veterinary Institution in America. All experienced Teachers. Fees, Fifty Dollars per Session. Session 1832-3 begins Oct. 25th. Apply to the Principal, PROF. SMITH, V. S., Edin., TORONTO, CANADA. 201-1

HORSE & CATTLE FOOD Absolutely Pure! Used by Stock Breeders Generally. AT Ask your feed dealer for it. Head Office: 32 Church St., TORONTO. 204-c CHOICE .and & Water Fowls **OVER 20 VARIETIES**



Geese; Rouch, Pekin and Cayuga Ducks. Send stamp for my 16-page large illustrated and descriptive catalogue. Address **CHARLES GAMMERDINGER**, (Mention this paper.) 204-f Columbus, O., U.S.

AGENTS WANTED EVERYWHERE to sell ting Machine ever invented. Will kn ta pair of stockings with HEPEL and TOE complete, in 20 minutes. It will also knit a great variety of fancy-work for which there is always a ready market. Send for circular and terms to the Twombly 16 aitting Machine Co., 163 Tremont Street, Boston, Mass. 201-f

Dairy cows have become scarce in all parts of the United States. Cause, the excessive shipment of calves westward and the too diligent "deaconing" of those not shipped. Already buyers are scouring the Western States and purchasing dairy cows to send east. This hint should save the lives of all the female calves born during the coming season.

Dairy matters in Ohio are "booming." Butter 40c. ; cheese, 16c. at retail ; milk at the creameries 18c. per gallon; Cleveland milk 22c. per 9 lbs., delivered on board cars; cream at ereameries 35c. per inch, and cows all the way from \$55 to \$500 per head, a herd of Holsteins selling near here for about or above that figure.

Professor L B. Arnold says the points in favor of dairying are : First, a dairy farm costs ten per cent. less to operate than grain growing or mixed agriculture ; second, the annual returns average a little more than other branches; third, prices are nearer uniform and more reliable ; fourth, dairying exhausts the soil less; fifth, it is more secure against changes in the season, since the dairyman does not suffer from wet and frost and varying sea sons, and he can, if prudent, protect against drouth.



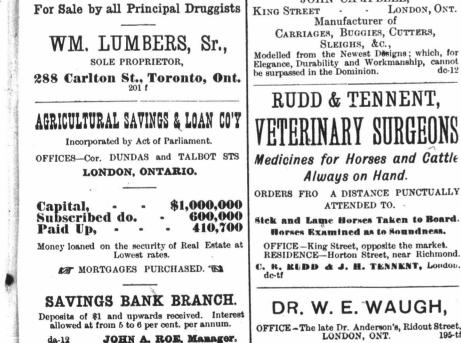
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parts of shipment ' deaconiyers are ng dairy the lives e coming

Butter eameries r 9 lbs., ries 35c to \$500 here for

in favor ten per r mixed verage a rices are dairying e secure airyman ying sea against



JOHN A. ROE, Manager. da-12

EACH AND EVERY MACHINE FULLY GUARANTEED.

Fast Threshers, Run Light, Perfect Separation No Waste and Good Cleaners.

The Best Style of Machine made in the World.

Send for Circular and particulars before next season is on, that order may be placed in good time.

JAS. SHARMAN.

206-F

Mention "Farmer's Advocate."



, and ten neighbors' most interested in Farming Sole Manufacturers of the PLANET JB. GOODS, S. L. ALLEN & CO., Patentees and



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