

1881.

LANDS.

13th August, 1881.

that the Government
Public Auction, at the
Winnipeg, beginning on
13th September
10 o'clock, a. m.,

in Manitoba, situated
at the rate of six per
cent on the unpaid
balances.

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FARMER'S ADVOCATE

PERSEVERE
SUCCEED

AND HOME MAGAZINE

VOL. XVI.

LONDON, ONT., NOVEMBER, 1881.

NO. 11.

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THE FARMER'S ADVOCATE —AND— HOME MAGAZINE.

WILLIAM WELD, Editor and Proprietor.

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Published in the Dominion.

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Prize Essay.

A prize of \$10.00 will be given for the best essay
on "The best and most practical method of pre-
serving timber used for building and fencing pur-
poses." Essay must be in this office by 20th Dec.

Mr. J. C. Snell, of Edmonton, Ont., has
thrown out a very valuable suggestion for the
directors of exhibitions and exhibitors to discuss.
It is our opinion that Mr. Snell has the interest of
both in view. Should any one object to the plan
of exhibiting cows singly, they have an oppor-
tunity to state their views; also, if any of the
members of the Board of Agriculture, or any
other persons, have any useful suggestions to make
with the object of improving our exhibitions or
advancing the agricultural interests, it would be
well to lay them openly before the independent
farmers, so that the plans might be openly discussed
before too hasty steps are taken. The numerous
and too hasty steps which have been taken now
show their results by the general dissatisfaction in
regard to the management of the herd book, and
many other acts. The real breeders were always
opposed to the change that was made, and now
thousands of farmers who have purchased animals
which they were led to believe were entitled to
pedigreed certificates, find them only grade ani-
mals after all. Question—Who profited by the
change?

Those interested in dairying should read with
interest Mrs. Parsons' remarks in regard to Stilton
cheese. We look on Prof. Arnold as a leading
authority in America on dairy subjects, and
claim that our Canadian dairymen make just as
good as the best American-made cheese. Yet
we must still improve. Our opinion is strongly in
favor of the unbroken curd, and the blue mold so
seldom found in Canadian or American cheese.

Agricultural Exhibitions.

Now the long evenings have set in and the busy
time of harvest, of attending the exhibitions,
and of the fall wheat seeding is passed,
we should devote a little of our time in
looking back, observing what has passed,
and endeavoring to lay our plans so as to
profit by our observations. To do this to the best
advantage is to exchange our thoughts, to impart
to others our ideas and thus hope to hear the
opinions of others. Each one may impart some
useful lesson from which others may learn. All
will not see with the same eyes. Open and full
discussions are the only ways to arrive at correct
conclusions. We purpose making a few remarks.
Every person may not coincide with us, but, al-
though they may not, they have the pages of this
journal open to them to express their ideas on any
agricultural subject that is intended for
developing and advancing the interests of agri-
culture, and those who really desire the agricul-
tural interests to be encouraged cannot ask a better
opportunity and can have no better medium. There
probably may be some that do not desire open dis-
cussions, and they may even use their influence to
suppress such discussions; but we cannot believe
that such a course tends to the best results.

Agricultural exhibitions are doubly beneficial to
farmers; they are the farmer's school, and are used
as the farmer's holiday. Farmers require a holi-
day and it is highly beneficial to them to have one,
and in no way can they spend it more profitably
than in attending exhibitions—that is, where exhi-
bitions are properly conducted. This word
"properly" implies much, and to what extent it
may with propriety extend in connection with these
exhibitions is a debatable question, one that we
hope those that take an interest in them will duly
consider and express their views upon. We take
the Royal Agricultural Exhibition of England as
the model one, taking all things into consideration.
We do not pretend to say but that many improve-
ments might be added to it; but it confines itself
to its own business; it is honorably conducted; it
is in no way under Government control; receives
no Government money; has no useless expendi-
tures; no other purpose to serve but the advance-
ment of the agricultural interests. It is honored
and respected, and a prize gained at it implies real
merit and passes like the British gold all over the
world. This exhibition is held under canvas tents
of immense size, and it is perambulating.

Despite the numerous kind invitations sent, we
were unable to attend more than four of these exhi-
bitions. The length of time occupied by the
two largest in Ontario—two weeks each—pre-
vented us from attending more. This arrangement
we believe, will be abandoned. We fear that per-
sons more interested in city interests than in the
interests of farmers or manufacturers had too much
weight in inaugurating this change to two weeks.

A few large exhibitors may still favor this plan, as
it tends to keep small exhibitors away, leaving a
better field for those that exhibit; but we think it
best to encourage the small exhibitors as well as
the large.

At the township agricultural show held at Mt.
Bridges, there was a prize given for the finest
baby. Of course it drew attention, caused fun,
perhaps added to the receipts; but it is a question
if such an exhibit tends to the well-being of an
agricultural exhibition.

We visited the County of Elgin Agricultural
Exhibition, held at St. Thomas, and it was a good
show. One of the directors of another exhibition
met us and said he did not approve of having these
betting showmen, aunt sallies, shooting tubes, etc.,
on the ground. It tended to the demoralization of
the young, and detracted from the utility of the
show. But what appeared most remarkable was
that one of the principal directors of this very
show had made very similar remarks to us but a
few years before, when conversing with us on the
fair grounds in London where the same kind of ex-
hibits had been on view. Perhaps the third com-
plainer might introduce them at his exhibition, but
the question arises—how far should these outside
attractions be allowed? It is claimed that the
dog show, the mermaid show, the female band
show, etc., all helped the funds of the Provincial
Association; but whether they are permanent bene-
fits is a question that may be asked. For instance,
this mermaid exhibition we believe to be only a
skull and arms of a monkey, with wooden or
guttapercha ears; a little red human hair stuck
on the skull, and a fish-skin and tail to represent the
extremities of the body. This exhibit was well
put together and excited the curiosity of thous-
ands, and drew a good sum to the exhibitor. Of
course the members of the Provincial Board may
have thought that by getting a good sum from the
showman for a small space of ground, it was clear
profit; but whether they should descend to such
means is another question. It is said the regatta,
etc., eclipsed the interest in the agricultural exhi-
bition the first week in Toronto. It was also said
that the attention of the directors was more de-
voted to a military and government display at the
first Provincial Exhibition held in Ottawa, and
it was claimed that the said exhibition was a grand
success. But the next time the Provincial was
held in Ottawa the loss was such that it nearly
ruined the credit and honor of the Association,
and gave it such a shock that it still remains a
question whether the present Board will outlive
another sitting of Parliament.

It might be well to discuss this subject. We are
inclined to the plan of keeping pretty close to one
business. There is enough in agriculture to make
agricultural exhibitions a success. We had better
not interfere with Barnum. There is a time and a
place for all things.

Legislative Agriculture.

Probably the first really important step taken by our Legislature intended for the advancement of agriculture, was the establishment of the Provincial Board of Agriculture and Arts. The inception of this Board was brought about by a few energetic gentlemen of honor and ability. Their first steps were taken without Government aid; they subscribed liberally themselves; they devoted their time and abilities freely; they obtained voluntary contributions, enlisted the aid of Americans, and got up an agricultural exhibition in Toronto which was so successful that the Government took it up and founded the Provincial Board and the Provincial Exhibition. They both increased in popularity and in utility for many years, but poor mortal man has always been fallow—

owner increases a greater opportunity is afforded to use such power for selfish purposes rather than for the public good. No honorable person will pretend to deny the fact that this has been the cause of the general complaints made against the Board and against their management. Many of the members of the present Board are undoubtedly honorable men, and desire to do their duty; but duty may sometimes place one in a very disagreeable position. People would rather give and receive a few favors from those with whom they may be working than make exposures and cause hard feelings. The original Board has been increased in numbers, with the object of giving it more power. The increase in numbers has not been objected to by the members, and the Government has laid great stress on the recommendation of this Board for increased expenditures of the public money. The numerous grants, and the large proportion of those grants that have been absorbed by the members of this Board in so many ways, should cause us to consider whether the receivers and payers should fill the same office—or rather, have we not been creating an army of recipients and giving them power to do as they choose in regard to collecting money, information, etc., and using the influences as they choose? Should we not consider whether such sums of money as were granted for the use and encouragement of the plain, practical farmer, have not been used, perhaps inadvertently, against his interest?

It has now become plain to every one that changes must take place, but what those changes should consist of should not be too hurriedly decided, as many changes heretofore have been. There is ample time before the next session of Parliament for measures to be brought before the public and openly discussed. Some one, at least, of all the members should openly and clearly express themselves both in regard to the past and future of this institution in some of the journals devoted to agriculture.

It is our opinion that very little good is done by grafting on the end of an old overgrown vine. This is what has been attempted for years past. The vine had borne good fruit; would it not be better to give it a thorough pruning both in root and branch? The husbandman would prefer this course rather than to dig up and plant an unknown vine that might bear only inferior or sour fruit. The root is good; it is the suckers that have overgrown and sapped the fruitful stem. The mere advocating of expenditures is easy and may suit many, but accounts of past expenditures should be first satisfactorily explained by any one advocating more expenditure.

Now is the time to subscribe for the ADVOCATE. New and interesting features next year.

English Letter No. 31.

[FROM OUR OWN CORRESPONDENT.]

Liverpool, Oct. 5.

Taken on an average, there is no very grievous fault to be found with the English climate; but, unfortunately, we have no regularity in the weather except in one thing, and that is its uniform irregularity. The pouring wet of August, usually one of the most settled months, has been succeeded by a September and early October of great warmth and brilliancy, and in Scotland and the north of England the farmers have been able to get in their cereal crops in fairly good condition. The root crops are almost uniformly good, and the pasturage continues exceptionally good and plentiful.

Trade matters between this country and the Dominion pursue an even course just now, with little or nothing calling for special notice.

The Hon. J. H. Pope, your able and practical Minister of Agriculture, has lately been making some important additions, through an agent well up to the work, to his splendid herd of Polled Aberdeens. These animals will form an exceedingly choice lot, and leave to-morrow by the SS. Dominion for their destination at Eastview. This fine addition to the Eastview herd includes the following: Charmer III, bred by the late Mr. M'Combie, of Tillyfour, and purchased for one hundred guineas at the recent sale of the Marquis of Huntley's stock; Mary of Balquharn, bred by Mr. Adamson, Melon; Princess of Montbleton; the heifers, Princess Dagnar, Fairflower, Gretchen, Beatrice of Canada, bred by Mr. M'Combie; Pride of Endovie, Annie III, Princess of Paris and Canada Lass.

Shorthorns, judging by recent sales, would seem to be rather going out of fashion. Mr. Chandos, Polo Gell, one of the leading breeders in this country, recently sold his herd by auction, at his seat in Derbyshire, and though the company included the elite of the Shorthorn society and other knowing ones, and the animals offered included representatives of some of the most celebrated families in Shorthorn history, the highest price reached was 360 guineas, and the average was a very moderate one indeed. On the other hand, however, I hear that Mr. R. Gibson, of Ilderton, is in England, and will sail towards the end of the month with a very valuable draft of Shorthorns, for some of which he has been paying quite fancy prices—one animal figuring, I believe, for something like \$10,000. Of course, these animals are real "cracks."

I am very glad to notice a number of Canadian buyers in the market for Shropshire Down rams. Their purchases will be hurried forward in order to reach Canada in time for the season. Prices in the cattle trade are ruinously low for beef, both alive and dead; but for mutton are good. Public men speaking on agricultural topics in this country lately have been pointing to the production of mutton and barley, as the sheet anchor of the British farmers. As Canada is their only formidable competitor in these things, it behoves Canadian farmers to have their wits about them, and to give special attention to the production of mutton and barley.

This week a number of cattle have arrived from Canada by way of Boston, and will, of course, have to be slaughtered at this port. The reason why they came by Boston is obvious. The freight from Boston is only \$6 per head for cattle, as compared with \$22 from Montreal; and 4s 6d for sheep, as compared with 8s to 10s from Montreal. Again, as a set-off against the slaughtering clause, the great railway companies here are charging 25s per ton

for dead meat shipped to the London market, whilst Irish and home beef has to be paid for at 50s, or exactly double the former rate. This is a real grievance, and the British farmers, I expect, will not be slow to make it known.

The chief feature in the horse market is the scarcity of first-class heavy stallions. The various shows up and down the country, as well as the difficulties of would-be purchasers for foreign and colonial markets, conclusively prove this. So many good animals have been sold to leave the country that a real want has sprung up at home. Canadian dealers are anxious to buy now in order that the sires may be got out to their destination in good time for next season.

Messrs. Woodall & Co., fruit merchants of this city, recently sent out a circular to the trade to inspect imports of fruit, tomatoes, melons, etc., packed under the new patented process of Mr. George Cochrane, of Montreal. Great surprise was expressed at the complete success of the process. A great trade is at present being done in tomatoes from Spain and Portugal; but these are packed in barrels of sawdust, causing great loss of space and frequent injury to a whole barrel from the decay of a few. In Mr. Cochrane's patent the fruit is first subjected to a process which arrests any tendency to decay, and it is then packed almost solid, effecting a great economy in freight, enabling Canadian fruit to compete on at least equal terms with the European productions. The specimens recently arrived appeared as firm and fresh as if they had just been taken off the vine. The invention indicates a complete revolution in the fruit trade, and the great extension of an already important industry in the warmer sections of the Dominion.

The "Fair" Trade movement is making progress in this country, notwithstanding the fierce attacks which are made upon it and its promoters from quarters many and mighty. A feature of the movement, not without its significance, is that it seems to be independent of any political limit, but to have amongst its advocates as many Liberals and Radicals as there are Conservatives and Tories. If Lord Beaconsfield were alive now he would wait till the movement had made a little more headway; he would have taken it under his "protection," and educated his wavering followers to the necessary pitch. It remains to be seen how Salisbury and Northcote will deal with it. Of course, it is not to be supposed that Gladstone and Bright will deviate one inch from the Free Trade ticket. As pointing to a commercial federation with the colonies, I cannot but regard the movement as fraught with a meaning of the utmost significance to the Dominion.

My Silo.

BY R. SHAW WOOD, WOODHOLME, ONT.

In the year 1855 or 1856, I am not certain which, I was in France about to take the train on one of the roads leading through the vine country. My custom in European travel was as second or even third class; but a gentleman with me, who had only travelled in the States, insisted on first class tickets in this instance. I yielded; but on reaching the train I found a solitary old gentleman, apparently a General, in the first. I told my companion he could go in the first, but that, as I was travelling to see the country and people, I should go in the third, which was of open seats on the top of the first class carriages. The guard, taking my first class ticket, I mounted, and there found a crowd of travellers, English, German and French, and a very jolly, pleasant set they were. I was seated by a German gentleman, who had travelled very extensively and possessed a vast store

of information, which he was ready to give his fellow-travellers the benefit of.

Passing through the vineyards, I was struck with what I thought peculiar cultivation of peas. I remarked on it, and was laughed at and informed those were vines. They were trained to stakes about three feet high, and though perhaps a hundred years old, were not allowed to grow higher or bear more than half a dozen bunches of grapes, completely upsetting my ideas of vineyards of high trellis work, forming arbors covered with luxuriant vines, the rich clusters of grapes waiting to be plucked by the dark-eyed beauties, etc.

My German acquaintance continued the subject of agriculture, alluding to various customs of different countries, and among others mentioned a method of preserving maize, clover, and other succulent plants in vogue in Hungary. He described it thus:—

A well drained knoll being chosen, a long pit was dug about five feet wide at the bottom and of the same depth. This is filled with fresh cut green fodder, tramped down and covered with straw, and then the clay heaped over and well packed on it. It is fed during the winter, coming out a greenish-brown mass, of a sour but pleasant odor, and greedily eaten by the cattle.

I had a vivid remembrance of sourkraut, so delightful to German taste, and thought that, although it was a mode worth noting, yet to use it we should require Dutch cattle to eat it, as no respectable English cow could be expected to do so.

Some years after, on coming to Canada, I found the question of wintering stock a very serious one, and recalling to mind this German mode, determined to try it on removing to this neighborhood. In 1877 I raised a quantity of kohlrabi, and thinking it a pity that the leaves should be wasted procured twenty hogheads which I sank in the ground, filled with the leaves salted and tramped in, and covered with boards, on which the clay was put to weight them and exclude the air. About four of these were used as feed, but not finding it satisfactory, as the bulge of the casks prevented the covers being close enough when settled, the remainder were not opened until 1879, when I commenced to dig the pit for my present silo. In doing this we took up the casks and found much of the fodder in good condition, which convinced me that it would answer if properly done—that is, well closed and sufficiently pressed. My pits were dug but not completed until 1880. I had, from reading, found that it was necessary for complete success that the fodder should be cut very fine and very heavily pressed.

Goffart, having a low wet situation, was compelled to build his silos above ground of masonry, laid in and plastered with Portland cement. The maize cut very fine; well tramped in; covered with plank closely fitted, but not united; which were covered with clay to render the covering air tight, and weighted with stones.

The Americans who have adopted this system usually choose a side hill; also using masonry laid with water-lime, and in some cases using rubber around the covers to make them air tight and screws to give the required pressure.

Mine is a pit thirty-two feet long, ten wide and eight deep; divided into four compartments by double boarding, the sides lined with boards; a space of fifteen inches between the boarding and bank filled with concrete; the bottom of clay; covers of double boards bolted on heavy frames, fitted as close as the raising and lowering will allow; no other means of rendering them air tight is used. They are weighted with as many logs as possible.

The maize, "Chester County Dent," a variety that does not mature in this latitude, but gives a large amount of fodder, is mowed when flowering with a reaper and cut with a Watson cutter, specially made to cut to one-eighth of an inch. Two teams mow, haul and cut four loads a day. This is put in one compartment, the cover lowered and weighted. They are thus filled in successive layers, requiring about forty loads. When opened on the first of January the fodder was of a greenish-brown appearance, of a decidedly alcoholic odor, resembling brewer's grains. A layer, furnishing a week's supply for thirty head of cattle, was taken out, put in a close feed box or room, and underwent a further fermentation. The covers and weights are replaced. I would here caution to guard against the gas on entering a deep pit.

This mode of preservation is especially suited to maize, the fermentation rendering its starchy substance soft and nutritious; also the chemical change the constituents undergo—the yield also being larger than any other fodder. It increases the production of milk, but I doubt if it is a beef producer although it will carry the stock well through the winter, which, I need hardly mention, is a very important matter in Canada.

Why are Ewes Shown in Pairs:

BY JOHN C. SNELL, EDMONTON, ONT.

Having been called upon in several cases during the late fair season to act as judge in the sheep classes, I have been confirmed in an opinion I have long held, namely, that there is no good reason why ewes should be required to be shown in pairs and not singly, as in all the other stock classes. Would it not be just as reasonable to require that sows, or cows, or mares should be shown in pairs? It is almost impossible to find two ewes that are equally good, and in passing on such exhibits judges are compelled to offset the merits of a superior animal by the defects of its companion. And so it often happens that the best individual animal in the show does not get even a second prize, while, if shown singly, she would have won the highest honors, and all will agree that the best ought to win every time.

I have mentioned this matter to a good many of the exhibitors of sheep, and they have almost invariably approved of the change suggested as being right in principle. I believe it would be more convenient for exhibitors, and I am sure it would be more satisfactory to judges; for it is much more difficult to decide upon the best two than upon the best one, especially if there is an exceptionally good one in one of the pairs. The only objection I have heard, and it has come not from exhibitors but from officers of the fairs, is that it might reduce the number of sheep brought out for exhibition. But now that at most of the larger fairs prizes are offered for the best flock or pen, of say one ram and six or more ewes, exhibitors competing for these must bring out a good representation to have a chance of winning a flock prize.

The Illinois State Board of Agriculture, some four years ago, at the request of the State Wool Growers' Association, adopted the plan of giving prizes for single ewes, and it gave such general satisfaction that they have continued the rule. The Kentucky and the St. Louis Fair Associations also give prizes for single ewes. The poultry associations have also adopted the principle and now give prizes for single birds, deeming it unfair to hold even a game cock responsible for the plainness or faults of his hen-wife, or vice versa.

I respectfully submit this idea, the result of experience and observation, for the consideration of breeders and exhibitors, and also of managers of agricultural societies, hoping that if it meets their approval, they will take the necessary action to secure its adoption.

Pleuro-Pneumonia.

The U.S. commissioners appointed to investigate the causes of the propagation of the cattle disease known as pleuro-pneumonia met at the Sherman House, Chicago. A large number of communications relative to the disease were read, but it was noticeable that all of them were from eastern points. In fact, Dr. E. F. Thayer, of West Newton, Mass., as well as Prof. James Law, of Cornell University, stated freely that such a disease as pleuro-pneumonia did not exist among the western cattle. They say the disease is contagious, but that all investigation shows that it is brought here by foreign cattle. The farthest place west where the disease has penetrated is Elmira, N. Y., and even at that point there was but one case, while there are doubts even there that it was a genuine case of the dreaded disease. Prof. Law is firm in the faith that the disease is contagious, however, and in this view he is endorsed by his associate. As proving the fact, the latter says that under the direction of the Governor of Massachusetts, stables thoroughly ventilated were built, and cattle some distance away caught the infection from the animals purposely introduced. The gentlemen cannot believe that either will feeding or close quarters have the least to do with the disease, and would impress upon the public that the thing to do in the premises is to stop the probable spread of an imported infection. Dr. Thayer says that he has no statistics upon which he might state that any particular breed of cattle brought the pleuro-pneumonia to this country, but he considers it of the utmost importance that its ravages should be checked at the earliest possible moment. The gentlemen visited the Stock Yards and endeavored to impress upon the dealers the fact that the cry of diseased cattle from the cause mentioned is costing the U. S. not less than \$2,000,000 per annum in England alone.

A report has recently come from Washington, U. S., to the effect, that the commission has failed in its object; having very limited means they endeavored to obtain information from the State authorities, but found them very apathetic. If the above dreaded disease has not already gained a foothold in the Western and North-western States it is passing strange, as thousands of calves are each year shipped from the eastern sections to the west, or non-infested States, as they are called. This has been going on for years, and at the present time no restriction, to our knowledge, has been placed on the trade, and we know of no reason why thousands more will not be shipped from the infected to the non-infected States this fall. If, as the commissioners say, pleuro-pneumonia does not exist in the west today, what proof is there that it will not exist there a month hence? Some Canadians are in favor of importing cattle from the west into the Dominion, but we utterly oppose this. We are quite free from all diseases of a dangerous or contagious nature; but if we deal with our American neighbors how long can we hope to remain so? or, can we claim to be free if we import animals in which we have reason to suspect the seeds of the disease exist, or may, be lurking for aught we know? We are in favor of the Canadian Government exercising at all times and places the most rigid prohibitory measures against American cattle. If the cattle exported from Canada were subjected to the same conditions as those exported from the United States, the Canadian farmers would lose at least \$20 per head on all exported to England.

The attention of our readers is called to the article on Stilton Cheese in the Correspondence Department.

Live Stock at the Provincial Exhibition.

(Continued from October Number.)

In the sheep department the show of Cotswolds was very good. There were 153 entries, and there must have been more animals on the ground than there were entries, a number being brought for sale and not for exhibition, and, therefore, were not all entered. The animals exhibited were of very superior quality and the competition for the awards was keen.

Mr. James Russell, of Richmond Hill, Ontario, had on exhibition twenty-three head, consisting of six rams and seventeen ewes of various ages, the majority of them being imported. The entire lot were well fitted for show. His aged ram was an exceedingly large and heavily-wooled animal with a good constitution. He won 1st prize in his class this year and the same last year. Mr. Russell's aged ewes were also very good and have been prize winners in England and three times successful competitors at the Ontario Provincial, including this year, when they won 1st and 2nd in their section; his yearling ewes won 2nd. On a yearling ram he won 1st. This animal was recently imported from England and his feet and legs were somewhat sore from the voyage. From this cause he did not appear to advantage. He is an exceedingly good animal—large, handsome and well-wooled, was bred by Mr. Swanwick, of Gloucester, England, and was recently imported by Mr. Arthur Johnston, of Greenwood, Ont., who sold him to Mr. Russell for \$275. Mr. Russell's flock won two flock prizes (all that were offered in this class).

James Main, of Trafalgar, also exhibited seventeen very choice animals, all of which had recently been imported from England. The lot consisted of two yearling rams, both of which were prize-winners; three ram lambs, which won 1st and 4th; six yearling ewes, which won 1st and 3rd; two aged ewes; and four ewe lambs which were awarded second and third prizes.

Mr. Thos. Teesdale, of Concord, Ont., exhibited seven head, all lambs, and though the number was not large they amply made up for their lack in this respect by their superior quality. Seven as good lambs from one flock are seldom seen. An expert might pick the country over, visiting all the best flocks in it, and we feel doubtful if as many lambs of equal quality would be forthcoming. They were very large and the quality of their wool was excellent. At the time the show was held some of them would weigh quite 200 pounds and none of them much less. They were bred by the exhibitor on his farm in York county, and we may therefore claim them as a Canadian product. They were successful in the show ring.

Mr. J. Franks, of Dorchester, Ont., had on exhibition fourteen head, which were not highly fed, but were a very useful lot. All, with one exception, were home-bred.

Mr. P. McLavie, of Jarvis, Ont., made a good display of fifteen head, and won a few prizes.

Mr. John C. Ross, also of Jarvis, exhibited fourteen head, some of which were imported. This flock was not highly fitted for exhibition, but was in that condition which is most profitable to the general farmer. Mr. Ross' entire exhibit was good, but especially worthy of mention were his yearling rams and ram lambs.

Messrs. F. & H. Shore, of White Oak, Ont., had fourteen head on exhibition, five of which were imported from England, and the remainder were bred by themselves. This lot was also in what is known to breeders as a half-fitted condition, and was, like Mr. Ross', a very profitable kind of sheep for farmers who are dealing in long-wools to buy.

Mr. H. Rawlings, of Ravenswood, Ont., exhibited fourteen, and Mr. Humphrey Snell, of Clinton, Ont., six, all of which were nice animals, but not fitted for exhibition.

LEICESTERS AND LINCOLNS.

Why these sheep are divided into two classes we fail to see. Some tell us that the Lincolns are a larger, coarser and better-wooled sheep than the Leicesters. This is a general supposition among the farmers, and in reality it is true; but in this country the two breeds have become so much alike that in many cases at our shows it is impossible for a person who does not know to whom the sheep belong to tell whether the owner calls them Lincolns or Leicesters. So much alike are they that some exhibitors, who have but one flock of sheep, enter in both classes, and show their coarser sheep as Lincolns and the finer ones as

Leicesters. Some even go further and exhibit in the class where there is the best chance to win a prize. We believe that if there were but one class in place of the two which now exist, the Association would effect a saving and the country lose nothing. This year there were entered 184 Leicesters and 153 Lincolns. A number of very choice animals were shown in the two classes, being better in quality and perhaps more in number than usual.

Mr. Andrew Murray, of Clanbrassil, Ont., had on exhibition twenty-seven choice Lincolns and won fifteen prizes, including the flock prize. They were well prepared for the exhibition, and considering the large number, this was one of the best flocks of any breed at the exhibition.

Mr. John Kelly, of Shakspeare, Ont., exhibited nineteen Border Leicesters, two of which were imported and the remainder home-bred. This flock won eight prizes, including the prize for the best flock of Leicesters.

Mr. Wm. Whitlaw, of Guelph, Ont., displayed fourteen Leicesters of the same family and won nine prizes. The last two flocks were very much alike in appearance and were a credit to their breeders and to the province. The aged sheep were large enough, of good symmetry, and carried very nice fleeces. The yearlings and lambs were large and well-matured. Like Mr. Murray's they were also among the best flocks on the ground.

Mr. Wm. Somers, of St. Marys, exhibited twenty-one large, strong sheep and took seven prizes.

Mr. W. Walker, of London, Ont., had a very nice flock of seventeen, and was a prize-winner. This flock was also well fitted for competition and made a very good display.

Mr. Henry Hammond, of Brantford, Ont., exhibited twenty head. They were useful sheep, but in rather lean condition.

Mr. H. Snell, of Clinton, exhibited six head. Mr. Humphrey, four; Mr. Hall, of London, three; Wm. Wadham, of Yarmouth; seventeen; and a few others made a creditable display, but their sheep were not highly fed.

SOUTHDOWNS.

Mr. John Jackson, of Abbington, Ont., exhibited twenty-five head, five of which were imported from England, and the remainder Canadian bred. This exhibit was very fine, several of the animals were of exceptional excellence. Mr. Jackson's flock took four first, three second and two third prizes, including the special prize known as "The Prince of Wales' Prize," which was this year given for the best flock of Southdowns consisting of ten animals of various ages.

Mr. H. H. Spencer, of Brooklin, Ont., made a display of twenty Southdowns, fifteen of which were imported and the remainder bred by the exhibitor. Mr. Spencer's herd made a very fine appearance, and won three first, one second and three third prizes.

Mr. D. Perley, of Paris, Ont., exhibited a flock which numbered twenty-four; all of them Canadian bred. They made a very nice appearance. Though not in high condition, they won a share of the awards.

Mr. T. W. Stone, of Guelph, Ont., exhibited two, and Joseph Salkeld, of Stratford, Ont., twelve head, all of which were rather nice but not in proper condition to be successful in the show ring.

SHROPSHIRE AND OXFORD.

The Shropshires and Oxfords were shown in one class, and although the Board were made aware of the injustice of this course they could not be induced to make other arrangements at all acceptable to the breeders. It seems rather strange in cases where separate classes are not really needed the Association should be so conservative as to maintain them for years after their usefulness is gone, and when new classes are needed they should be so slow to act.

Messrs. Beatty & Miller, of Clarmont, Ont., exhibited twenty-nine head, the majority of which were Oxfords and the remainder Shropshires. This flock won the greater part of the prizes awarded to this class. Their exhibit was very good, especially their Oxfords, which were very large and of superior quality. The entire lot arrived from England but a short time before the show.

Mr. H. H. Spencer, of Brooklin, Ont., exhibited a flock of fourteen Shropshires, all of which were also recently imported for England, and like the above flock, all the animals were very good, especially his yearling ewes, yearling ram and aged ram.

Mr. Hodgson, of London, Ont., had four very good Shropshires on exhibition.

Never at an Ontario Provincial were there

so many Downs exhibited or so many change hands, and we may safely say that those shown were much superior to anything heretofore seen at any Canadian fair. The number of entries were—Southdowns, 107; Shropshires and Oxfords, 55. Although the Down exhibit was in every way superior, the flocks of some of the old and prominent breeders were conspicuous by their absence. prominent among those was the flock of Mr. Robt. Marsh, of Richmond Hill, Ont. Mr. Marsh, like many others, objected to so long an absence from home.

MERINOS.

The published prize list this year contained no class for these sheep, but, as a number of them were brought to the show, the Directors allowed a special class to be made. Twenty-six entries were made. Rock Bailey, of Union, Ont., was the principal exhibitor, his flock numbering twenty-three. As most of our readers know, these sheep are small and produce a fleece of fine, short, oily wool. Mr. Bailey claims that his entire flock will average 12 lbs. of unwashed or 8 lbs. of washed wool per head, for which he receives the highest market price. For a long time the Merino breeders have claimed heavy fleeces. Mr. B. is no exception, he says that his breeding ram last spring clipped 28 lbs. of unwashed wool, and in the spring of 1880 24 lbs., which was only eleven months' growth.

Mr. Langton, of Sparta, and Geo. Hood, of Guelph, were also exhibitors in this class. Mr. Hood exhibited an imported French Merino ram, which was no doubt the best sheep of the breed on the ground.

The show of fat sheep was very good and Mr. Geo. Hood was the principal exhibitor. His flock numbered twenty; and included seven Cotswolds, three grade Oxford-downs, four Southdowns and one pure Oxford-down, and two grade Leicesters. A few other exhibitors showed some very fine Cotswolds and Southdowns. We were pleased to see representatives from so many breeds competing in this class.

In the section for aged wethers a pair of pure Cotswolds won 1st and a pair of Southdowns 2nd. The 1st and 2nd prizes for yearling wethers were awarded to Oxford-down grades; the 3rd to a pair of Longwools. The sweepstake prize for four best fat sheep was won by three Southdowns and an Oxford-down.

HOGS.

The number of hogs exhibited was not as large as in previous years, but the quality was excellent. Especially was this the case in the Berkshire and small white classes. Among the large white hogs there were several fine ones, but there were also some of inferior quality. The Poland China hogs, which to many Canadian farmers are a new breed, were pretty well represented; but the majority of those shown were not in high condition and did not make as good an appearance as they would have done had they been properly prepared for exhibition. In the Berkshire class there were 125 entries; small white class, 105; Poland Chinas, 56; Essex, 50; Yorkshires and other large breeds, 48.

The curculio of plum weevil is one of the aborigines of America. Dr. Fitch, formerly entomologist for New York, says it is unknown in Europe. Before the era of cultivated fruits it subsisted on wild plums, crabs and thorn apples, but it now attacks nearly all tree fruits, and in addition makes them a depository for its eggs where its young are bred. The wound it makes for feeding purposes will heal on most fruits when the fruit is small, but when approaching maturity it causes the tender sorts to rot, plums particularly, and where plums touch each other this rot is infectious. This explains why some fruits rot so rapidly when nearly ripe.

The "Chicago Herald" mentions a strange horse disease which exists in Illinois it resembles lock-jaw. The muscles of the horses neck become rigid, accompanied by a discharge of mucus from the nose. There is little or no fever, and a total inability to swallow. In making the attempt to do so the animals attacked will thrust their heads up to the eyes in water. Several horses have died.

An agriculturalist says that there is no substance that can be applied with so small a cost to a worn-out orchard as lime. It promotes flowering and fruiting by the influence it exerts in evaporating and concentrating the sap, and that when lime will not bring an old orchard into bearing again the probabilities are that nothing will do so.

Garden and Orchard.

Small Fruit Culture.

BY E. COTT.

It is a task not easily defined to state with precision just which kind of soil is positively best for the different classes of small fruits. We doubt not that different results will be obtained by planting the same fruit on different soils, and much more different by planting different fruit on different soils; but to say exactly which is the best for obtaining the best results is a question for scientific and superior investigation. At a former period in our experience, we most decidedly held the opinion that a fine, strong, well-drained sandy loam, rich in vegetable ingredients and not too loose, was the best possible condition of soil for strawberries and raspberries; but later on in our course of fruit culture, and as our observations widened in these matters, our opinion came gradually to a wide and material difference of caste, and now we strongly lean to a preference for a strong and well-drained clay loam for both these fruits, if not too much condensed.

One of our local growers has a small fruit farm established on just such a description of soil as this last, and the results of his plantings are all that could be desired—plenty of fruit, and of fine quality. If there is any advantage in favor of the sandy loam for small fruits, it may be on the score of wintering; for on this soil the plants do not appear so liable to frost and heaving as on the clay soil. The flavor, too, may be very much finer in fruits from sandy soil, but we most emphatically deny that the fruit may be either more or of better quality. Any of our clay loams, therefore, of proper texture and if thoroughly and systematically drained, are clearly suitable for the successful growth and development of small fruit plants and of the finest possible quality of fruit.

With these preliminaries we will at once proceed with our subject in hand, viz.: Character of Soil for Small Fruits; Its Preparation, Culture, &c. By small fruits we shall at present understand to be meant our popular berries, as strawberries, raspberries, blackberries, gooseberries, and currants, and for their successful culture we shall prefer a medium clayish loam, of a dark color and a crumbly texture, and very rich in vegetable matters in composition, and laying on a solid clay subsoil at the depth of from twelve to twenty inches from the surface.

We would prefer the surface to be nearly on a level, or, at the most, with merely gentle slopes to prevent severe washing from heavy and frequent rains. The whole must be thoroughly underdrained by laying at systematic distances hard-burnt clay tile, two inches in diameter in the bore, and from two to three feet under the surface. These drains should not be more than twenty or thirty feet apart, according to the dryness or wetness of the soil, and the whole laid with a careful reference to a good and efficient outlet. The mode of preparation consists in thoroughly cleaning the ground of all annoyances, as stumps, stones, sticks, etc., as impediments to the easy progress of the plow and the cultivator. Before the planting is done the ground must be thoroughly broken up to a depth of ten or twelve inches by good plowing and subsoiling, and after cultivation during the entire summer. For the soil I am now describing being in a virgin state and unexhausted, very little application of artificial fertilizers is required; but if the ground is worn out or in the least depleted of its vegetable fertility, those artificial stimulants must be most certainly applied with unsparring liberality. This application, in the main, must be made during the workings of the summer months.

The after culture consists, in the main, of a thorough and constant moving and stirring of the soil to prevent the effects of summer drouth and the progress of the least tiny weed. This point—the eradication of all weeds—must be most assiduously attended to from the beginning, and the success of the whole operation mainly depends upon the efficiency of this part of the work. Do not consider the weeds merely in the light of a curse, but rather as a blessing in disguise, and go at them with a settled determination of will. In the culture of strawberries for market the planting is generally proceeded with in the following manner:—The ground being, as described, thoroughly prepared, is then marked off in distances of three or four feet apart, entirely across the field, and the plants set in those rows $1\frac{1}{2}$ feet apart. The season for doing this is as early as the ground can

be profitably worked in the spring of the year. You have now your field nicely set with plants, at regular distances 2 x 3 feet apart, or 7,260 plants to the acre. The first season nothing is to be done but thorough cultivation and cleaning, and nothing is to be expected of them but to grow out, occasionally directing the young plants where to root as the runners push out. The object is to cause the young plants as much as possible to root in the rows, and there mass up and keep the spaces between clear for cultivation and gathering the fruit. In this system scarcely any fruit is matured the first year; but in the second year a very large and heavy crop is the result of thorough and patient care, and will amply reward all the labor and expense incurred. This method is continued two or three or more years, according to circumstances, and the whole is then plowed up and planted with some other crop, or the ground is thoroughly manured and again planted with the same fruit.

For planting in the hill system the ground is marked off 3 x 3 feet, or 4,840 hills to the acre, and the plants are carefully set at the crossings in the shape of a triangle, three plants to a hill. This makes a very nice plantation and is carefully and thoroughly kept, cultivated, and cleaned from all weeds, and the runners scrupulously kept closely out off. In this way, large and fine masses of fruit are matured the second year in large clusters around the hills. This system is much more expensive than the first, and nothing but constant watchfulness and labor can expect to be successful with it. The hills must be underlaid with straw as the fruit is ripening, to prevent it being damaged by contact with the neighboring earth, and so making it unfit for use. Both of these systems of strawberry-culture have their stern advocates; but we greatly prefer the first, as it seems more practicable for general field culture in a country like this, where every item of labor is intensely expensive.

For raspberries, gooseberries and currants, the land is prepared as before, and marked off 3 x 6 feet, or 2,620 plants to an acre, and the young plants placed in the crossings. The matter of planting raspberries is very simple and easy, and consists in merely placing the young plants, previously prepared, in their places with a spade and tramping them firm. The planting of gooseberries and currants, however, requires much more labor and care, as the plants used are fine, thrifty, two-year-old plants and have plenty of long fibrous roots that must be carefully placed as the planting goes on. Careful and constant cultivation must not be neglected, and regular prunings must be attended to. Blackberries are planted as are raspberries, but the distance apart for the plants must be far greater, or 6 x 6 feet, being 1,210 plants to an acre. For this fruit, being so rampant and irresistible in its growth, constant and systematic prunings are necessary and cannot be dispensed with for a season. If this is not attended to, neither cultivation nor fruit-gathering can be proceeded with with safety or profit. In a former paper on small fruits I have sufficiently indicated the varieties of these fruits preferable for the purpose of planting. I have, therefore, now nothing further to do in this paper than to throw out some hints on the profitableness of small-fruit culture and the condition of the market.

The demand for small fruits is annually increasing in most of our respectable country markets, and the difficulty of disposing of a fine crop of fruit is annually decreasing. It is this demand in the market that regulates the price of small fruits, as of every other commodity, and consequently determines the question of its profitableness. If a large crop of small fruit, as of anything else, is put upon a flush market, the profit side of the account sinks; but if the same crop can be put upon a keen market, the balance rises in grateful proportions. Again, the question of profitableness is determined by the method of culture, the location and nature of the soil, its location, etc., the skill in management, and the economy of gathering and marketing the crop.

By this it will easily be seen that the question of product is not by any means the only question in the profitableness of the crop. In all cases where the business is studiously and intelligently followed on from year to year with perseverance, good judgment and favorable circumstances, small fruit culture is universally found to pay, and amply pay the painstaking cultivator. Let none, therefore, be discouraged in their attempts, but wherever good, sound taste for the business exists, accompanied by a small amount of

capital at command, and a moderate amount of experience, any one may engage in it with an absolute certainty of being well repaid for their outlay in this direction.

Fruit Raising in New Brunswick.

BY S. L. PETERS, QUEEN'S CO., N. B.

To all lovers of good fruit, and who does not enjoy it, it must be with the greatest satisfaction that they have witnessed the increased attention that is being given to the culture of the many varieties of fruit for which our climate is adapted, and the rapidity with which our markets have been supplied with the most excellent quality of fruit of Provincial growth. It is but a few years ago since we imported about all the really good fruit that was consumed by our people, drawing the supply from our sister Province of Nova Scotia, and from the United States. So impressed were our farmers with the idea that our soil and climate were unsuitable for the growth and production of the better kind of fruit, that it was with the greatest reluctance and misgivings that they were persuaded to make the attempt. That the soil would produce apple, plum, and cherry trees, and give heavy crops of the poorest sort of fruit, they had abundant evidence in the old orchards of natural fruit, planted by the first settlers of the Province, particularly along the sloping banks of the valley of our beautiful river St. John, and its numerous tributaries. Our markets were filled with beautiful apples from Nova Scotia, and with smaller fruit from the United States. Our people were large buyers, and it soon became a question of importance whether we should continue to repeat the large importations of fruit year after year, or make the attempt to produce them for ourselves. We had tasted the sweets and enjoyed the luxury of good fruit, and would be satisfied with nothing short of the best.

Scarcely had the demand been created for grafting fruit trees for the best varieties, when our American cousins (ever on the alert to push their business and take advantage of opportunities) were on hand to supply the demand. Through the persuasive and often eloquent pleadings of agents of the "Rochester," and other nurseries of the United States, large sales were made to our farmers. For a few years of the grafted fruit trees they were cultivating, but from some cause (partially, perhaps, from the difference in climate and the want of that proper cultivation and care so essential to the growth of young trees) those who purchased them were sadly disappointed; large numbers of them died the second year after planting, and those that did live made but a sickly growth, and I question if to day, ten per cent of those imported and planted can be found alive.

Nothing daunted by the disaster which attended this attempt to grow fruit trees, and having learned wisdom by sad experience, a small number of our people had the courage to start nurseries in the province, cultivating those kinds which in their judgment would prove the most suitable to the climate. Notable, among those gentlemen, was Mr. E. P. Sharp, of Woodstock, whose efforts in this direction have been very successful, and who, we venture to assert, is entitled to the hearty thanks of our people for the great variety of fine healthy trees he has been able to supply. Mr. Sharp's success soon led others to follow his example, and now we have Mr. Milbary's nursery at Florenceville, Carleton Co.; Mr. Secord's and Mr. Slipp's in Queens, and the Sussex and Albert Co. nurseries. From these nurseries the people bought cautiously at first (in view of their past experience) but as soon as the fact was established that with proper care the trees growing here were sure to live and do well, they at once increased their orders, and it is a fact worthy of note, as showing the increase in fruit culture, that all the nurseries at present established in the Province are taxed to their utmost to fill the orders given by the fruit growers of the Province; while considerable quantities of trees are still sold by agents of Nova Scotia and United States nurseries. Experience has shown us that quite a large variety of apples can be successfully grown.

In autumn fruit we have the Early Harvest, Sweet Bough, Red Astrachan, and Duchess of Oldenburgh, or New Brunswickers, as they are familiarly known with us. The Duchess is, I think, without a rival with us in autumn fruit. Crisp, tender and juicy, with sprightly acid flavor while its rich crimson blush gives it a rich and attractive appearance. The tree is a prolific bearer, and as a September fruit it is exceedingly popular.

The Early Harvest is a very desirable early fruit for home use, but unless highly cultivated the fruit is often imperfect, making it unprofitable for market purposes. The Sweet Bough is a fine, early apple; it is white, tender, juicy and rich, but with me has not proved very productive. The Red Astrachan is an exceedingly beautiful apple and perfectly hardy; the fruit is nice, but like the Duchess, its season is short and must be gathered and used early, otherwise it becomes mealy. The tree is perfectly hardy and productive.

In early winter fruit, the Fameuse has no superior; fruit of medium size, and deep crimson when grown in the sun, flesh snowy white, tender and of delicious flavor; the tree is a vigorous grower, bears at an early age, and quite abundant, and it deserves more extensive cultivation than it has hitherto received. The Emperor Alexander is another of our early winter varieties; fruit large with a nice crimson blush, and fine appearance; flesh not so fine as the Fameuse, but having a nice, pleasant flavor; notwithstanding its deserved popularity, I think it is only entitled to second place among our early winter fruits. Sops of Wine is cultivated to considerable extent, and is quite equal to the Emperor in every respect.

Prominent among our list of late winter fruit, are to be found the Golden Russett of Western New York, Yellow Bellflower, or Bishop Pippin, Northern Spy, Pomme Gris, Ben Davis, Strawberry Pearmain, Talman Sweet, Nonpareil, Rhode Island Greening and American Baldwin. The Golden Russett I have found to be a most desirable winter fruit, keeping until June in perfect condition. Flesh firm and crisp, yellowish white, flavor mild and pleasant. The tree is a vigorous grower and fairly prolific; should be extensively cultivated.

The Bishop Pippin is large, of a superior quality, oblong, and quite irregular in its formation. The flesh is tender, juicy and crisp, with a sprightly acid flavor. The tree with me has thus far proved a very vigorous grower, and perfectly hardy, but rather a shy bearer, shedding its fruit to a large extent when about the size of plums. In Nova Scotia the tree is immensely productive and is one of the standard fruit growers. It is to be found in every orchard in that Province.

The Northern Spy with us is a hardy, thrifty and upright grower, moderately productive, but very tardy in coming into bearing, requires high cultivation and quite severe pruning in the centre of the tree to give it a spreading form. The fruit is of the highest order, peculiarly fragrant and delicious, and retains its freshness like an autumn apple. It is of good size, pale yellow in the shade, with stripes of purplish red next the sun; the flesh is white, fine grained, and very tender and juicy. Those who are willing to wait from ten to fifteen years for a splendid sample of fruit should plant at once. One need not expect good fruit sooner. No orchard is complete without a number of trees of this variety.

The Pomme Gris, so far as my knowledge extends, is not very extensively cultivated in the Province, but richly deserves a place in all well stocked orchards, on account of its late keeping qualities and excellent flavor. In size it is below medium, skin rough covered with russett. Nice from January to June.

Ben Davis has been but recently introduced, but thus far has given good satisfaction; the fruit is striped with red, and bright red next the sun, rather above the medium in size.

The Strawberry Pearmain, introduced by the Nova Scotia nurseries, is one of our finest fruits. In size, large, pale yellow in the shade, with a beautiful crimson blush next the sun; skin beautifully dotted resembling a strawberry in appearance. The fruit is of the highest excellence, retaining a peculiar freshness and delicacy until late in May. The tree is a vigorous grower and perfectly hardy. No orchardist should be without it.

Talman Sweet is a good keeper and pleasant flavor; not much for a market apple, but nice to have a tree or two for house use. The Nonpareil is a good winter fruit, medium in size and of good quality. Rhode Island Greening is giving good satisfaction as a late keeper; it is among the very best, and is a choice dessert fruit when well cultivated; the tree is productive and a thrifty grower. The Baldwin succeeds well and gives good satisfaction.

With reference to the culture I have found that apples, like all other crops, are greatly benefited by constant care and good cultivation; indeed I am convinced that orchard culture cannot be a success without judicious pruning and good culti-

vation. I am happy to state that I am not alone in this respect, as there are thousands of our orchardists who have by experience in the variety of methods learned that their efforts in that direction can only be crowned by success when their orchards are carefully attended to by proper pruning and good cultivation.

I notice that very many of our farmers in planting out their young orchards are placing the trees from 8 to 15 feet apart each way. In my opinion this is a great mistake. I have invariably planted them 33 feet apart each way, and hope at no very distant day to see their branches sufficiently close to each other for the cultivation of first-class fruit. Besides it gives the advantage of easy cultivation. From 8 to 15 feet may answer when they are quite small, but after some ten or fifteen years have elapsed (if the trees grow as they should) they would present much the appearance of a thicket of brushwood, with branches woven and interwoven so as to entirely exclude the sunshine, that is so essential to bring all kinds of fruit to the highest point of perfection.

In the Province of Nova Scotia, where they have given the subject of fruit culture much consideration and have been very successful fruit growers, I find that it is the practice to plant their trees from 25 to 33 feet apart. I am aware that there are many advocates of the close planting system in the Province, but at the risk of incurring their friendly criticisms I protest against it.

Little is being done to extend the cultivation of the crab apple, as it is not considered profitable, the present supply being quite in excess of the demand. The Golden or Wax crab, Transcendent, Siberian, etc., are among the varieties grown.

As yet but little has been done in pear culture. Some of the hardier sorts however have been introduced and the result is awaited with interest. Probably the climate of our Province will not prove so congenial to their growth as that of our sister Province of Nova Scotia, where they grow to great perfection.

The culture of small fruit is largely on the increase. Some ten years ago the culture of strawberries was attempted by D. P. Wetmore, Esq., of Clifton, for market purposes, and so successful has his attempt proved, that whereas in 1871 we were importing all the cultivated strawberries made use of by our people from the United States, we are now supplying our markets and shipping large quantities to Halifax, Quebec and Boston. Many of our farmers have gone into the cultivation of small fruit, encouraged to do so by the success attending Mr. Wetmore's efforts. Their plantations are gradually extended from year to year, with ready markets for all that is produced. The principal varieties cultivated are the Wilson's Albany, Charles Downing, Col. Cheney, and Downer's Prolific. The interest in their cultivation, as also of raspberries, gooseberries, etc., is increasing.

November in the Garden.

There is less to be done in the garden this month than in any of the fall months. Nature seems to have commenced her long sleep, to awake with renewed vitality in the spring. There are, however, some things even now to be done. Not only have we to preserve the fruits of the past season, but we can do much in preparing for the future by being beforehand in your spring labor. Digging, or, better still, trenching. No vacant spot should be neglected now, if it has been left undone in October. Throwing up the land in rough ridges makes it more fertile and friable. There is latent richness in almost every soil that can be made available.

Asparagus beds should be prepared for winter by giving a good covering of stable manure, the coarser part to be raked off in the spring, and that remaining to be forked into the soil. The plants are hastened in growth and improved in flavor by a top-dressing of salt. Lettuce and radish may still be sown in a cold frame for an early spring supply, though October would have been more suitable. A great benefit from turning the soil in October or November is the destruction of many injurious insects, especially about the roots of fruit trees, bushes and vines. It will kill many, and thereby prevent the increase of many more. Their winter quarters are broken up by the operation, and many of them killed and frozen and exposed to the birds, their great exterminators.

Pruning.—The best season for pruning is summer; but it may have been neglected, or even if attended to at the proper season, there may be some branches to be cut away. The object of pruning in the fall is to cause branches to push out with

greater vigor in the spring. The time for fall pruning is when the leaves have fallen. If this month be mild the pruning-knife may be used even now. If it be necessary to saw off large branches, smooth the scar and paint it, in order to keep the wet from penetrating it and causing rot. Hedges should also be attended to. Branches that are straggling or too forward may be pruned with a knife—not with shears.

Unhealthy Orchards.—One cause of unthrifty trees is the poverty of the soil. This may be remedied by a liberal topdressing. A more efficacious method of supplying the trees with food is the following: Dig a circle round the tree about two spades deep, and from four to eight feet from the stem. Fill this circle with rich compost. This will supply the root at once with the needed food. We have often practised this method of feeding fruit trees, especially currants and gooseberries, and found the improvement the following season. We generally add over the compost and round the tree a coal heap. To this enriching of the soil should be added a pruning out of all decaying branches, scraping off the old, loose bark and moss, and washing the trees with a solution of soft-soap and sulphur.

Planting Trees.—Planting in autumn or spring has each its advocates, as each season has its advantages and disadvantages. The careful transplanting is, however, of greater importance than the season. If the weather remains mild and the ground in good condition, trees may be still transplanted. All newly-planted trees should be protected by having a mound of earth placed around them to some height. This is a preservative from mice, from frost, and from being disturbed by winter and spring winds. Gooseberries, currants and raspberry bushes may be transplanted even as late as this month in preference to waiting until spring.

Preserving Grape Vines.—For the winter or annual preserving of grape vines the best time is as soon as the wood is ripened in the fall. They should be protected sufficiently before the frost.

The Window Garden.—Plants for the window should have been taken up before the first of last month. Watering them is a very important operation. Plants are often injured by injudicious watering. If the plant be in vigorous growth there is but little danger of giving it too much watering. If the plant has been out back or lost its leaves water should be given sparingly. The insect that is most injurious to house-plants is the aphid, or plant louse. The plants infested with them should be immersed once or twice a week in tobacco water, made to a strength having the color of strong tea; or when the plants are large they should be syringed with it instead of being immersed.

Bulbs.—If the weather continues mild and the soil be in good condition, bulbs, the planting of which has been neglected in October, may still be planted, and the beds should be protected by a coating of forest leaves before the ground be frozen.

Squash Seed.—The seed of the squash continues to ripen after the squash is removed from the vine, and it is better to leave them in the squash for a couple of months before removing so that they may be thoroughly ripened. They should be cleaned without water, if possible, and thoroughly dried. Seed so preserved will keep its vitality for four or five years.

Indian Corn for seed should be carefully selected and preserved. The necessity of this has been exemplified this season. The Ohio Board of Agriculture estimates the loss in the corn crop in that State on account of defective seed at 40,000,000 bushels. The loss in the corn crop of Illinois from the same cause is put at 60,000,000 bushels. This proves that too much care cannot be given to selecting and preparing seed corn.

PETROLEUM ON TREES AND BUSHES.—Dr. H. Gibbons, at a recent meeting of the California Academy of Sciences, said that since he put petroleum on the trees in his garden they had grown better and faster than ever before, and given better roses than before. The petroleum seems to kill the scale insect. The handsomest rose he exhibited was from a bush which looked nearly dead a short time before. The petroleum was mixed with castor oil. It is applied sparingly, and great care is taken that it does not run down the roots. Perhaps in a crude state the petroleum would be bad, even on the stalks; but mixed with the castor oil it appears to be advantageous to the plant.

What is Good Grape Culture.

A friend joyfully told us a few days ago of his anticipations in the grape way. He had bought a little place in the vicinity, and had made up his mind to have things right. His maxim was that what was worth doing at all was worth doing well, and he meant to do it. He had done it. He had dug out the dirt three feet into the clay, and had filled it in with light rich compost, through which the roots might push their way in ease and comfort, and live on the fat of the land. He had spent considerable money in doing the job well. He intended to get only the best vines, and felt sure such an expenditure would result in magnificent grapes and plenty of them. He had done his work well.

It is strange that such a course as this should ever have been recommended by horticultural writers, but it is a fact that they have. Grapes are now so easily and cheaply grown—fruit often four and five cents a pound—that we had wellnigh forgotten that this was the standard advice of the books years ago. But our friend produced it in black and white from the pages which he had chosen as an authority, and then we knew how it was in the olden time.

Now, our readers at least would know that instead of such a proceeding as this being an evidence of doing it well for the grape, it is simply an act of folly. The grape root needs to be warm and dry, but this deep well in the clay encouraging the collection of water from all around it has just the contrary effect. The roots are damp and cool and not warm and dry.

Indeed, it is only of late years when people have given up all this expensive foolery that grape culture has become a tolerable success. Under the old plan we have failure after failure, so that we came to believe only those varieties which were little removed from the wild fox or the frost grapes could be grown. But now we have the finer kinds getting quite common. As soon as we gave up this deep trenching nonsense, grape culture—real grape culture—took a fresh start, and this real culture consists in little more than planting a vine in good earth of less depth than we would say ordinary tree and see that it does not suffer for want of food. This is good grape culture in a nutshell.

Poultry.

Description of Farm Poultry.

(Continued.)

BY R. A. BROWN, CHERRY GROVE, ONT.

There are two varieties of Brahmas—Light and Dark. The Light Brahma is the farmer's favorite, being readily sought after on the market on account of their large size, yellow skin, and rich, juicy meat. Color of plumage white; neck hackle silvery white, with a dark stripe down each feather; tail small and color black; comb pea, or having three small combs joined in one, the centre one the highest; comb, face, wattles and ear lobe bright red; shanks yellow, and feathered on the outside down to the end of outside toe with black and white feathers. Weight of adult cocks from 11 to 14 lbs., hen 9 to 11 lbs. Chicks mature to lay in about nine months—seven eggs per pound, are good winter layers, but inclined to be broody in warm weather; are better enclosed in a small room and yard attached; will bear confinement well if not overfed on too much fattening food, as they put on fat very fast and are apt to become very dull and lazy if fed on too rich food.

Dark Brahmas are similar to Light, except in color of feathers, which have dark bars running across each feather, except on breast of cock, which is black, or nearly so—sometimes dotted with white. They are not quite as popular as the light variety.

There are four varieties of the Cochins family. The Buffs are the most popular. Head rather short for size of bird, color buff; comb single, perfectly upright and evenly serrated; comb, wattles, face and ear lobe bright red; neck and back of cock deep buff; breast and lower part of body light buff; tail tipped with brown; neck hackle of hen sometimes tipped with black; shanks yellow and feathers on two outside toes; carriage upright and stately. Weight of adult cock 11 to 15 lbs., hen 9 to 12 lbs. Eggs deep color, seven per pound.

Are first-class winter and fall layers; meat yellow, sweet and tender. Pullets, if well fed, will mature in seven months and begin to lay, but are inclined to be broody when warm weather sets in, if let run at large; are better confined to small apartments, and will stand enclosure the best of all the hen tribe. Are the tradesman's favorite, on account of their size and hardiness, and excellent table qualities.

Partridge C chips: Comb, face, wattles and ear lobe brilliant red; comb single, erect, small and evenly serrated. Cock—neck hackle and back rich red orange color, with a black stripe down each feather; breast, wing-coverts and tail glossy black; shanks feathered down outside with black feathers; color of shanks dusky yellow. Partridge hen: Neck short; color rich reddish golden, with dark stripe down each feather; breast and body rich brown, pencilled with a darker brown mark across each feather; tail short, main feathers black; shanks dusky yellow and well feathered on outside to end of toes; color same as the body. Adult cock 11 to 13 lbs., hen 8 to 11 lbs.; are good winter layers and have their admirers amongst fanciers; eggs 8 per pound.

White Cochins: Plumage entirely white; comb single, erect and evenly serrated; comb, face, wattles and ear lobe brilliant red; beak and shanks yellow, well feathered on outside of leg and down to end of toes. Weight of adult cock 11 to 13 lbs., hen 9 to 11 lbs. Are good mothers and good winter layers, bear confinement well, but do better with a clean grass run on account of their plumage, which shows any soils; eggs 8 per pound.

Black Cochins: Plumage rich glossy black throughout; comb single, small, straight and upright; wattles and ear lobe deep red; shanks yellow, shaded with black; outside of shank and two outside toes well feathered. Weight of adult cock 10 to 12 lbs., hen 8 to 10 lbs.; eggs 8 per pound. Good winter layers, hardy and bear confinement very well.

Dorkings—White, Silver-grey and Colored.—White: Plumage pure white, except in adult cocks, in which it is sometimes tinged with yellow; comb is rose, bright red, square in front and sitting level on the head, running to a point behind; ear lobes and wattles bright red; good flowing tail, two elevated sickle feathers; shanks flesh-color, clean and with five toes. Good winter layers if given warm apartments; somewhat broody in warm weather; good mothers; will lay at eight months old if well fed; bear confinement well if they get an outside run of medium size attached to their house; eggs 8 per pound.

Silver-grey Dorkings: Comb single or rose; wattles and ear lobe bright red; head, neck and saddle hackle of cock silvery-white, striped with black; breast and tail rich black; wing-bow silvery-white, wing-coverts a metallic greenish-black; shanks white or flesh-color, having five toes. Hen: Head ashy-grey, neck silvery-white, back grey; breast robin or salmon-red, shading off to grey at the sides; wings grey, primaries dark brown; tail dark grey and carried at a moderate elevation; shanks smooth and flesh-color, having five toes. Moderate winter layers if given good apartments; do remarkably well where only one breed is kept, if they have a good run. Pullets mature early and lay at about six months old. Produce the best flesh of all fowls. No fancier thinks his yards complete without this variety.

Colored Dorkings are similar to Silver-grey in every point, except color of feather, which is deeper shaded, and may be from light to very dark as long as comb, wattles and ear lobe are smooth, clean and bright red; legs white or flesh-colored, being clean and smooth. Are well adapted for farmers, as they are not so hard to breed to the requisite color of feather.

(To be Continued.)

Feeding Poultry.

We have sometimes been amazed at the difference between chickens hatched from the same parents and at the same season of the year, but differently treated as to food. We do not refer to cases where the youngsters have been starved, or half-starved and otherwise neglected, but to instances in which food has been abundantly supplied, and the fault has been rather in the quality than the quantity.

Before entering upon the discussion of the best method of feeding the growing birds, a few words as to the treatment of the breeding stock may not be out of place.

It is obvious that the chief points to be borne in mind here are, that the supply of food be such as

shall promote a general, healthy and vigorous state of the constitution, which implies a freedom from excessive fat, and also such as will supply the necessary materials for the formation of eggs.

The egg of the domestic fowl, when deprived of its shell, consists of 71½ parts of water, 14 parts of albumen or flesh-forming material, 13 parts of fat, etc., and 1¼ parts of phosphates, etc. The proportion of flesh-forming material to fat is far larger in the white than in the yolk, but that is not of importance for our purpose. The shell of the egg is mainly composed of carbonate of lime or hard chalk.

The secretion of an excessive amount of fat by the hen has by experience been found to be a hindrance to laying, but once hens are in full lay a larger proportion of fat-forming food becomes necessary in order to supply materials for the eggs.

There can be no hard-and-fast rule laid down as to feeding the breeding stock. The Asiatics are very different from some of the other breeds, such as the Spanish, Hamburgs, etc., that a course of feeding which is suitable for these latter sorts would be far too fattening for the Asiatics. The food must be selected according to the variety kept, and must also be varied to suit the season of the year. Indian corn, for instance, which contains a large proportion of warmth-giving materials (fat, starch, etc.) should be chiefly used in winter, and may be given to the breeds which are not apt to run to fat in larger quantities than the birds of fuller habit. It may also be given with less danger of evil results when the hens are in full lay than at other times. A change of food is beneficial, and for this reason mixtures of whole grain are not to be recommended. It is far better to give one grain for a time, and then change to another, than to give a mixture of several.

With regard to soft food the case is different. Here the means of varying the character of the food are numerous, and a judicious blend of meals, with potatoes, parsnips, turnips, etc., may with advantage be resorted to.

The soft food should, when possible, be cooked, just as much water as the meal will absorb being used. Cooked food is much more easily assimilated than raw, and the mixture of a moderate proportion of water helps the process of digestion. A liberal supply of fresh green food is indispensable, and if the birds be confined a small portion of animal food may be given with advantage. The supply of gravel or sand to keep the gizzard at work, and of lime rubbish in some form to make the shells for the eggs, must not be omitted.

The feeding of the chickens has, as we have already said, an important bearing upon their maturing early or late, and consequently upon their ultimate size. Where size is an object, food containing too large a proportion of flesh-formers must, after the first two or three months of the chicken's life, be withheld or given only in conjunction with other food containing bone-making materials. Bone-meal has of late years been largely used for mixing with chickens' food, and may with advantage be used from the first and continued till the birds reach maturity. About one-tenth of it added to soft food is sufficient. During the first three months of the chick's life no apprehension as to forcing the birds to too early a maturity need be felt, and food containing plenty of flesh-formers, as also a moderate supply of meat, may also be given.

Oat-meal should first form the chief food, varied with a mixture of Indian-meal and middlings; later on the quantity of oat-meal must be diminished, and bran may be added, while after three months buckwheat, wheat or barley may be given, as grain with barley meal, middlings, bran and Indian meal as the chief materials for forming the soft food. Pea-meal in moderate quantities is good at first, but should be avoided afterwards as being too stimulating.

Where size is not the object, and early maturity is desired, a diet in which flesh-formers are largely present may be adopted throughout.

A word of caution may be added as to breeds in which largeness of comb is a disadvantage. Here especial attention to the exclusion of all over-stimulants from the food is essential. We have seen more than one first-rate Brahma cockerel spoiled by injudicious kindness in the matter of feeding. A few scraps of meat gathered from the lunch table have been too much for a springing comb which was all right before, and the prize which would otherwise have been gained has had to go elsewhere.

The Derby Game Fowl.

We do not admire the cock-pit, or any of the brutal exhibitions that take place there, though we do admire the game fowl, particularly the Derby, ranking as it does as one of the oldest breeds in England. It is the many superior qualities, apart from those of fighting, possessed by this noted fowl that command our highest admiration. Those who breed games say their flesh is finer-grained and whiter, and their bone lighter than that of any other fowl. The eggs are larger in proportion to the weight of the bird than those

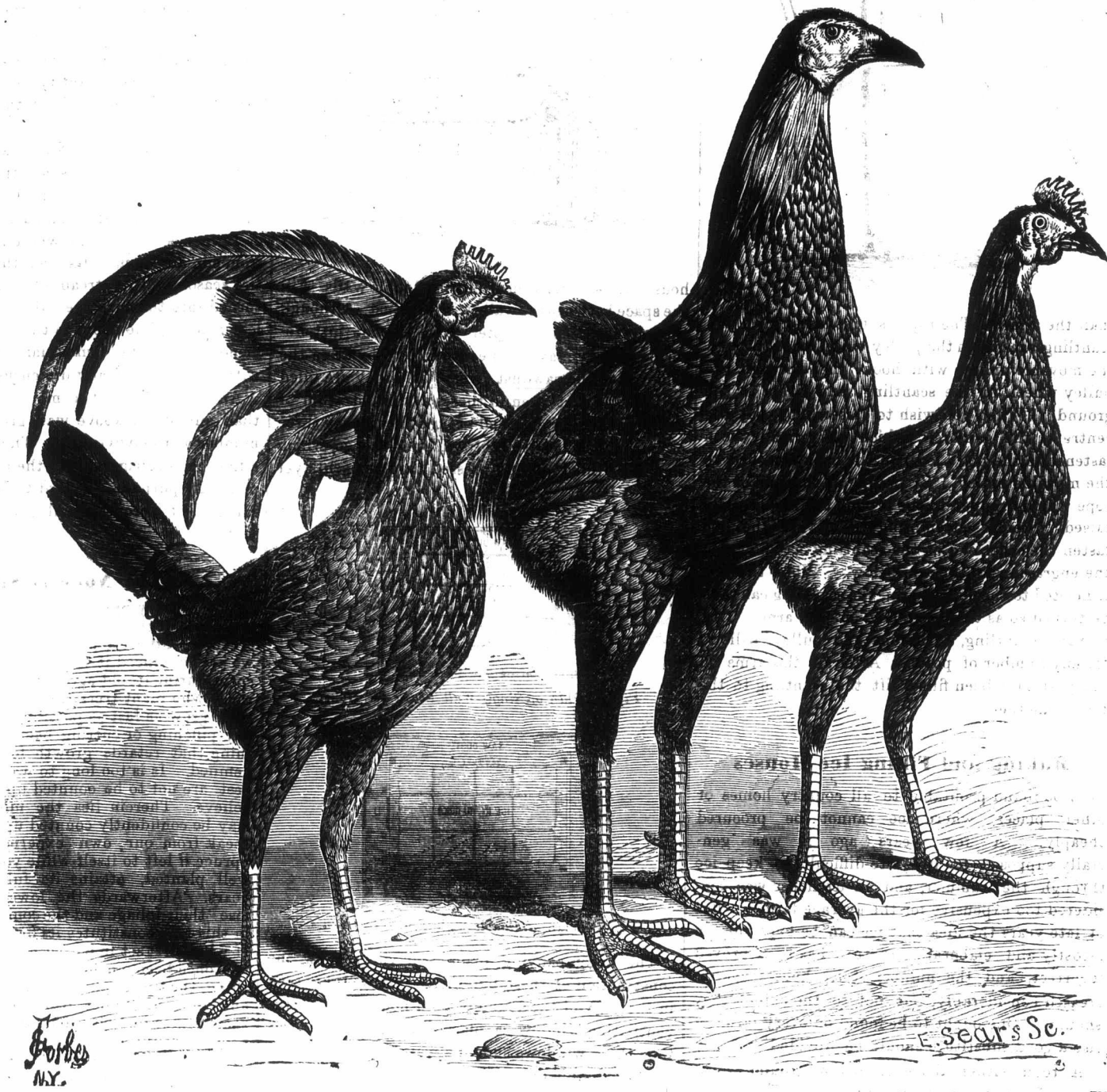
chickens. One or more game hens should always be kept by those who have flocks of non-sitters.

The game cock is not nearly so pugnacious as many would suppose from the reputation he has attained, yet when once started in a fight he continues till he or his antagonist is defeated, after which he is peaceably inclined. It is seldom that he will keep up a long chase after he has gained a victory. Other fowls will constantly chase a defeated bird, whenever it comes in sight.

This breed of fowls cannot well bear close confinement, but are excellent foragers, and if given a

tail long and sickled, being well tufted at the roots, thick, short and stiff; legs rather long, with white feet and nails, the latter being free from all coarseness.

The red Derby Game cock is a very showy bird. He should have a bright red face; breast and thighs coal black; hackle and saddle feathers light orange-red; back brown-red—a depth of color that painters term dragon's blood; lesser wing coverts maroon colored; greater wing coverts marked at the extremity with steel-blue, forming a bar across the wings. It is a peculiarity of these fowls that one at least of the pinion feathers is marked with white.



DERBY GAME FOWL.

of any other fowl, except, probably, the Leghorn. Not only are they larger, but they are richer as a food than those of any other fowl; and it is a fact not generally known that there is a wide difference in the quality of eggs. The hens cannot be recommended as non-sitters, like some breeds; as good mothers they excel every other breed. Some farmers have a mistaken idea that they are pugnacious, and always spoiling for a fight. There are no hens more peaceably inclined if unmolested, but if attacked there are none which will fight with more tenacity, and this good quality is what makes them such good mothers. We have seen one of these hens drive a tom-cat from the yard because he dared to attempt a raid upon her

good run they will take care of themselves, and though somewhat shy, like the Leghorn, if kept near the house they soon become accustomed to the family. The cocks can be grown by extra feeding so as to dress six pounds, and hens three and a half to four pounds. These weights may be considered, however, a pound above the average.

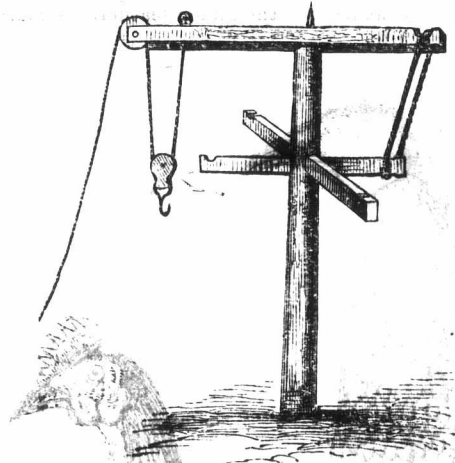
In the illustration herewith given the birds are represented as nearly perfect as possible, the cock showing off his points to excellent advantage. He is of good round shape, well put together, the head long with "daw-eyes" (resembling the eyes of the jack-daw), long and strong neck, hackle well feathered, touching the shoulder; wings large and well quilled, back short, belly round and black,

We have had an excellent cross with the Game and the Dorking. Their size was not increased, but their flesh was greatly improved. The brown Leghorn, it is said, emanated from a cross between the Leghorn and the Game. We have crossed them and produced a similar bird, but did not fix the type. We have also had a desirable cross with the Brahma.

A worm resembling the ordinary corn-grub has appeared about Goshen, N. Y., and is ruining grass-fields. It burrows in the ground just beneath the surface and eats off the roots of the grass. Its presence is detected by spots of brown grass that look as if scorched. The sward can be lifted from the surface, revealing the grubs beneath. Many fields are swept cleaner than could be done with a scythe and farmers are becoming alarmed. The same grubs are eating the potatoes in the ground in many localities.

Hints and Helps.

We give an illustration of a conveniently arranged post to hang hogs on. The post is made with four arms. It should extend about two feet above the arms, with an inch and a half pin in the top. The tackle consists of a piece of 3 x 4 inch white oak scantling, with a pulley wheel in one end. This scantling should be long enough so that when placed on the top of the post the end with the pulley wheel will extend four or five inches farther



than the arms. The rope is first fastened in the scantling back from the pulley wheel, then through the movable pulley with hook, then through the pulley wheel in the scantling, and drops to the ground. When you wish to raise a hog, put the centre of the gambrel (which has already been fastened to the hog's legs) in the hook attached to the movable pulley. By pulling at that end of the rope which dropped to the ground the hog is easily raised. Before attempting to elevate the hog fasten the other end of the scantling as shown in the engraving, to the arm below. When the hog is hoisted to the desired arm, the scantling can then be turned so as to place a hog on each arm. One movable scantling, with rope and pulley, will do for any number of posts. After all the arms on one post have been filled, lift the scantling to the top of another.

Making and Filling Ice Houses

Will be found profitable to all country homes or other places where ice cannot be procured cheaply. A few years ago it was generally supposed to be quite difficult to keep ice through the summer, and an ice house was considered too expensive for the average farmer. But of late years the idea that ice can be kept only in a costly and elaborate structure has been proved incorrect, and the number of ice houses has increased considerably, but not to the extent they should. One ought to be found on every farm, or else a good substitute should be provided.

A room either above or below ground works well. If only a small amount of ice is needed, a room may be boarded off from the wagon shed or any of the outbuildings which may be convenient. A clean basement room in any outhouse, or in a dwelling house, would also answer the purpose.

Our illustrations show several methods of building cheap and useful houses for this purpose.



Fig. 1—Rough or Shanty Ice House, left open under the Eaves for Ventilation.

Cheap ones may be quickly constructed in the form of strong board shanties, with a good but not tight floor. Place a few inches of sawdust on the floor; pile up the ice compactly in square blocks, leaving a space of eight to twelve inches all round next to the boards, to be filled with sawdust, trodden in, as the structure of ice is built upwards. Cover the whole with eight or ten inches of sawdust, and let plenty of fresh air blow through the shanty over the top. Ice will keep in this way as well as in the most costly and elaborate building. Chaff or finely cut straw may be substituted for the sawdust; but being less perfect non-conductors, should be in thicker layers. One door is enough for a house of common size. A better ice

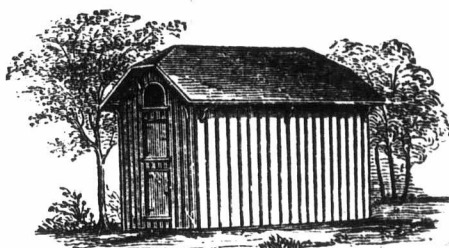


Fig. 2—Another Plan of Ice House.

house can be built of boards, with double walls. Fill the space between the walls with sawdust. Although they do not keep ice better than the one just described, they save some labor by obviating the removal of the sawdust every time they are filled with ice. But even in these a thin stratum of sawdust should be packed around the ice, say three or four inches, between the walls and the ice, which should be filled in and pressed hard as each layer of ice is laid.

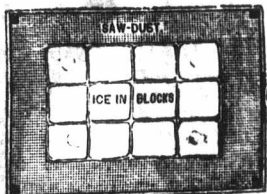


Fig. 3—Plan of Single-Wall Board Ice House.



Fig. 4—Plan of Double-Wall Board Ice House.

The accompanying plans and views show the construction of these buildings. It will be seen in the view of the double-walled house that a large ventilating window is placed in each end at the top; these windows should always be open. There are two double doors at one end in large building, and one in small; these are for convenience in filling and taking the ice out at different heights. Care should be taken that all the sawdust be pressed solid, and no cavities left. An ice house with one apartment, eight by ten feet and six feet high (including a foot of sawdust all around), will keep ice enough for a moderate family.

Some of our readers are no doubt far from rivers or any other suitable place to obtain ice. For their benefit we give a plan recommended by Mr. Warning, which is very simple and requires but a trifling expense to construct and fill. "Select a place on the north side of some building. Lay a floor 12 x 12 ft. on scantlings, one foot from the ground. Set firmly at each corner a post from 4 to 6 inches square and from 8 to 10 ft. long. When the weather becomes cold place on the floor

sawdust, tanbark or rye-straw to the depth of 8 to 10 inches. On the top of this place another floor of the same size, putting a curb inside the posts to keep the filling between the floors in its place. Next make a curb 10 x 10 ft. and 6 inches deep. Fasten the corners with common gate-hooks. On a cold day place the curb on the floor, having each side and end of the curb at an equal distance from the edges of the floor; put in a few inches of sawdust, chaff or tanbark, and dash water slowly over the bottom inside the curb, until it forms a coating of ice that will not leak; fill the curb with water and let it stand until it is frozen solid. With boiling water thaw the curb loose, raise it to the top of the frozen mass, slop a little water round the edges until it becomes water-tight, fill and freeze as before, and so on until a sufficient quantity of ice is obtained. Place boards on the inside of the posts and fill the space between the ice and boards with tanbark, rye-straw or sawdust. Nail boards on the outside of the posts and fill the space thus made with the same substance as before used; cover the top of the ice with sawdust or tanbark to the depth of 10 or 12 inches. Over the whole put a roof to shield from sun and rain. Ice can thus be kept the entire season. If a stream of running water can be turned into the curb the labor will be very much lessened." The above is the size of house recommended, but the same plan can be carried out with a building of any dimensions.

An illustration of a more expensive building than any of the above was given in the February number of the ADVOCATE. Those who wish to add a first-class refrigerator to their ice house for dairy or family purposes, a card to Messrs. Wishrow & Hillock, of Toronto, will give them every information.

The Norway Spruce.

The Norway Spruce is one of the most popular, if not one of the most beautiful and hardy of evergreens. If it were properly treated while young, we are convinced it would command a higher respect during its old age. The desire on the part of those who plant trees about their homes to see them grow as fast as possible and their distrust of any pinching or cutting back are natural. Anything that retards growth for one year is condemned. It is too long to wait for results that, at best, are not to be counted upon positively as they believe. Therein lies the mistake. The results may be confidently counted upon; and in this we speak from our own experience. The Norway Spruce if left to itself while young, especially if not well planted, attains its fullest beauty in ten years. Afterwards, the lower branches begin to lose their foliage and the conical symmetry which in this tree constitutes its first charm, is marred. If when first set in its permanent abode the buds had once been pinched out—or what is the same thing, the tips of all the branches except the lower and lowermost ones had been cut off—and the same course had been pursued the second spring, growth would have been confined mainly to the lower branches, and a vigor would have been imparted to them that would be retained as long as the upper branches remained robust or as long as the tree maintained a healthy existence. The impression, which until of late years has been quite general, that evergreens (hardy coniferous evergreens, at least) were never to be cut back, is still a conviction in the minds of many; and it is one that deprives them of the very best means both of adding to the attractiveness of their evergreens and of preserving their attraction unimpaired to a good old age. For the purpose of inducing this strong development of the bottom branches, and at the same time a more compact habit throughout, instead of cutting off or "back" the branches, we have for several years past merely twisted out of the verticle of buds which terminates them. Those buds begin to form as soon as the spring growth is completed, and they may be removed in the following fall, winter, or early the next spring. Thus only the terminal growth which would have been made is prevented, and the same object is accomplished.

Agricultural.

Onions from Seed.

Those intending to commence Onion-raising on new ground another season, will do well to make preparation of the soil this fall, and have it ready for operations at the earliest opportunity in spring. It is of great advantage to sow Onion seed early, and the best way to ensure it is to do all that can be done in the fall to make the soil ready, for, if left until spring, it will take longer to dry than if it is left light and loose in the fall, and then there is not only the time required for its preparation, but, very probably, considerable delay by frequent storms at that season. In order to bulb well, Onions should have all the chance possible to make their early growth while the ground is cool; seed sown late, when the mean daily temperature is already high and increasing, may vegetate promptly, but the young plants make a very spindling growth and never produce as good bottoms. Old Onion growers understand all this, and do not need to be reminded of the importance of the early preliminary work.

Good Onion crops can be produced on a variety of soils, from sandy loams to clayey loams, and alluvial bottom lands containing a large amount of carbonaceous substance of vegetable mold. Soils of the latter character are probably best, but the land must be well drained; this last remark is true of all land on which Onion culture is to be undertaken, but it is not so frequently necessary on rolling uplands to underdrain as on the lower lying bottom lands. Good crops are often secured on such lands by a system of draining with open ditches; generally, it may be considered that this method is more expensive ultimately than substantial underdraining, but there are localities where it can be adopted to advantage. On most clayey loams underdraining may be considered absolutely essential to secure the best crops of Onions, and this preparation should be made with full confidence that the expense will soon be made in extra crops. A good, sandy loam is very desirable soil for Onions, and good crops may be raised on quite sandy soils with proper management and manuring. Level ground is more desirable than that having much slope, as on the latter the washings by heavy rains would be injurious. Land should be selected if possible that has just been in some hoed crop and that has, thereby, been left free from weeds.

Deep plowing and harrowing the surface until fine operations essential to a good crop. It is well to delay the fall plowing as late as possible, but it should be done when the ground is dry, and can be left in rough furrows all winter. Old or well-rotted stable manure should be used at the rate of twenty cords to the acre on most soils. Fresh manure should be carefully avoided, as it contains many weed seeds which would immediately germinate and, consequently, cause much extra work in weeding after the crop is up.

When barn-yard manure of sufficient quantity or of proper quality cannot be procured, artificial fertilizers may be used; of these, Peruvian guano and bone-dust can probably be used to best advantage, and should be applied in the spring and worked in during the course of pulverization. Ashes are sometimes used at the rate of one hundred to two hundred bushels to the acre. It is generally agreed by experienced Onion growers that mellowing the soil deeply is a disadvantage rather than a benefit, as in that case the roots strike deep and the Onions do not form good bulbs, many of them being what are called bull-necks, or Scallions; consequently, if the cultivator is used in working the soil it should be set so as not to run more than about five inches deep, and on light soils the use of the harrow will be all that is necessary. This work should be done as early in spring as the ground is dry enough to work. It requires about three weeks for Onion seed to germinate, and it should be got in with the least delay possible. Having the soil in proper condition, fine and mellow, the seed can be sown very rapidly with a good seed-drill. It should be in rows about twelve inches apart. If the seed is to be sowed by hand a line should be used to keep the rows straight; draw a drill by the side of the line, about half an inch deep, and drop the seed as evenly as possible, about a quarter to a half inch apart, and then cover by drawing a little soil over, or by spreading sand along the drill. Another way of sowing is sometimes practiced, and is thought to facilitate weeding and hoeing the crop; this is by

distributing the seed in little clusters or circles about six inches in diameter, keeping the centres twelve inches apart each way; however, drilling in continuous rows is the generally accepted method. If all the work of cleaning and cultivating were to be done by hand and hoe, the cluster or hill method might present advantages, but with wheel-hoes and hand cultivators there is none. The implements referred to are now offered in forms so improved and perfected, and are such valuable aids in cultivation, that no one having much work to perform, of the kind to which they are adapted, can afford to be without them.

Onion seed is a crop of considerable uncertainty to raise, and the amount of it produced from year to year is quite variable; as it is poor seed to keep, retaining its vitality but a short time, the price of it is subject to great fluctuations. It may be offered one season at a dollar and a dollar and a half a pound, and the very next spring be worth from four to five dollars. A little reflection will enable our readers to perceive that there is no safety in turning aside, in time of scarcity, from respectable dealers who have a reputation to maintain, in order to buy Onion seed at a low price. No one can afford to carry his stock over at any time on account of its poor keeping qualities, and if it is unusually valuable the more necessity is there for him to sell; to fix an exorbitant price, therefore, and to maintain it, would be practically impossible. On the other hand, the temptation is very great at such times for irresponsible parties to pour into the market old seed at a comparatively low price. One cannot afford to take any risks in purchasing Onion seed, as the expense of propagation and the value of the prospective crop are too great to admit of any avoidable chances.

The staple varieties for general crops are the Wethersfield Red and the Danvers Yellow. Particular markets may demand white varieties to some extent, when White Globe can be raised for the main crop, and the Silver-skinned for very early use.

As soon as the young plants are fairly up, cultivating and weeding should commence, and be persistently continued until the crop is out of danger. A delay of a few days in weeding may result in the loss of a great portion of the crop. If any appearance of wilting or turning yellow of the plants is noticed, immediate inspection of them must be made, for this indicates the work of the Onion-maggot, which sometimes does considerable damage. The Onion-fly (*Anthomyia ceparum*) lays its eggs on the Onion, and the larvæ when hatched gnaw into the centre of the little Onions and destroy them. All affected plants should be pulled up and burned. Soot is the best substance that can be applied to prevent the work of the insect, and next to this is powdered charcoal; lime, salt and ashes will all do good.

Mixed Farming, as Generally Understood and Practiced, a Snare and a Delusion.

BY HON. HIRAM SMITH.

I am well aware that the opinions I intend to present will come in direct conflict with the opinions and notions long entertained by the great majority of farmers of the present day. Mixed farming has been highly extolled and recommended by most of the politicians and professors who have addressed national and international agricultural associations, and has been echoed, parrot-like, by many young lawyers and doctors who have addressed thousands of agriculturists. We read its praise in hundreds of paragraphs and editorials in the agricultural papers of the day. Therefore it is no wonder that unthinking farmers should believe in and practice the delusion.

Briefly stated, mixed farming consists in raising to sell, a few cows, calves, horses, colts, sheep, beef, pigs and poultry, fruits and roots, hay, butter and cheese, corn, rye, spring and winter wheat. And in the language of the old song:

"Oats, peas, beans and barley, O."

The theory of the advocates of mixed farming is, that by raising a great variety of crops, if one or more crops should fail, there would be others to fall back upon. This plausible but delusive theory is predicated on the notion that farming is not a question of science, but is a question of luck.

There are many farmers in our day more intent on planting in certain stages of the moon than they are in the pulverization of the soil; more confidence in certain breeds for milkers than they have in June-cut hay and ground feed; more faith in boring holes in the horns of sickly cows than in

warm stables. More money is invested in the purchase of new varieties of highly pictured fruit trees than in pruning the vines and trimming the trees. All these past and present errors are the legitimate result of the widespread notion that farming, in all its varied branches, is not a science, and therefore needs no special education and training to insure success, while all admit that if a young man is designed for the law, the medical profession, the clergy or the counting room, he should attend some good school or college, and attend two or three years a special course of lectures, to fit him to commence his life work. He is expected to have time and opportunity afforded him to learn the history and the theory and practice of the lives of the most successful men in the profession he has chosen. A liberal education in the arts and sciences, in the laws of nature, in the history of nations, communities and men, enables him to form quick and correct judgment of the influences that control the action and conduct of men.

But in the case of the farmer the opinion largely prevails that a boy who has drudged in the treadmill of his father's farm can emerge from his teens a full-fledged farmer, fully competent to engage in mixed farming. They say he was brought up on a farm, and knows all about it. He may be and often is ignorant of the difference in soils, knows but little about the nature and properties of the manures he ought to use, or what crops he could most profitably produce in the particular locality in which he lives. He knows but little of the laws of trade, of the actual supply and probable demand for the various crops he is trying to produce; he has had no teaching in the intricate principles involved in successful stock breeding; he has not a superficial knowledge of who his real competitors are, and whether their natural advantages do not greatly outweigh his closest economy and severest industry. The best he can do is, to guess whether it is better to sell his hay, oats and corn, or put it into pork, beef or dairy products. He may spend a quarter of his life in raising wool on high-priced land at a loss, while his real competitor is growing rich raising wool on cheap land. An intelligent understanding of the natural advantages pertaining to his locality, and a thorough training in the proper business adapted to that locality, might have made him rich, contented and happy, instead of his unrequited labor, disappointed hope and financial failure. It is as absurd to suppose that any one man can become a successful horticulturist, a skillful cattle breeder, a proficient in raising grain, and a competent dairyman, as it would be to suppose any one man could be an able lawyer, a skilled physician, and a successful merchant. It takes the best years of man's life to become master of any one of these branches of agriculture, or either one of the so-called professions. Farmers might and ought to learn a lesson from the management of nearly all other kinds of business, and take some one branch of agriculture and make that the main business of life. It matters but little what that branch may be, if pursued with growing intelligence, so as to utilize the natural advantages with which it is surrounded. If raising grain should be the chosen occupation, then all other business should be subordinate to the main object in view; then accumulated knowledge and experience should determine the proper rotation of crops, the manufacture or purchase of fertilizers best adapted to increase the yield, in the purchase of labor-saving machinery, and only such as is best adapted to aid this main object of raising grain. If the occupation of dairy farming should be selected, then all inquiry, observation and experiments should be directed to make all crops raised contribute to the success of the dairy, the proper selection of cows, the most careful treatment, so as to promote health and contentment among them, for in this contentment largely consists much of the profits of the enterprise, the management of the pastures and meadows, the keeping up of a continuous supply of just the right kind of food, in its best possible condition, to produce the cheapest milk, the converting of that milk into butter or cheese in its greatest perfection at the least waste of labor. The care of these products, while held in the manner, time and place for disposing of them, necessitates as close observation, as deep study, as long and patient labor, as it does to become a master mechanic or a D. D. in any of the learned professions. Fifty years ago, "Mixed Farming" was more of a necessity than at present. Exchanges were made of the products, instead of selling and buying for cash. I well remember, when a boy, that a certain manufacturer of hoes came every winter through the country and exchanged his hoes

for honey, feathers and butter; other peddlers came every winter with haddock, fresh cod and oysters, and exchanged them for pork, butter and venison for a return load. Money exchanges from one place to another were not made by draft, as now, but a one hundred dollar bill was cut in two pieces and one-half sent in a letter, and, on notice of its safe arrival, the other half was forwarded. If the parties lived five hundred miles apart, the transaction would require four weeks' time and four letters with twenty-five cents postage for each letter to complete the exchange.

Mixed manufacture and trade was formerly as common as mixed farming. A wagon shop was a place where you could get a two horse lumber wagon, an ox cart, a one horse dray, a two horse pleasure carriage, a one horse shay, or a wheelbarrow made by the same workman. The farmers' trade with a wagon shop, a shoemaker or a blacksmith shop, was by the law of custom payable in farm products.

Large factories now run only on lumber wagons, another on carriages, and still others on wheelbarrows. Sharp competition has long since driven mixed manufactories out of the market; men work to much better advantage by working at one branch of business. It takes seven men or boys to make one clothes pin to advantage. Every one works to the best possible advantage, so that no one man can afford to make a clothes pin. What is true of this business is true of all manufacture. Thus, we see large woolen mills where nothing but shawls are made, another for carpets, another for cloth. Precisely the same principle prevails in regard to trade. We have wholesale and retail merchants engaged exclusively in dry goods, others in groceries, still others in hardware, clothing, boots and shoes, and so on through the whole list of staple articles. The same causes that have of necessity driven mixed manufactures and trade into special lines will as surely drive mixed farming into special productions; not alone for the reason that it takes so long to acquire correct knowledge so as to produce profitably many different kinds of products, as for the more potent reason that they cannot be produced so cheaply. Five farmers in a neighborhood engaged in mixed farming necessitates the purchase of much more expensive labor-saving machinery than if these five farmers were engaged, each one, in some special line of farming. A dairyman does not require a self-binder and grain drill; a grain farmer does not require a hay loader and tedder; a pork and corn producer does not require either of the above machines, but instead, horse cultivators and planters. Thus you will perceive that the five farmers must have in the aggregate (for mixed farming) a larger amount invested than would be necessary if each one was engaged in some special branch of agriculture; and the aggregate receipts would be no more, and in all probability would be less. It is a well settled principle of finance that the profits of all enterprises must ultimately be determined by the amount of capital invested and labor expended; compared with the aggregate net receipts obtained. Thus, the conclusion is inevitable that five farmers engaged in mixed farming, with largely increased invested capital, and the disadvantages to labor by the necessity of beginning and finishing many small jobs of work required in mixed farming, with no possible chance of increasing aggregate receipts above the amount that can and are produced by five farmers engaged in special lines of production. Therefore, it is a delusion to suppose that large investments, increased labor and lessened receipts, can by any legerdemain, be made more profitable.

I would be glad, in this connection, to give accurate statistics showing a comparison between mixed farming and those engaged in special branches; but, after much inquiry, I was unable to find a single farmer that had kept a book or could give any intelligent understanding of his farm operations. None were able to say whether their net receipts were five or five hundred dollars above their expenses, but nearly all would assert that no farmer could make three per cent. on his investment. I have interviewed farmers engaged in pork, raising corn to feed them, and clover pastures for summer use, with but small investments for barns and machinery, whose profits were satisfactory; also stock breeders, where the man was adapted to the business; their profits were ample. It might be supposed that it would be difficult to procure accurate statistics of exclusive dairy farming, but I have been unable to find anyone so engaged. All men are liable to have fits of the shallows, and it affects dairymen in this way: They think they can raise better cows than they can

buy. Last November, I bought a three year old heifer for twenty-five dollars. No particular breed; no extra care in raising, and she has given by actual weight an average of 36½ pounds per day for the past six weeks. Five years ago, I had a fit of the shallows, and raised four half-blood Ayrshire heifers. They are beauties and praised by all, but not one of them ever gave 36 pounds of milk per day, in the best of the season, and yet they are profitable cows, but no better than I can buy.

Being unable to find anyone engaged in exclusive dairy farming, except myself, I shall therefore be obliged to give statistics from my own farming, which I should prefer not to do, hoping thereby to draw out volunteer statements from some one engaged in mixed farming, that by a comparison of occupations we may arrive at best results. It may be proper to state that about one hundred tons of hay, five hundred bushels of corn, six hundred bushels of oats and six acres of fodder corn were raised and fed out to the stock.

Statement of farm account for 1880: 211 acres of land, 20 acres woods. Stock, 52 cows, 6 horses, 13 hogs.

Receipts for butter	\$2,930 85
Receipts for sour curd	303 48
Receipts for calves sold	119 00
Receipts for hogs	164 00

Total receipts from dairy	\$3,517 33
Average per cow for 52 cows	67 63
Other receipts from farm	203 00

Total receipts from farm	\$3,720 33
Paid for hired help	\$925 87
Paid cost for board	400 00
Paid cost 23 tons of bran	208 85
Paid difference between 8 cows sold and 8 cows bought	77 00
Paid for plaster and dairy supplies	67 00
Paid for blacksmith work and repairs	97 00
Paid for grass seed, thrashing and husking corn	76 00
Paid for taxes and insurance	110 00
Allowed for superintending	500 00
	\$2,467 62

Net receipts \$1,252 71

It will be perceived that the net receipts of \$1,252.71 is a sum sufficient to pay six per cent. interest over \$20,000, and there is less than that sum invested in the business. Special farming, in addition to being more profitable (as I believe), it is much more agreeable, as all work can be done in season, fewer kinds of crops are required, and one crop will not be running to waste by being over ripe before it can be attended to. There will be no thrashing until dark and the cows still to milk. There will be no dead sheep to skin on Sunday; no unruly colts to chase out of mischief in the rain, and no bunting calves to smear your Sunday breeches; lessening the drudgery and increasing the profits, will elevate the business of farming, and elevate the men and women engaged in it.

Rural Drainage and Disease.

Many farmers, otherwise well informed, do not seem to realize the fact that gases arising from stables, pig-pens, and out houses, may poison the pure country air as effectually as the atmosphere in the cities may be spoiled for breathing from the same effluvia spreading from neglected alleys or cesspools. And the thrifty wives of farmers, who, forgetful of cleanliness, saturate the door yard with wash water and kitchen sewage through all the winter months, should be taught that when that ground sours and festers under the summer sun, the heat will ripen the germs of disease as surely as it will ripen the grain in the harvest field.

Maladies mysteriously affecting families residing in what are regarded as healthy localities are often explainable on opening the cellar door, whence an intolerable odor of decaying vegetables proceeds; or, on lifting a board of the kitchen floor, beneath which is a shallow pool of standing water; or on observing that the well is so situated as to drain into itself some of the substances that are thrown away as utterly unfit to be retained in proximity to human beings.

The latter point is one very frequently overlooked. For example, a certain city, finely located and attractive, gained the reputation of being an exceedingly unhealthy spot, and was of course much retarded in its prosperity by the fact.

Finally it was noticed that underlying the city, at the depth of about twelve feet, was a stratum of impervious blue clay, above which lies an extensive quicksand, affording an abundant water supply by means of numerous wells, and into that same quicksand all the vaults and cesspools of the place were also dug, thus mixing their foul contents with the drinking water that everyone used. The amount of sickness was materially diminished by proper attention being given to this one point. Every careful farmer will see that the compost heap, and other refuse stored as food for the roots of grasses or vegetables, shall be at such a distance from the house and well as not to contaminate the air and the water essential to the preservation of life and health.

In closing, I may mention a curious illustration, given in a paper by Prof. E. T. Cox, on the "Influence of Geology on Local Diseases," showing what has actually been done by rural drainage to eradicate a dreaded malady that used to prevail extensively in Kentucky and Indiana, known as "milk sickness," because first attacking cattle; it was communicated to human beings through the milk, butter, and beef of the infected animals. Many a brave pioneer lost his life by this malady, which almost always proved fatal; and recovery was usually lingering and imperfect. At first it was supposed that the cattle had eaten some poisonous plant; but every suspected grass and weed proved harmless on scientific examination. Then it was held that mineral poisons must lurk in the springs and brooks; but hundreds of samples were analyzed without detecting the presence of the enemy. At last an investigation of the clay shales, soft rocks formed from ancient mud beds, and which are microscopic in an eminent degree, revealed the secret. These formations abound in every affected locality, and it now seems clear that they exhale some sort of miasma, when saturated with water, that originated or aggravated the disease, just as other kinds of malaria bring on chills and fever. Proceeding on this discovery, thorough drainage of the wet lands adjacent to the shale beds dried them sufficiently to terminate the conditions favorable to the spread of milk sickness, so that it has now almost entirely disappeared from regions that once were cursed by that plague.

The opinion is now established that a large proportion of diseases are of germ origin; and the obvious mode of prevention is the destruction of the germs or their timely removal.

Professor J. L. Budd thinks that the *Eucalyptus Globulus* which has done such wonders in arresting malarial disease on the fatal Roman Campagna and in other places, acts not only by the immense transpiration from its leaves which soon distill the juices of the soil, but from actual antiseptic emanations, and by the absorption of deleterious gases. Wounds are healed and foul sores purified by an application of the leaves. He advises their growth as a house plant, and says that a plant of his in an eight-inch pot, three years from the seed, remains at about five feet without losing its large handsome leaves. Any of our readers could grow this as a house-plant. It can be procured of nurserymen.

It is a popular fallacy that the moisture distilled from the leaves of the black walnut (*Juglans nigra*) after dew or rain is poisonous, the reason given for the assertion being that little or nothing else will grow near these trees. The real reason lies in the fact that the tree is a gross feeder, every root being covered with fine fibrous rootlets, which are so many open mouths to extract nutriment from the soil and sustain the tree. There is an old saying current that five or six walnut trees in an orchard will destroy it, and though somewhat exaggerated, there is no doubt that the walnut trees exhaust the soil to the great detriment of the fruit trees.

Peter Henderson, in his essay at Dayton, Ohio, teaches a use of moss in growing window seedlings, etc., which is a possible benefit for every gardener or flowergrower in the land. The writer has for two years grown soft cuttings for home adornment in a window-box containing an inch of mould, and two or three inches of a mixture of washed sand and roasted moss rubbed fine, then an inch of sand and about three inches of space for the tops of the cuttings, so as to allow of a pane of glass on top to preserve moist air about the leaves in the dry living room. Cuttings never rooted better nor transplanted so easily—the light moss remaining between the tender rootlets when lifted with a table fork for planting pots. Previously dust from coconut fibre had been used, and that failing, dried cow droppings and charred sawdust or braize, had answered fairly well.—(Shelah.

The Apiary.

Ontario Bee-Keeping Association.

This Association held their annual meeting in the City Hall, Toronto, Sept. 13, 14, 15. The President, Mr. D. A. Jones, of Beeton, in his address said:

Never was there such a severe winter in the experience of bee-keepers as last winter, in fact many who were considered the most scientific bee-raisers in the country had lost all they possessed in consequence of the severe weather. The yield of honey last season, continued the President, was small, but the season was especially good for breeding. The prices of honey, however, will be high, as butter is scarce and high in price. He advised all who had honey to sell, to hold back for a time and a remunerative price would be ensured. One gentleman had told him the previous day, that honey he would gladly have accepted 10c per pound for, a few weeks ago, he had since refused 15c for. The hives he said, should be carefully prepared for wintering, and he would advise all present to make such provision as would ensure the safe-keeping of the bees. He had a number of fine hives spoiled because they commenced breeding in the winter. The proper regulating of bees in the fall was much more important than the wintering of them.

In speaking of the various species of bees, he said he had been led to entertain a very high opinion of the *apis dorsata* species from the Holy Land, accounts of which have been very flattering. There was another species of bee said to be even better than this, which a European friend of his had written to him about, and he trusted to be able to say more about it shortly. Canada, he said was the finest country in the world for raising bees, and he was confident that twenty per cent. could easily be made by entering into the business with a will. Judging from the comparative success with which bees were wintered this year, in view of its being such a severe one, it was fair to infer that any sort of bees could be successfully raised in Canada. The great hinderance to the successful raising of bees was the fact that the majority of people imagine that all they have to do is to set the hive out on a stand and leave the rest to the bees. This is a mistake. Bees, like every animal which is kept for the benefit of man, must be similarly provided and cared for, or they will never prove successful. People should inform themselves on the subject before they go into the business, and then theory must be conjoined with practice.

THE SECRETARY'S REPORT.

The Secretary, Mr. McKnight, of Owen Sound, stated that a few weeks ago he had sent to the members a form of entry for the Exhibition, together with a printed circular for the purpose of ascertaining what progress had been made in bee culture by the members. Twenty-seven members had reported, and from them he had gathered the following:—Last fall they put into winter quarters 1,534 colonies, or an average of 56 colonies each. Of these there were 1,264 taken out alive in the spring; 216 were lost by spring dwindling, leaving an aggregate working force of 905 colonies, or an average of 37 per member. At the time of reporting these 905 were increased to 1,993, or an average of 74 stocks per member, as against 37 in the spring. This showed that notwithstanding the unusual mortality among bees last winter there are now in the hands of these 27 members twenty per cent. more bees than at the corresponding time last fall. The honey taken by the members who reported, amounted on an aggregate to 73,790, pounds or an average of 81 pounds for each stock held at the opening of the honey season. Over three-fourths of the amount was taken by the extractor.

The report being found satisfactory, it was moved by Mr. S. Webster, and seconded by Mr. Dougall, that it be adopted and that a vote of thanks be tendered to the Secretary for the satisfactory manner in which he had transacted the business of the Association during the year. Adopted.

The meeting then discussed the following subjects:—

WINTERING.

Several of the members related their experience in wintering bees. Mr. Hall, of Woodstock, stated that he commenced on the 15th September and wintered until 15th April. There was a cellar under the bee house, which was built with walls

16 inches thick, packed with sawdust. When he put them out he had no dwindling; last year he had lost two out of 137 stocks.

Mr. Jones, the President, stated that there was no surer way of killing bees than by disturbing them in the fall. He had lost \$1,000 worth of queens in that way. He always tried to get as many young ones in the fall as possible.

In reply to a question, Mr. Jones stated that when bee-keepers were troubled with mice, they should use arsenic, granulated white sugar, and flour in equal parts.

Mr. Wallace, of Brighton, who had put in 32 last fall, had taken them all out. He had lost none by robbing and none by dwindling. He had increased his by 67. He kept the temperature at 38 to 42 degrees.

Mr. J. T. Beech, of Burnt River P. O., near Lindsay, stated that his mode of wintering differed from those who had given their experiences. He had commenced with one form and now he had 40. The President had said that if he disturbed bees in the fall it was not good for them. He, Mr. Beech, had disturbed his in December and some of which he had put out of doors were in better condition in the spring than those he had placed in the cellar. There were dead bees found in the hives left in the and he did not pay much attention to the hives there. The cellar was well ventilated, for his family used it for ordinary purposes. They kept potatoes beside the hives, and the bees kept beside the potatoes, and kept well.

THE BEST METHOD OF TAKING HONEY.

Several of the members related their experience of the *modus operandi* of "taking honey." The President said that he had had enough experience as to the best means of getting honey. He found that extracted honey paid him the best, and he "took" it almost exclusively. Mr. Aimer, he said, had told him that he shut off the "queens" to a number of frames, which depended upon the size of the colony, and out of the cones behind the sections he took the honey. He would advise all the members to take both extracted and comb honey. In taking it they might shut off a "queen" on each side and place the section in the middle.

HONORARY MEMBERS ELECTED.

It was moved by Mr. G. R. McKnight, that the following gentlemen be elected honorary members of the Association:—The Mayor of Toronto; Mr. John J. Withrow, President of the Industrial Exhibition Association; Mr. James Mills, President of the Guelph Agricultural College; Professor Brown, Guelph, and any other gentlemen the Executive Committee may wish to elect. Carried.

A lady sent two cakes to the convention, one sponge and the other ginger both of these had been sweetened with honey. The cakes were cut up, were passed to the members present, who discussed the merits of the cakes, which it might be said were uncommonly good. It was stated that a cake sweetened with honey was better to keep than one sweetened with sugar, as the honey would keep it moist. The chairman stated that if ladies would use honey in making cakes they might do their baking in the winter time when it was cool, and have fresh cakes all through the summer. It was resolved by the Association, that among the many uses of honey, its value as a sweetening in the process of cookery is one of the most important, especially in view of the adulteration practised upon almost all grades of sugar, and this meeting takes the opportunity afforded by the presentation of the excellent cakes to call the attention of the public to the great superiority of honey to sugar in all cases in which an absolutely pure sweet is desired.

The officers elected for the ensuing year were as follows:—Hon. Lewis, Wallaceburg, President; J. B. Hall, Woodstock, Vice-President; J. R. McKnight, Owen Sound, Secretary-Treasurer. A full Committee was also elected.

Wintering Bees.

Now is the time to prepare colonies for safe wintering. First see that each colony has a prolific queen, and if it has not already enough honey, be sure that the colony has enough bees to fill up for winter as soon as the fall bloom comes. Each comb should have at least one hole through it, for a winter passage for the bees to pass from one comb to another, without passing round the frame. I have examined many colonies of bees that have been wintered in a careless way, that were not provided with passages and have been starved with plenty of honey on the other side of the comb. I feel certain that if they had had a passage through

the comb they would have survived the winter. If any colonies fail to gather enough honey for winter, in the fall, unite all such together, for you can make one good colony out of two or three poor ones, and I often find colonies thus treated the very best in the spring.

This is my plan for preparing bees for winter, and it works like a charm. After the fall season is over for surplus, I take a blanket made the size of the hive on top, and long enough to reach down to the bottom of the frames. Smoke the colony, take on the surplus arrangements, contract the colony to the proper size, put in the division boards, fill the empty space with dry chaff or any dry absorbent that may be handy, such as rags, fine hay, or straw; place the blanket on top of the frames, then drop the end of the blanket down back of the frames, tuck the edges in nicely, close up the hive and all the top or upper story with an absorbent; cover the hive to keep perfectly dry. I bore a ½ inch hole in the front of the hive, about ⅓ of the way up from the entrance, front the hive to the south, and all is ready.

I have wintered my bees with success for at least 15 years, and I know whereof I speak. People are depending too much on chaff packing outside of the hive; they must have at least one end of the frames to run to the hive without packing, and the ends should be the front, and the hive must front the south. Last fall I had 135 colonies and my loss in wintering was 6 colonies, 2 of which became queenless, 2 were destroyed by mice, and starved, and one died with dysentery. This has been a very good season for honey. My bees have had no rest since the fruit bloom; there has been a constant flow of honey.—L. J. Diehl, in Am. Bee Journal.

Miscellaneous.

ADVANCE IN THE PRICE OF HORSES.—The Boston Advertiser says that there is a sharp demand for good horses at an advance of from 15 to 30 per cent. on the values current the past two years. In fact at no time within twenty years has there been no noticeable a scarcity of thoroughly sound stock. The horse car companies that three years ago were supplying their wants at from \$80 to \$100, are now forced to bid up to \$130 for animals counterparts of 1879 purchases. Truckmen, were last autumn buying heavy draught teams at \$350 to \$400, are now compelled to pay \$425 to \$550 for duplicates to these pairs. The most persistent demand is for dark-colored, well-bred carriage horses, in closely matched pairs, each horse weighing about twelve or thirteen hundred pounds. Such a well-broken and stylish team, though not fleet, will secure from \$600 to \$1,000, the price advancing from the lower range upon their freedom from blemish and their evenness in speeding.

A large lumber business is being carried on by parties in Bridgewater, Nova Scotia. Messrs E. D. Davinson & Son's two mills will cut during the season 15,000,000 feet of lumber; Dufus & Co.'s mill at Summerside will cut 6,000,000 ft.; C. H. Chase expects to cut 2,500,000 ft.; Alex. Nelson will cut 1,000,000 ft.; Jas. A. Carll expects also to cut 1,000,000 ft., a total of 25,000,000 feet lumber, a gain of about 8 per cent. This gives employment to 700 men, and supports 3,000 people. This is good for the county of Lunenburg. And all the branches of industry in a country tend to supply to the farmer a home market. Mechanics as well as other workmen must have their supply from the farmer.

When fattening an animal for beef let the process be as quick as possible. Any stint in feeding will make the meat tough and dry. Stall fed animals will fatten more readily than others, and young animals require richer food than older ones. In winter fattening depends much upon the temperature of the stable. The warmer the cattle are kept of course the less food they require.

Poor shelter, care, feed and drink, will in a few generations make scrubs of the finest thoroughbred stock. Thoroughbred scrubs are but little better than native scrubs; and the farmer who raises either will continually be poor. Breeding the best stock, and keeping in the best manner always pays best.

A writer in the American Farmer has tried the following, worked well into the sod under pear trees to prevent blight, and, so far as tried, with satisfactory results: One quart slaked lime, one quart salt, one quart bone phosphate, and one ounce of sulphur for each tree,

Guelph Exhibition.

The Union Exhibition held at Guelph was very poorly attended this year. The cause of this was the losses the Association had sustained the two previous years, thus necessitating the reduction of the prize list to less than one-fourth of what it had formerly been. The stock and poultry exhibit was good. The thermometer took a low dip just after the horticultural display was arranged, and such havoc we never saw made in any such display. The fine plants were all cut down. This was the only place where the Model Farm made a show of their stock. By recent purchases they have added some good animals to their herd. There was a fine display of Herefords. A prize for the best herd of cattle of any breed was given at this Exhibition. The competition lay between Shorthorns and Herefords, and the latter carried off the prize. Perhaps it would have been better to have held this exhibition a little earlier in the season

The Great Central Fair, Hamilton.

The result of the Central Fair is summed up in the words: A good show and a large attendance. On the first day (Tuesday, Oct. 4,) the same dilatoriness that was remarked at other exhibitions was the subject of complaint here also. Up to noon of the first day no department was complete, and many contained only a few of those that had been entered. There were not many people on the ground. The arrangements, however, were complete, and the exhibitors received every attention from those in office and were afforded every facility for getting the articles into place. Wednesday merited the name of the Farmer's Day; the visitors were nearly all from the country. There 12,000 people on the ground. The receipts at the gate during the day amounted to \$1,235. The special morning train of the H. & N. W. Railroad conveyed to the fair over four hundred visitors, and the G. W. R. trains were crowded with excursionists.

The grain display was large and of superior quality. The wheat was in especially good condition and there were some very choice samples. Mr. Smith, Emigration Agent, purchased seven bags of very fine grain and a collection of grain in straw to send to England as a sample of the grain that is grown in Ontario. The show of butter was not large, but of extra quality. There were exhibited some very fine Stilton cheese and some factory-made; but the exhibit of dairy products, on the whole, was very small.

The exhibit of Durham cattle was large and excellent, the greater portion of them being from the ridings of Wentworth. There were one hundred entries, many of them animals that could not be beaten. The Devons were fewer in number, the exhibitors being confined to the neighborhood of Guelph. Of Ayrshires there was a very fair entry. There were not as many competitors in this class as in the Durhams, but among them, however, a number of the best Ayrshires in the Province were exhibited. There was a lively competition in the classes of grade and fat cattle.

The number of horses exhibited in each class was very large. Especially was this the case in the class of Road and Carriage horses. Blood horses were well represented; so also were Agricultural and Heavy Draught horses. There were some quite superior animals.

There were large lists in nearly all the classes of sheep. There were seventy-eight entries of Leicesters, which formed a splendid show. The entries of Lincolns were not so numerous. In the Southdown class there were over fifty entries, the animals coming from a wide district, and the show being described as first-class.

In pigs there were 118 animals exhibited. Of these thirty-three were of large breeds and eighty-five of small breeds—Suffolks, Berkshires and Essex.

In agricultural implements there was not a large exhibit; but all the implements now considered essential to improved farming were there. They are most of them such as engrossed such attention at previous exhibitions and are well-known to our readers.

The display of fruit of all kinds was magnificent. There were choice specimens from the Grimsby, Niagara and Hamilton districts, some of the best fruit-growing districts of Canada. Of apples there was, for the season, a creditable display. The display of peaches was very fine, notwithstanding the time of the year. Plums were scarce, there being but few entries; but the quality was good.

Pears—The exhibit of this delicious fruit was an exceptionally fine one. There were sixteen entries. Of Quinces there was but a small exhibit, but the specimens were good. There were about two hundred plates of grapes, making this the crowning exhibit in the fruit department.

The display of flowers, ferns and foliage plants was an excellent one.

The show in itself was announced to be a financial success, and as showing a handsome balance to carry over for the next fair.

The Provincial Exhibition of Prince Edward Island.

The exhibition this year was a very creditable one; it may be pronounced a great success, and, on the whole, a good representation of the industries of the Garden Island of the Dominion. The samples of grain—wheat, barley, oats and buckwheat—exhibited were not inferior to any in the old provinces of Canada. The oats shown at the Summerside Exhibition weighed from 42 lbs. to 48 lbs. to the bushel, and those shown at the Provincial were, it is said, fully equal to them. The roots and other farm products were all not to be surpassed. The potatoes shown maintained the reputation of the Island for this valuable crop. The varieties for which prizes were obtained were Early Rose, Burbank Seedling, Prolific and Blues.

The show of horses (whose superiors, it is said, are not to be found in Canada) was certainly of a high character. In this class there were awarded twenty-five prizes.

The exhibits of cattle bore testimony to the great improvement in stock in that province. There was an excellent exhibit, especially of Shorthorns. For this breed fourteen prizes were awarded. For Ayrshires the awards were only twelve; for grades, twelve; and three awards for best steers.

There was an excellent exhibit of sheep, whose condition proved that the climate and soil of the province are well adapted to this stock. Leicesters still maintain their position in the province. For this breed twelve prizes were awarded. For Shropshire or Southdown, grey or black face, twelve prizes; for sheep of other classes, sixteen prizes.

The show of pigs was very creditable, so also was that of poultry. The exhibit of agricultural implements was not large or varied.

The show of fruit was not large, though there were some very fine specimens of apples, plums, damsons, grapes and cranberries. The exhibit of flowers shows that the science of floriculture is progressing in the Island. The butter and cheese exhibited were all dairy-made, factories being as yet unknown in Prince Edward. There were, of course, domestic manufactures and ladies' fancy work. Without them our agricultural exhibitions would be incomplete.

The Central, or Midland Exhibition.

This exhibition was held at Lindsay on Oct. 4th, 5th and 6th. From its central position in the midst of enterprising farmers and stock breeders, it is always looked forward to with interest. The fall exhibition of 1881 was, on the whole, very successful, though the number of exhibits in some departments was not so great as in former years. This was especially the case in products of the garden and the dairy. To the unprecedented drought of the summer and early autumn months this comparative falling off may be partly attributed. The exhibits in nearly every class within the building were far short of those of four years ago when the exhibition was last held in Lindsay. Though the number of exhibits was less than had been expected, there can be no doubt of their superior quality. Any disappointment that was felt at the small number of entries in the horticultural and dairy departments was, however, more than made up by the admirable exhibition of live stock. On Tuesday, the opening day, the grounds presented the appearance of active preparation; from an early hour till 2 p. m. the exhibitors were busy conveying stock, farm produce, implements, &c., to the grounds and arranging them in their places. The day following was the great day of the exhibition, the attendance was very large, there being not less than 10,000 persons on the ground. The receipts were about \$2,500, so that financially the show was a success. The live stock department was one that it would be difficult to excel; this was the main feature of

the exhibition. In agricultural implements the exhibit was very fair. In the horticultural there were some very fine specimens in its different sections, though the display of fruits and flowers generally was inferior to some former exhibits, owing to the drought. The total number of entries was about 3,500. The show of horses was especially good; the number of entries in this department was 252, including 11 blood horses, 133 carriage or road, 59 agricultural, and 54 heavy draught horses. The display of stock in cattle was fully equal to that in horses, and afforded a most satisfactory indication of the increased attention now paid by farmers to the quality of their stock; the number of entries was 185, including Durhams, 93; Devons, 32; Ayrshires, 24; and Grades, 32. The sheep exhibited were of excellent quality; the number of entries was 127, comprising Leicester, 49; Cotswold, 44; Southdown, 27; and unclassified, 55. The poultry department created a keen interest; the crush at their house was very great, and the number of exhibits was greater than could be well accommodated.

Manitoba Agricultural Exhibition.

The Agricultural Exhibition of this province is of general interest. Manitoba, with great fertility, and the vast extent of the great North-west, with its vast resources, are of deep interest, not merely to Canadians, but also to thousands in Great Britain and the continent of Europe. The Provincial Exhibition was opened in Winnipeg on Tuesday, October the 4th. The weather was very favorable; but the means of access to the city were very discouraging. For a week previous there had been a downpour of rain, and the state of the roads was such as to prevent the large attendance at the Exhibition that there would have been otherwise. In spite of bad roads, however, the attendance was good, and the Provincial was on the whole a decided success.

In the pavilion great object of attraction was the C. P. R. "Pillar of Plenty." On the terraces of the pyramid were arranged specimens of the various products of the country along the line of the C. P. R. Very conspicuous among the products were many varieties of the native grasses. The main display on the terraces was that of the various cereals, some in the sheaf and some threshed, and interspersed with superior specimens of potatoes, and the whole was bordered with native flowers, pressed and preserved.

The staple grains made the finest display ever made at the Provincial Exhibition, though not in such large quantities as at our Ontario shows; but the quality was all that could be desired. Spring wheat was represented by twenty samples. White Fife, Red Fife, Russian and Golden Drop. Of the twenty samples there was not one pound that could not be classed A No. 1. Barley, next to wheat, may be considered the great staple grain of the province. The specimens exhibited were in plumpness and brightness at least equal to any on the continent. Of oats there was a good, though not a large exhibition—four white and seven black samples. Of peas and beans there were few samples and not worth mentioning. There was one sample of Indian corn, the white sugar variety. The potato exhibits maintained their reputation as being unsurpassed if not unequalled. The Beauty of Hebron, Early Rose and Climax seem to be most prized. The display of garden products was very large and in quality first-rate.

The outside department, in Dufferin Park, was not very large. The small number of exhibits was attributed, in part at least, to the condition of the roads. Horses made the best showing. For blood horses, roadsters, carriage horses, agricultural horses and heavy draught horses, there were awarded in all forty-four prizes.

In the cattle stalls were to be seen a few as fine animals as could be produced anywhere. Two or three bulls, Ayrshire and Durham, were objects of general commendation. For pure red bulls and cows twelve prizes were awarded and for grade cattle the same number.

The sheep exhibited were Cotswolds, Leicesters and Shortwools; but there was not a large display. The swine were Suffolks and Berkshires. The display of agricultural implements was small. For dairy products the premiums for butter were in four classes—for shipping, crock butter, table butter and home-made cheese. For prizes for domestic manufactures and ladies' work there were many competitors.



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A BREEDER'S VIEWS ON THE SHORTHORN HERD-BOOK.

SIR,—The question of control of the Canadian Herd Book, including the expunging of entries of cattle already registered, having arisen between the breeders of pure Shorthorns and the agricultural Association, a question in which the whole agricultural community is interested, and that cannot be decided without serious consideration and the consulting of all interests involved; and as a very large number of farmers are not very well posted on the thorough-bred question, I have deemed that a letter on the subject from a thorough-bred breeder might not be unacceptable after the late discussion mentioned in other parts of this number.

The foundation of the system being a law of nature, that "like begets like," this is being applied to every department of agriculture seeds as well as animals.

From very early times there has existed in the North of England a breed of wild cattle with strong distinctive qualities, while in color these are supposed to be the original of the "Shorthorn." Over a hundred years ago the cattle of the country were noted for certain qualities excelling all others.

It occurred to two men, Bates and Booth, that by careful selection of animals of both sexes, notably pre-eminent in certain qualities, these qualities would be further developed and transmitted by continuing the same family, choosing only the most perfect, culling all that were not up to their standards, these qualities would be established. The present character of the thorough-bred, or cattle traced by registered pedigree in dam and sire direct to the founders of the various families, fully proves the soundness of their judgment. It is not to be supposed that there were no other cows or bulls in England of equal excellence with these originators, as undoubtedly there were and are. But on account of the acknowledged excellent judgment of these breeders, we feel confidence in animals that can be traced in an uninterrupted line to these herds, that we will not be disappointed in obtaining the results we aim at.

Now to the question of the moment, "Shall the Canadian Herd Book," the property of the agricultural community of Canada, be handed over to an association of a portion of the breeders of Shorthorns, or retained as a general register of pedigreed animals of the class?

The object of a Herd Book is that an animal may be traced by its recorded pedigree, which according to the fidelity with which it is kept, is evidence as to professed purity, namely, the amount of blood that may be called for, whether of imported or local celebrity. It is intended to stimulate the general improvement of cattle. This improvement may and will take different directions.

Qualities called for may be:

Beef	{	Quality
		Quantity
Dairy	{	Milk
		Cream
		Butter
		Cheese
Adaptability	{	Soil
		Climate
		Food.

No honest breeder would recommend an ordinary Canadian farmer to buy a thorough-bred cow, but would recommend his procuring a cow of well known indigenous stock, that is, one that had been acclimated for several generations, and possessed of the individual characteristics required; and using a purebred bull of a family possessing the qualities desired. There are numbers of excellent animals

through the country possessing in a marked degree these individualities, and would it be just to a man possessed of requisite ability, who should carefully select and judiciously improve a family thus specially adapted to the requirements of the country, to shut him out from guaranteeing this production of intellect and purse, by official recognition? It is also a security from piracy.

No Shorthorn breeder would be affected in the sale, or misled in the buying of pure bred stock, as he would trace the animal's pedigree to its earliest source. Furthermore, any "Shorthorn" record now started will soon require to be further remodeled on account of the differences between the two principal tribes, namely, Bates and Booth, for even now no Bates breeder will risk the character of his stock by the introduction of a Booth bull into his herd, although the Booth may possess qualities thought by some superior, yet the types are so markedly distinct as to necessitate a different Herd Book, and cause objection to crossing.

Taking this view I think it will be generally admitted that it will be better for the H. B. to remain in the hands of the Agricultural Association. I would suggest the raising the qualification for cows to the seventh cross with pure bulls, and the shutting out of grade bulls entirely. I would also suggest that herd names be registered as trade marks, thus preventing confusion from using the same name by different herds.

COLUMELLA.

TAX OR NO TAX ON BULLS?

SIR,—This is a subject of great importance to the public generally, and one to which for some years I have given thought, pro and con, and have come to the conclusion that a tax should be placed on bulls. The questions to be taken into consideration are as follows:—

1. Are we to support thoroughbred male animals or not?
2. Should all male animals be taxed?
3. If not, what class of animals should bear a tax?
4. The amount of tax to be imposed and how disposed of.

At present I merely write on taxation of the male bovine tribe and shall entirely confine myself to them; in doing so, your readers must not think I wish to place an unnecessary burden on the back of the farmer. My object in writing is to court the opinion of the public on this point, and to see what is best for the improvement of the stock of our country. Private feeling must give way when the public weal is concerned.

Now as to the first question. A few years ago when the country was in a transition state, from forest clad ground to the cleared bush, it would have been premature to have placed a tax on bulls; that time has now pretty well gone by. In conversations held with high class breeders, and more particularly with those who are breeding up, with very few exceptions they admit a tax can be fairly imposed without interfering with the liberty of the subject, and the stock of the country improved in a very important degree.

No one who has read the evidence given before the Agricultural Commissioners can doubt that a time has arrived when more attention must be paid to the class of stock we raise. A market is in our hands; I am referring to our English market, and if we allow our chance to flit by, we have only ourselves to blame. This country possesses most valuable animals. But when we travel through the country and see the fields carrying the wretched stock we do, stock that would take double its value to make it fit for market, we are led to ask, how is this? Simply this: Good stock is in the hands of the few and not of the great whole. Wherever enterprising men have imported good stock, we see an improvement in that immediate locality, but even with such an advantage, when a superior animal is close to the door, we find the ignorant and the penurious man will drive his cow a mile or two past the good animal to be served by a wretched grade, rather than pay a fair price of say \$2, for the service of an animal that would produce a calf worth \$5 the day it was dropped. I have heard many say they do not care for the calf, they only want the milk and that they kill the calf as soon as born. I can only answer such an one in the following terms, "Oh, murderer of the innocents! have you a right to deprive your fellow creatures of good veal to gratify your avariciousness." Surely such a man should pay for his wantonness, thus, as a very large number of the community agree with me that a bull should bear a tax. We come to the next point, Are all bulls to bear a tax? I for one see no objection, and

and would willingly pay a fair tax. Some think only grade bulls should be taxed, others that all should be taxed, the grade bull to bear a heavier tax than the pedigreed bull. I incline to the latter view, but with certain exceptions, which I shall mention in due course. Many farmers will think it hard perhaps that they should pay a tax for a bull kept for the service of their own stock; to meet their view, in a liberal way, I would advance my exception (i. e.) I would allow a farmer the right to keep a bull (pure bred of course) for his own use, provided he is not allowed to serve other animals than his own, with or without profit, such bulls to be exempt from duty. Having advanced thus far we naturally refer back to the original question, "Shall all bulls be taxed?" I think all bulls should be taxed when let at profit or for use to other cattle than the owner's own stock. There can I think be no objection to this, and will therefore suggest that the duty on a registered animal be \$5 per annum, that to be charged on a grade or unpedigreed beast \$15. Some are of opinion the latter tax should be higher; I think this would answer every purpose. If such tax be imposed we should no longer see the disgraceful animals in the country, so disgraceful to a good breeder's eye. I can fancy I hear the slovenly and antedated farmer say: The grade bull did well enough for our fathers, why should it not do for us? My good man, you have other interests to consider besides your own; the country calls upon all to exert themselves in providing good food for the world in general, and if you will not come out of your shell we must draw you out; no longer can you be allowed to injure your neighbors. Why not say, how do I injure them? Why, first of all, you deprive him of his veal, you then raise an animal that is unmarketable, and worse than all, you keep an animal that often injures his good stock; a case of this latter injury occurred a couple of weeks ago in my neighborhood. A most disreputable bull scrub leapt over a high fence into the field of a Shorthorn breeder in which his yearling heifers were grazing, and spoilt a valuable heifer. I am glad to say the breeder made the owner pay \$15 costs, but this was a very small sum in comparison to the mischief done. I have counted as many as three scrub bulls grazing on the public road near some valuable Shorthorn stock. If people will be so perverse and keep such animals to injure their neighbors, they must be taxed; the community calls for it. Then comes the point, If bulls are to be taxed, what is to be done with the tax? I would propose that the tax be raised in the same way as other taxes are raised, and all bull duties should be handed over to the directors of the township cattle shows, in which levied, and applied by them in prizes for improvement of stock, and save the present grants, if I mistake not, at least half of them; but if this should not be the case the tax will work well for improving the stock of the country. The time has come when we must look at what other countries are doing. Our neighbors in the States are far outdoing us in the improvement of stock; look also what our brother colonists are doing, also France, Russia, Germany and other European countries are vying with each other in stock raising, getting the best animals. So we must use the whip and spur to drive those benighted men who call themselves agriculturists, and who are contented to drag on in the old groove. When I tell you that it took a shipper the past part of six weeks driving round this part of the country this fall to make up two car load of cattle good enough for Manitoba, you can hardly be surprised by my advocating the imposing of a bull duty. I dare say many will differ as to the desirability of taxing bulls. The general opinion of the country could be easily ascertained by asking the directors of the county and township shows to put the matter before their meetings in a calm, dispassionate manner. I do not fear the result; I have but one view in writing, viz., the welfare of the cattle trade and general improvement of stock.

G. F., Oakville.

ALL CLASSES FIND THE ADVOCATE USEFUL.

SIR,—I like the ADVOCATE very much. I am a carpenter, and have a small place (about an acre), which is in fruit trees. Last year I raised over 75 barrels of apples, besides other small fruit, and there has not been \$10 worth of manure put on the land in 25 years. I am going to try raising peaches. I saw an article in the ADVOCATE of last year, and am going to try and get the kind you mention and take them home with me if I can get them.

W. W., Falmouth, N. S.

AN EXHIBITOR'S CRITICISM ON THE PROVINCIAL EXHIBITION OF 1881.

SIR,—Now that the shows are over, and people have time to think over all that they have seen and heard, it might not be out of place to make a few remarks on the show just held in London. The first thing that seemed out of place was the number of pedlars, mountebanks, quack-doctors and side-shows that kept up a continual howl and had no business there. They may add a little to the funds of the institution, but take away from the merit of the show. Our fair ought to be carried on for its worth, and have none of this trash on or near the grounds. Those fellows are only on the look-out for the stray dimes that the most of those who patronize them would do better to take home and use to better purpose.

The implement show was excellent, but we think that they should be supplied with sheds to protect them from the weather. We fancy those who have engines to show would be willing to supply the power for the sake of showing their engines to advantage. We know there would be extra expense, but that might be helped by adopting the old country plan of using canvass tents; these could be taken down after the fair is over and laid by for another, thereby saving great expense. The same might apply to the stock. True enough, there would require to be divisions, but perhaps fewer than at present would do. These tents are said to be very satisfactory in Britain, and if so, why not here? The money thus saved would go to swell the prize list, and thereby increase the usefulness of the show, placing it before all competitors.

The stock was, as usual, up to the mark, and in most classes the competition was keen. It is not our intention to generalize, but to pass on and give some things that appeared out of place.

The first thing is, the two-week system is a total failure. There would have been a good many more exhibitors had the show been for one week. People cannot spare the time, and if persisted in, it will seriously injure the show. There are plenty of exhibitors who don't care a straw for any show but the Provincial, and we saw several who would have been there had it not been for the long time they had to stay.

The next thing wrong is the appointing of judges. How these men are appointed we do not know, but we are satisfied it is not on account of their knowledge of the classes they are about to inspect. We will give one or two instances that we can vouch for. One set of judges on Devons, not many years ago, were sure they were in the wrong ring, "because," says one, "don't you see them going into that other ring with their white faces." Another judge came up to us and said he hoped we were satisfied, as he did not know anything about our class of stock. We know of many more cases of the same kind, some even worse. There is surely a remedy for this, or are we to say that there are not enough of men in Canada to judge the different classes of stock? We believe a remedy for this would be the appointing of one judge only, because a man knowing that his judgments have to go before the country, would be more wary in taking a position he felt sure he could not fill. There are plenty in this country plain enough spoken to, tell him if he favors the man rather than the animal.

Our new Secretary is a decided improvement, and if he continues to be as civil and obliging in the future, we feel sure he will go a great way towards improving the fair. His task is a hard one during show week, requiring patience and tact to please all.

There were several complaints among exhibitors as regards the Superintendent's office. We do not know how many pass tickets he is allowed to issue, but it is hardly fair to grant one man two passes for eight head of cattle, and refuse another any more than two for twenty head. Another case was that of an exhibitor who wanted to make another dam on the creek for convenience sake, and was refused. It looks as if he was beginning to feel high in his position.

The herd book came in for considerable discussion among the exhibitors, but we will give our views on this subject at some later day.

Another thing condemned was allowing the band competition and dog show to be outside the grounds. True, the latter was inside the fence, but people felt that they should have been part of the show. We know of cases where parties came to see these shows, and never entered the Provincial. I hope to live to see the Provincial rise to such a standard that it shall be equalled by few, excelled by none. PLOWBOY, Guelph, Ont.

THE APHIS—HARDY APPLE TREES.

SIR,—My young apple trees are infested with a small green louse which adheres to the under-side of the leaves and cluster around the tender shoots. They do not eat the leaves, but suck the life-blood out of them. I have tried several things to kill them, but so far have not accomplished anything. The trees otherwise are in a healthy condition. What must I do to kill these vermin, and is there anything I can do to prevent them from coming on the trees? Please name three of each of the hardest varieties of summer, fall and winter apples. We live in the county of Renfrew (the most northerly county in the Province of Ontario); we have paid out annually thousands of dollars to tree agents for apple trees, and to my knowledge there has not a single tree come to maturity. If there are any varieties worth cultivating we would like to know them and where they can be got. J. L., Renfrew P. O., Ont.

[The insect with which your apple trees are infested is of the *aphis* family, commonly named bark louse. The worst enemy we have affecting the bark of the tree is the oyster-shell bark louse, which is a very troublesome though a very minute one. You may, when the tree is infested, see the bark of the apple tree covered with larvae. It is generally detected in the shape of a small scale, somewhat resembling an oyster shell, whence its name. If the scale be lifted up in August or September, there will be disclosed a large number of small eggs underneath. These eggs remain under the scab during the winter, and early in the following summer, as soon as the weather gets warm, the young ones are hatched out. They wait for a warm day before leaving their shelter, and then they scatter themselves over the twigs of the tree and when they find a suitable spot they fix themselves upon the tender growing part, insert their beaks and become permanently located. They go on sucking the juices of the tree until about the latter end of August or September, when they attain their full size and gradually form the scale within which the eggs are deposited, and the female louse shrivels up and dies.]

The apple tree plant louse (another of the *aphis* family) attacks the terminal growing shoots. It is similar to the plant louse described above. A strong alkaline solution applied to the bark is the most efficacious remedy. Apply in April, and again in June, and, if needed again, any time during the summer. The aphids are found in a large number of plants—the grain aphid, the cabbage aphid and the apple aphid have all been very destructive. The productiveness of the *aphis* is excessive, each female producing about four young ones a day, which are able to produce offspring in like manner when three days old, so that it has been calculated that in twenty days the progeny of one female would amount to 2,000,000 individuals. Fortunately there are various checks imposed upon their increase. There is probably no kind of vegetation exempt from their attacks.

The hardest variety of apples.—At the Waba Nurseries, Renfrew county, of thirty hardy varieties made trial of, the following ten lived: Red Astrachan, White Astrachan, Tetofsky, Duchess of Oldenburgh, Fameuse, Twenty-ounce, English Russett, Pomme Gris, Peach Apple and the Wall-bridge. Out of all these sorts the only varieties never injured were the White Astrachan, the Tetofsky, the Duchess of Oldenburgh and the Peach Apple—2 summer, 1 fall, 1 winter. In buying trees to plant be careful to get those grown in a similar climate to your own. Those grown in a southern country or district are not as hardy for your purpose. If possible, buy trees grown from seed produced in a climate as cold as your own.]

SIR,—Would you please answer the following through the *ADVOCATE*? I have a young orchard, four years old; I mulched it with coarse straw and planted it with corn, and now a number of the trees have bursted, near the ground, about four to six inches, and the bark becomes loose. The trees have grown very fast this summer. What is the cause, and what should I do to save them? A. S., Luton P. O., Ont.

[The need of draining is most probably the cause of the bark of your apple trees bursting; but you have not said if your ground is wet. Water on the surface of the ground might produce that effect. The quantity of coarse straw as mulched would prevent the evaporation of the stagnant water and the access of air and light to the soil. Orchards are frequently planted in soil that is naturally unfit—a cold, wet soil with a hard, tenacious subsoil is not suitable for the growth of fruit trees. Such a soil should be underdrained

and subsoiled. Sandy loam or gravel with a porous subsoil is the best soil for apple growing. In pruning, also, mistakes are often made by cutting off all the lower branches. If the limbs are allowed to shade the stem the tree is always much healthier, and the bark is not apt to get loose. It is contrary to nature to grow a tree with a large stem exposed to the sun and weather; it tends to make the tree diseased.]

READ YOUR BACK NUMBERS.

SIR,—As a subscriber to your valuable paper, I wish to ask your advice on a very important step I am thinking of taking. A great desire to push their fortunes in a new country has laid hold on many farmers in this part of the country, myself among the number. Some have been thinking of going to the Western States, but others, profiting by the reasonable words of caution sometimes given in the *FARMER'S ADVOCATE*, have decided not to go there, but to turn our faces to Manitoba. I would feel obliged if you would let us know through the *ADVOCATE* if you think such a move would be advisable, and if so, something of the nature of the country, its soil and the method of farming there. I ask you because we know we can rely on any information in the farmers' paper, the *ADVOCATE*. MUSKOKA, Bobcaygeon, Ont.

[In reply to "Muskoka," we advise him to look to the back numbers of the *ADVOCATE* and he will find this question fully treated of in more than one instance. See for instance a prize essay Vol. 15, page 81, an article written for the *ADVOCATE* by an old subscriber of the paper, who was a practical farmer in Ontario, and who knew well the subject he wrote upon. It would be well for our subscribers to preserve their numbers for reference and have them bound in yearly volumes, as we cannot occupy our space with repeating the information that it once contained.]

VETCHES.

SIR,—Can you give me some information about Vetches? Are they a profitable crop to grow? What is the best soil to plant in? Does it need to be highly manured? I have a piece of black muck land on which oats were planted last season; the straw grew quite rank, and the oats filled out well but were badly rusted. Do you think it would be good soil to put vetches in? Are they good for milk cows and to give working horses? E. S. P., Carleton County, N. B.

[Vetches are not much grown in Canada, though in England they are considered a very profitable crop for soiling. Our short spring and hot summer seem to hinder the luxuriant growth that is promoted by the moist climate of Great Britain. The soil that will produce a good oat or other cereal crop is suitable for a crop of vetches. The cultivation is the same as that of peas, of which they are a variety. They have the same beneficial effect on the ground where they are grown—fertilizing, instead of impoverishing the soil, and smothering weeds. They are good for milk cows and for horses; but horses should have in addition a portion of dry food—hay, or hay and oats. They are also good food for pigs. They serve as a substitute for clover where it cannot be grown or has been killed from any cause. They may be fed in the green state or cut and cured for hay. When used for the latter purpose they should be cut about the time the pod is forming. They should, in all cases, be sown with oats; enough oats being sown to keep the vetches off the ground. Spring vetches are the only variety successfully grown in Canada.]

CUTTING MAPLES.

SIR,—Would you please answer in the *ADVOCATE* what is the best time to cut White Maples? T. B., P. E. I.

[Do you refer to the silver maple or poplar? (it is known by either name) If so, grub it out at any time you can. It is worth very little, even for firewood, and its shoots make it a real pest. The maple, hard or soft, is a valuable tree; neither of them is a white maple. The proper time to prune the hard or soft maple is after the leaves have fallen in the fall, or in the early part of the winter.]

The crops are turning out well in this neighborhood. Wheat will average 25 bushels per acre; oats, about 50 bushels. Prairie fires are now raging in most parts of this country. A good deal of fencing and some stacks of hay have been burnt. The weather has been cold this last week with hard frost at night. S. T. P. M. Beaver Creek, Man., Oct. 10.

STILTON CHEESE.

SIR,—I have read Professor Arnold's article on Stilton cheese in your number for October. It appears great presumption in me to differ from him, but I must plead fifty years experience in the manufacture of Stilton cheese as my excuse. In making the common press cheese the curd when formed is, I believe, broken into the smallest possible particles and scalded; but in the Stilton the curd when formed is lifted out into the strainer with the greatest possible care, to prevent its being broken. This care to prevent its being broken is continued throughout the whole process of making an English Stilton. I cannot believe in breaking up the curd and scalding it. It appears to me that it must entirely destroy its characteristics. I should think a cheese made in this way would have a smooth outside, and in England, where it is so well known, no dealer would purchase it for a Stilton. As regards a slight pressure, I should think it might be applied at the right time with advantage, both to assist their ripening sooner and prevent their going out of shape. The length of time they take to ripen is a great disadvantage. Some years since I had more than a hundred left when I began to make in spring, and they continued ripening all through the summer and were excellent in quality. But, according to what Professor Arnold tells us, they may be made to ripen in six weeks. If I ever see a cheese which has been made only six weeks, with the outside appearance which the Stilton cheese alone has, and the blue mould inside, which is the sure sign of its being ripe, I shall be greatly astonished. ELIZA PARSONS, Cardiff Farm, Guelph.

INCIDENTS NOTICEABLE AT TWO NEW YORK FAIRS.

SIR,—Our county fair, for the last two years, was held for three days, in which case it is generally conceded to allow the exhibitors the first day for arranging their wares and exhibits, so that the next two days will constitute the show proper. But, although the skies were bright and there was not the least danger of foul or wet weather, still there seemed to be a great damper upon the usually joyous, holiday appearance of the crowds in attendance, for being the 19th, 20th and 21st of Sept., when the drouth was most severe, farmers were almost in despair about their wheat seeding. That which had been sown four weeks had not come up, and others who had not sown knew not what to do, and were seen in knots of a few each all about the grounds, consulting with their brother farmers what it was best to do. The horticultural department of the show was also quite meagre owing to the same cause. But the news of our great calamity, which affected all classes of our community, came as the second day of our fair opened, causing all to show more or less of the sadness which they all felt over the loss of our beloved President. But, as a whole, the exhibit was quite creditable, and the attendance so good as to insure the success of the enterprise.

One new feature of the fair was the trial of potato diggers, which attracted much interest among farmers who were about having that kind of harvesting to do, and the work done by them showed a decided improvement in that line of labor-saving farm implements over any previous trial we had witnessed.

On four days of the following week, at the city of Rochester, was held the Western New York Fair, which is usually about as large and well attended as any in the State; and this year, though it was held the last days of September, and it rained almost every day of the fair, still the rain was so welcome that it seemed to stimulate the people to come out. The attendance was very good, and one day that it rained hardest in the morning the crowd was largest in the afternoon; and while it was raining many enjoyed it so well that they would not try to shelter themselves.

As the implement department was most attractive to me, I examined its contents more particularly. With the usual display of steam power for various industries, was shown a portable steam saw mill in operation, doing good practical work; also two traction engines moving about the grounds, drawing after them threshing separators and water tank, well loaded with boys, and going up and down hill quite satisfactorily. The one-horse grain binder also seemed more attractive to many farmers than the cumbersome-looking and complicated self-binders; but their price seemed the greatest objection to their popularity. Quite a novel exhibit, and one that attracted a good deal of attention was made by a practical and inventive farmer, showing a number of new tools, some of them do-

ing a class of work which none of our tools in the market can claim to do, viz., scarify and dress rows of corn or beans, or hoed crops of the like kind, without the use of the hoe or hand work, beginning its work where the cultivator leaves off, and with one horse doing 15 acres of corn a day where the conditions of tillage are good, and doing that about as well as is usually done by hand. His greatest novelty was a combined implement which could be worked as eleven different tools, so that with it he could fit land for planting, could mark it out, plant it to corn, beans or potatoes, and put it in form to till—all these through the season with two horses, the farmer riding and cultivating two rows at a time, or about 12 acres a day. It operates also as a potato digger and as a bean puller, so that in the growing of beans and potatoes he had repeatedly prepared the grounds planted and tilled the crop through the season, and harvested them with this tool alone. His principal claims for its utility were that with it a man can do two, and in one class of work three rows at a time, do it better (for all is held to a perfect gauge and depth), and the economy in so combining is such that being made mostly with steel, and as well and durable as can be made, they will only cost about one-half what they would as separate tools. All his tools were taken from their work to the show grounds, for being a farmer, he first made the tools to fit the work he was doing, and as they proved practicable made a few more, which have been well tested by other farmers to establish their merits. H. IVES, Batavia, N. Y.

[We are pleased to hear of new and improved implements. We should like to see the implement referred to in operation. Perhaps our correspondent might inform the manufacturers of the best potato digger that we might insert a cut of it and also of the combined cultivator, if good, neat cuts were made, as many of our Canadian farmers desire to know which is the best and to procure such.]

A PATENT FOR MAKING MANURE.

SIR,—There is one George A. Kay, from New Brunswick, selling patent rights for 15 different ways in making manures in Antigonish. Could you inform me through your magazine if his patent right is used in Canada or would it pay to use it. He charges \$5.00.

A CONSTANT READER, N. S.

[We have never heard of any patent of this kind being sold in Ontario, and we would advise our readers to let the vendor severely alone. The best method you can have for making manure you will find published in the ADVOCATE from time to time; see back numbers, and be sure and read those which are yet to be issued when you receive them. A law should be passed to protect farmers and others from travelling swindlers.]

SIR,—Our harvest, on the whole, is not up to the average. Potatoes are not more than three-quarters of a crop, and are being bought up by speculators, prices ranging from \$1.50 to \$1.60 per barrel. Wheat suffered seriously from weevil and wet weather; oats are about average; grass a very good crop, but much of it was damaged by rainy weather during haying; hay may not bring the common price, but already there are buyers. The autumn has been rough, with one fall of snow of about six inches. T. C. C. Sackville P. O., N. B.

SIR,—In your May number I saw a plan for introducing surface water to a tile drain. I think I can give you a better plan, one that I have adopted. When I bought my farm there was an acre that would grow nothing but smart weed. There was an open ditch through the field that had to be five feet deep, and one place in it was always filling up. I put a tile drain through this low place, which was clay. In the spring the water could not get through, and would fill up and run over the ridge. I dug up about a rod of the drain and filled up around the tile with small stone. I have a heap above the ground, which is very little in the way to what an open ditch was. As soon as the water commences to flow it filters through the stones. This has worked well for over ten years. I have served three more places the same way, which works well. J. W., Port Stanley, Ont.

SIR,—It would be to the interest of every farmer to subscribe for the FARMER'S ADVOCATE if they would consider the matter over to their own interest. JOHN PURDHAM, Cummingsville, P. O., Ont.

SIR,—Would you be pleased to inform an old subscriber the proper time for pruning Honey Locust Hedge?

A. R., Nairn P. O.

[Hedges are pruned either in spring or fall. When the leaves in the fall have begun to lose the fresh green verdure of the spring they may be pruned, though the spring is considered the best season for pruning hedges of every variety. We have found the Honey Locust quite hardy.]

SIR,—Will you be kind enough to give me the name of the manufacturer of the potato digger exhibited at Montreal, and mentioned in the October ADVOCATE; also the name of the manufacturer of the Mole Plow, for ditching, exhibited at Halifax, mentioned in the ADVOCATE for October? I prize the ADVOCATE much. You can class me among your permanent subscribers. I have taken the ADVOCATE for three years, and have two volumes bound in cloth, with morocco back and corners. I think it is a great saving to have them bound, as it keeps them from being lost or damaged, and they are very convenient for reference. J. H. K., Kin's Co., N. B.

[The Mole Plow is manufactured by A. G. VanMeter, Turo, N. S. We could not ascertain the address of the manufacturer of the potato digger. Manufacturers would find it profitable to advertise their implements in the ADVOCATE.]

SIR,—Until I received the September number which you mailed I had not seen your FARMER'S ADVOCATE. I read that number carefully, and have been instructed by its perusal. If our farmers by the sea would only read and profit by the information you convey it would do more to bring about that long promised era of prosperity than all the protective tariffs and other political nostrums will ever accomplish. Yours truly,

WM. MCKERRON, Sec. Dominion Exhibition, Halifax, N. S.

LOBSTER SHELLS.

SIR,—Are lobster shells valuable as manure, and how is it best to apply them to the soil?

SUBSCRIBER, Brule, N. S.

[Burn them as you would oyster shells or lime stone and apply the product to the land in the same manner as lime is applied. They are of about the same value as oyster shells. They are considered by some not to be of as much value as lime procured from stone.]

A LOST TURNIP.

SIR,—Some forty years ago there was a white turnip called the "Canadian Turnip" grown in this Province. It grew entirely under ground and was as sound as a bell when taken up in the spring. Can you tell me where I can get seed?

OLD FOGGY, Guelph, Ont.

[Can any of our subscribers answer the above question? If so we would be glad to hear from them.]

SIR,—How much Prickly Comfrey would it take to set out an acre, and what time should it be done, have the roots to be set out every year and how how are they cultivated? Where could I get them?

A. SUBSCRIBER, Wales P. O., Ont.

[The roots of Prickly Comfrey should be cut in small pieces and planted like corn at any time, except in cold weather. Plant in rows 3½ feet apart, with the plants about 3 feet apart in rows. About 4,000 plants will be required to set an acre. The roots once set and started to grow will remain as long as required. The land where this plant is to be grown must be highly fertilized, and always kept rich and clean. You can procure the roots of Pearce, Weld & Co., seed merchants of this city. For price, &c., apply to them. We would advise our readers who contemplate raising Comfrey to commence on a small scale, as there are certain objections urged by farmers against it. It is very hard to eradicate from the land when once planted. It costs considerable to start a field. Many complain that their stock will not eat it, while other growers are disposed to think much of it. Whether it will pay the farmer to grow it will depend altogether on the advantages he has for growing other kinds of fodder, and whether his cattle will eat it or not. It has not, so far, grown rapidly into public favor in this province. Very few persons grow it.]

SIR.—A rented a farm to B on a three year's lease, the years 1878, 1879 and 1880, B agreeing to pay all taxes. B neglected to pay the taxes for the years 1878 and 1879, and A paid the taxes for the year 1880. Can the farm be sold for the taxes of 1878 and 1879, A being in a position to prove that B was a resident and had a sufficient quantity of seizable property on the farm during 1878 and 1879 to pay the taxes?

W. O. B., Springbank, Ont.

[They cannot sell the farm. The Collector should have made proper returns at the time.]

BLUE-WEED.

A subscriber at Warwick, Ont., sends us a weed which he says is becoming quite common in his neighborhood. Its botanical name is *Echium vulgare*. It is commonly known as Viper's Bugloss, or Blueweed. It is a troublesome weed, common in Virginia and becoming so in many parts of Ontario. It is a biennial, and should never be allowed to go to seed. To exterminate it, treat it as you would the burdock.

Stock.

When Cows May be Kept at a Profit.

In every herd of cows there are animals which differ widely among themselves in their adaptability for profit. Each animal has a different digestive power, different tastes, different aptitudes from any other animal. In one animal increase of food may result in the laying on of flesh rather than increase of quantity of milk yield, or, vice versa, one animal may keep up a uniform yield of milk under a considerable change of food, while another animal will respond in milk yield to slight changes in food. The owner who carefully studies the aptitudes of each cow in his herd will usually be able to point out such cows as can be kept profitably on coarse fodders and little grain, and such other cows as can more profitably be forced by high feeding into large yield of milk. As there exists this individual difference between cows in utilizing such food as they obtain, it follows that, as a herd is usually constituted, some cows are kept at a profit, and certain other cows at a diminished profit, or perhaps at a loss.

In the fall season, while the farmer is preparing for the winter, it is well to consider the relation between the food stored and the cattle kept, and carefully figure whether the season's crops are sufficient to maintain the live stock already possessed. It is also well to consider whether certain crops cannot be more profitably sold outright for cash than fed on the farm, and whether in order to do this some of the live stock had not better be sold before winter closes in.

These two ideas, viz., the differences that exist between individual animals in economy of food and in product, and the changing relations between the values of feeding crops and the animal products, should lead the farmer to a careful study and thought in the autumn, and will usually justify the disposal of certain animals that do not respond profitably to the winter feeding; such exist in the majority of herds. A milk cow weighing 1,000 pounds is generally calculated to require for her support and profit three per cent. of her live weight daily in food, or thirty pounds of hay or its equivalent. As in this region the winter may be considered as of six months' duration, this means two and three-quarters tons of hay. In the six months' pasturing it is difficult to assign a representative value, but let us, keeping on the safe side, for the sake of even figures, calculate the cost of the yearly keep of a cow at three tons of hay. Now, when hay is at a certain cost, that is, possesses a certain cash value, it is easy to figure out the quantity of milk a cow has to annually

produce, in order, at a given price, to cover the value of the food, thus:

A cow must yield annually to equal the value of three tons of hay consumed—

When hay is worth	Qts. at 2c.	Qts. at 3c.
\$10 00 a ton	1,500	1,000
15 00 a ton	2,250	1,500
20 00 a ton	3,000	2,000
25 00 a ton	3,750	2,500
30 00 a ton	4,500	3,000

According to the most recent statistics available the average value of hay in Ont. is about \$10 a ton. In New York State the average price is \$9.79 per ton. The average price of milk, as deducted from the cheese factory returns of New York State, is about 2½¢ a quart; as paid to the farmer by the milk contractors for city supply about Boston, from 3¢ to 3½¢ a quart. In Ontario, unfortunately, there are no official statistics issued concerning this matter; but from good authority we learn that the average price paid for milk throughout Ontario is about 2½¢ per quart. Valuing hay at \$10 per ton, the cost of finding feed for a cow would be \$30 per year, and in order to pay for her feed alone she must give 1,200 quarts of milk each year. Other expenses can be added and calculated in like manner. The question of relation will thus be answered.

Now, in New York State the average yield per cow is calculated to not exceed 1,300 quarts, while the yield of good herds is placed at 1,800 quarts.

The figures are but rough illustrations of certain conditions which appertain to dairy husbandry, the methods under which competition and low prices of product are to be met, and the value of intelligent calculation to the farmer.

There are certain facts which in this connection should be well apprehended: First, that breed is superior to feed, that is, that the animal the fodder is fed to is of more consequence under the conditions of good farming than the money value of the food. In other words, it is a loss of money to keep and feed a cow which only produces 800 to 1,000 quarts of milk in a season, when by a little attention cows which would yield 1,400 to 1,800 quarts might be procured. Feed does not produce milk in a dry cow; high feeding cannot force a scant milker by inheritance into a large milker; the cow of milking habits and strong digestive power can utilize unsaleable fodder and give satisfactory and profitable flow under circumstances when the high value of saleable fodder cannot justify feeding such material with the hope of profit. Second, whether we shall feed high, feed food of high or low value, feed for maintenance or for milk, is a question to be determined by the character of the animal and the relation of values. Third, the cow of profitable aptitude is the one to keep; the cow of unprofitable aptitudes should be sold off at once, and every herd contains usually more than one, and thus the herd shall be in a condition for the owner to secure profit by studying the value relations between the various unmarketable products of his farm, the various purchasable food and the saleable products of his growth. Also, whether to feed to the cow and sell the milk, whether to feed coarse fodders, obtain less milk, but at a profit, and sell hay and grain, whether to keep the herd intact, or sell off the poorer cows, whether to meet the present conditions through changed practices, are questions each individual farmer must think out for himself, but the subject will well repay careful thought.

Pink Eye.

This disease has for some months been prevalent in several American cities and surrounding country and has of late broken out in Montreal and the Canadian North West. A Veterinary Surgeon who had considerable experience with the disease writes to the Michigan Farmer as follows:

The origin of the term pink-eye is rather obscure, a name unknown in veterinary nosology. The name has reference only to the redness of the conjunctiva, or external coat of the eye and lining of the eye-lids, but does not indicate the true character of the disease. Horse dealers regard it as a dangerous disease not to be trifled with. The

veterinary surgeon recognizes the malady as a severe form of typhoid influenza; many animals affected with it are so completely prostrated that the term typhoid fever (not typhus) we would not regard as a misnomer. Typhoid influenza is an annual visitor to the equine family, but with exceptional years not as an epizootic; hence its presence creates no alarm. It arises from atmospheric and other causes unknown. The symptoms vary in different animals and different localities, due no doubt to the susceptibility of one animal more than another to the influences which produce it; some resisting them altogether, while others are prostrated from the very commencement of the disease. Its appearance this year is very much the same as it was in 1854 and 1855, travelling slowly, and extending over a period of nearly two years, when it disappeared. In the work "The Horse and His Diseases," first published in the year 1860, will be found a brief history of the disease as it occurred at that time. The same epizootic but in a different form again made its appearance in 1872, prostrating almost all horses at the same time and making its exit in about six weeks after its first appearance; this is of too recent a date to require further remark. The symptoms of the disease are so variable in different animals, no two being precisely alike, these complications cause a variety of opinions to exist concerning its nature, and as a consequence, various other diseases are often confounded with it. Symptoms: Slight watery or thin mucous discharges from the nostrils, eye watery, with matter collecting in the inner corner; eyelids swollen and puffy, the membrane on the inner side presenting a yellowish red color; appetite in most cases lost or suspended; dull appearance of the countenance; in some cases mouth hot, with a corresponding increase of temperature of the skin; in these cases there is great prostration of strength as shown in the staggering gait, with a quick small and weak pulse; heart sometimes violently agitated; respiration increased. Cough, accompanied with sore throat, sometimes present. Paralysis of the hind extremities exists in some cases; in other cases the feet become hot, presenting all the symptoms of laminitis or founder; swelling of the legs, which upon pressure pit or leave the marks of the fingers upon the skin. It should be borne in mind that the above symptoms are not all present in the same animal. The complications found in the epizootic form are not observed when existing as a sporadic disease. Ordinarily the disease yields readily to proper treatment, when accompanied by careful nursing, which in fact is one half in the animal's recovery. During the prevalence of epizootics in the horse, unusual care should be taken in feeding. New hay or new grain should not be used. The horse during the prevalence of such diseases is more predisposed to colic, which oftener than at any other times proves fatal. Treatment: When the services of a competent veterinary surgeon can be had, it is safer to secure his services, as a mistake in the character of the disease may prove fatal to the animal. It is difficult to lay down a course of medication in a disease presenting so many complications as this disease does at the present time. In ordinary cases tonics and stimulants are called for. In cases where the fever runs high give the following: Tartrate of antimony and nitrate of potassa, of each, one drachm; mix both together and give night and morning. When the fever is broken tonics and stimulants are called for. The following may be used in ordinary cases with good effect: Gentian root, pulverized, and nitrate of potassa, each one ounce; Jamaica ginger, pulverized, half an ounce; fennugreek or anisee-seed, pulv., six drachms; mix and divide in four parts, give one night and morning. When there is dropsical swelling of the legs, half an ounce of sulphate of iron may be added to the above with good effect. If the lungs are involved give the following: Aconite root in tincture, with tincture of belladonna, one part each, water two parts; dose one teaspoonful every three hours. If the liver be affected, which may be known by the yellow tinge of the mucous membrane, dung small and hard, horse lying on his side, and occasionally fit of uneasiness, give Barbadoes aloes, three drachms, colomel and pulverized digitalis, of each half a drachm; make into a ball with molasses. This must not be repeated. When there is soreness of the throat, blisters should be applied; the fly blister, made thin with turpentine, answers a good purpose. The animal should be placed in a box stall, well littered with straw, and kept clean; as pure atmosphere as possible is necessary; the contaminated air of a badly ventilated stable retards or defeats restoration to health.



The Family Circle.

"Home, Sweet Home."

A Passing Shadow.

Maud Thornton, with ten thousand a year and a splendid estate in Warwickshire, was far more miserable that dull October day, because it was raining, than Carroll, the meek companion, who was trying to please her petulant mistress by an account of the vivid interest of some new book.

"It's of no use, Car. To rain like this—to-day, too, when Lawrence promised to come over from Kingston!"

"You will forget the rain, if you will only let me read you the first chapter; it's splendid, Miss Maude," persisted Carroll, opening the brown volume.

"Ring for my cloak and shoes, Car; I am going down to the lodge to see nurse."

"Miss Maude!"

Miss Maude had turned to the window, and was impetuously tapping the pane. She was still young, with a proud fire in her face and shining through her dark eyes which was more bewitching than her beauty. Tall and slight, Maude had inherited a rare grace of movement from her mother. That mother twenty-four years ago married the Squire for his money. They were both dead now, lying together under the grey stones of the chancel pavement, and Maude was their heiress. She lived in the "big house" with an old half-witted aunt and her companion.

It was only a temporary arrangement; Maude was engaged to be married to her cousin, a dashing young officer, whose regiment was then stationed at Kingston. She was very proud of him, and loved him all the better for his poverty; for hers was a nature that felt almost too keenly the joy of giving.

Lawrence was well pleased of course to have the love of the heiress and to excite the envy of all the other fellows who didn't see "what Maude Thornton liked in her yellow-haired cousin."

Maude had rebelled fiercely at his manner lately. It was too courteous, too reserved for a devoted lover, she inwardly decided; and it was this perhaps that upon that wet day made her so discontented amid all the splendour of the Thornton drawing-room.

After a few sharp words Maude obtained cloak and shoes, and went out into the rain. It was coming down more fiercely then ever on the dank leaves and the soft gravel; but she hastened onward bravely enough, down the path and across the bridge, striking away from the main avenue to save time.

Parting Thornton grounds from the Rectory garden was a high thick fence of laurel, which ran for a few hundred yards in almost a straight line. A new thought struck Maude's wayward mind as she reached the fence; she would go and see Polly, the Rectory's little daughter, whom Maude patronised very graciously.

As she stood for a moment by the fence, undecided, a low voice, tremulous with pain, reached her from the other side.

"Poor little Polly! It is cruel that fate should part two such loving hearts."

It was Lawrence Gary who spoke. Then came Polly's soft response—

"Never mind. Heaven will help us, Captain Gary."

"May it help you to be patient, dear?"

Maude heard no more; she hastened away, like a guilty thing, back across the bridge, her breath coming in short gasps, the fever-flush of pain on her cheeks.

Carroll met her in the hall, mildly reproachful.

"You'll fall into a consumption and die, Miss Maude, and then what will Captain Gary do? I'd sooner have a tame elephant to keep in health."

Miss Thornton threw off her cloak with a little bitter laugh.

"Don't be cross, Car. I was a great fool to go out, I know; I'll go and dress for dinner, and you can read that book, if you like, dear."

She hastened up stairs to her room, and rang for her maid.

"I will wear my new dress to-night, Mary; and do my hair in coils, please."

Maude looked queenly when she came into the drawing-room; she was dressed in black velvet, with square-cut bodice, and rich lace drooping over her pretty white arms.

"You look like a picture, Miss Maude," exclaimed Carroll admiringly.

Maude smiled, and seated herself by the hearth, the fire-light playing on her proud, queenly face, and on her luxuriant hair. She sat there, silent and thoughtful, playing with a pictured fire-screen, each movement of her white hand causing the rings on her fingers to flash brightly.

"Captain Gary!" cried Carroll, at the sound of wheels on the drive.

Maude's color rose a little higher, but she did not speak, not even when Carroll said something about a book and left the room.

He came in unannounced—a man of twenty-five, yellow haired, handsome—a man any woman with unclaimed heart might have loved.

Maude held out her hand, with a laugh.

"I didn't expect you to-night, Lawrence."

He took it gravely, but did not attempt to kiss her. There was something in her proud face which checked him.

"What a dreary day— isn't it?" she said, in her softest tones, clasping her hands together lest he should see them tremble, and looking at him, her white lips drooped a little.

"How beautiful she was! The soldier's face flushed a little with pride as he looked at this queenly girl—his promised wife."

"It is rather damp, my darling," he returned gaily.

She played with the rings on her fingers, loosening one, a bright cluster of diamonds, and half drawing it off.

"This old house is dreadfully dull. I am utterly miserable."

"Maude!" her lover cried in grave reproach.

Her eyes flashed as she looked up at him proudly.

"Don't you think it must be dull, with two old women for my companions?"

He bent over her eagerly.

"It must be dull, dear; I know. Don't spend the winter here. Let it form our honeymoon, passed in sunny Italy, my darling."

Her proud lips quivered with pain; but she laughed lightly.

"I shall not spend the winter here. I am going abroad—to Paris; I have friends there, and shall see a little of the world. I do not know my own heart, Lawrence."

Lawrence bit his lips with annoyance.

"I hardly understand you; you are in a strange mood to-night."

She went on recklessly, twisting that bright betrothal ring.

"It was hardly fair to claim my promise so soon, Lawrence—I am fettered before I have known anything of the world's real life. They may be golden chains to you; to me they are simply galling."

The insulting words stung him to the quick.

"Fetters do you call your words of promise? I have no wish to chain you Maude—Miss Thornton, if you will," he returned hotly.

She rose up, playing carelessly with her rings.

"They are fetters—easily broken, though, when no love binds the links together. There—take back your ring."

She slipped it off and held it out, laughing the while. He clasped her wrist and the ring dropped between them.

"What do you mean? Are you playing with me? It has gone too far for a joke."

"Loose my arm, Captain Gary—you hurt me. I tell you my promise has become a galling chain. I like you, you know, but not well enough to give up better chances in life. I am handsome—I have ten thousand a year. A captain in a marching regiment is not a good party."

"For Heaven's sake, stop!" he exclaimed, hoarsely. "I won't reproach you Maude—I am glad you have dropped your word."

"You are not worthy of an honest man's love! I will crush mine as I crush this bauble!" He stamped upon the glittering diamonds with his heel as he spoke.

"For shame! You have spoiled a ring worth the Rector's yearly income!" she exclaimed lightly.

But he heeded not the words in his angry pain. He caught the girl's hand in his with no gentle clasp, and looked sternly in her face.

"Heaven help and pity you, Maude! The triumphs you covet, the rank you may gain, will turn to ashes at your touch. I know you love me, Nay, let your eyes droop; I know their secret—you have let me read it often enough. And now I say heaven forgive you for the words you have spoken this night and for the solemn promise you have lightly broken."

He wrung her hands and strode out of the room, his heart beating fiercely with pain and anger.

With a low heart-broken cry Maude dropped upon her knees, and covered her face from the light.

Miss Carroll, coming in, found her sobbing wildly. The companion knelt down, and put her hands tenderly round her.

"Miss Maude, dear Miss Maude, what is the matter? Where is Captain Gary?"

Maude put up her hands with a passionate gesture.

"He is gone, Car. He will never come back any more. He doesn't love me, Car."

"Not love you?" echoed Carroll in high disdain.

"He doesn't—he seeks my money!" And Maude sobbed out the whole wretched story—the whispered words behind the laurel fence, and her own hard words to Lawrence.

"Didn't you tell him what you had heard?"

"Tell him?" questioned Maude, her face flushing hotly.

"No, indeed!"

"Then you ought to have done so, Miss Maude. Many a heart has been broken by keeping back something that might have cleared up all trouble. Listen, Miss Maude, dear. I am nearly forty, and my hair is gray; but, twenty years ago, there wasn't a brighter face than mine in all the village. I was engaged to a young doctor, and we loved each other dearly. I was a clergyman's daughter, you know, and we lived in a rectory, for the living was in the hands of some canon, and my father was curate-in-charge."

Maude moved her head impatiently. What was the loves and sorrows of these people to her, in her supreme grief?

Miss Carroll went on hastily—

"Well, we were engaged; and one day that we had arranged to go to a picnic, some miles away, John came over, looking troubled. He had to go on business to the town, and couldn't join us at the picnic. I was very sorry, but did not think much of it till Lizzy Towel, one of my friends, told me a long story of some young lady John went to see—some beauty of the neighboring town. Jealousy is a strange thing, Miss Maude. It makes one think the worst of our dearest and best. I accused him bitterly. He was proud at first and angry; but then he begged me to tell him all. I wouldn't, and we parted in anger—in anger, Miss Maude—and I never saw him again till I looked on his dead face. He was stricken by a fever, and died."

Miss Carroll's voice dropped. Over the dreary plain of twenty years the flood of pain was surging again.

"Poor dear old Car!" Maude exclaimed, rousing herself.

"I am so sorry."

The companion wiped her faded eyes tremblingly.

"Heaven's will be done, Miss Maude; but it's of no use to mistake our foolish pride for the Almighty's will, dear. I wish—I wish you had told Captain Gary."

Maude rose up, shaking the folds of her dress with an impatient sigh.

"Go and have your dinner, dear, and send me a cup of tea—nothing else."

Miss Carroll kissed the beautiful heiress, and went briskly away. After seeing that the aunt had all she required, and sending the tea to Maude, the companion took a well-worn cloak from her wardrobe and left the house. It was still raining, but the wind had gone down, and thick mists shadowed the meadows round the Rectory.

Miss Carroll walked quickly up the garden path and pulled the bell, half hidden among the ivy leaves. She was a welcome visitor to the Rectory, and the servant ushered her at once into the parlor. The lamp was burning low, and Polly's piano was shut. Polly herself, with a little conscious color, came forward to receive Miss Carroll. She had been standing by the fireplace talking to Lawrence Gary.

"Give me your cloak; it is wet." She took hold of it and carried it out of the room.

The little companion hesitated a moment. She was terribly afraid of this grand, tall soldier. But love conquered fear. She went up to him, her face flushing and her voice trembling, but strong in her purpose.

"Captain Gary, Miss Maude is breaking her heart about you. She thinks you love Polly. She heard you say something this afternoon."

A great light came into Lawrence's face.

"Thank Heaven!" he exclaimed, as Polly came back, saying—

"Sit down, Miss Carroll; mamma will be down in a moment. Captain Gary's horse became lame while driving from the Hall, and he is going to stay here to-night."

"Yes—no—that is," exclaimed the young officer, excitedly, "I am going back to the Hall—I have forgotten something."

He left the room, and Polly turned up the lamp, and sat down at her needlework. Polly's eyes were red.

"You have been crying," said Miss Carroll.

"Yes, I have," the girl admitted, frankly; "I am very miserable. Charlie—you know Charlie?"

"No."

Polly blushed, it seemed perfectly natural to tell Miss Carroll—she was every one's confidant.

"He is in Captain Gary's regiment, and they are ordered abroad to India. Captain Gary was very kind. He came to tell me to-day, as Charlie couldn't leave."

"But who is Charlie? I have not heard of him," said Polly, with a little dignity.

"Ah, I understand. Poor little girl! India is a long way off—Captain Gary won't go?"

"No. I suppose not," said Polly, with a smile that proved Captain Gary had kept his council.

Maude had drunk her tea, and was moodily watching the glowing embers, her tears falling unchecked when the door was pushed open by an eager hand, and Lawrence Gary entered again. He was very close to her before he spoke.

"Maude, don't let us be foolish children and quarrel for nothing."

Maude dashed away her tears very proudly.

"I thought you went to Kingston, Captain Gary."

"No; my horse became lame and I had to stop at the Rectory. Polly is in sad trouble, Maude. Charlie Tillson, her betrothed husband, goes to India next month—the regiment has received orders; and I stopped to tell her this afternoon. I had intended to tell you of our going to India, but—"

"Oh, Lawrence, you are not going?"

Captain Gary could have laughed as he caught her in his arms and kissed her again and again.

"You foolish, foolish girl! Did you think I could love any one but you? Oh, Maude, for Heaven's sake don't speak to me again as you did just now!"

She clasped her arms around his neck, and laid her head on his shoulder.

"Forget and forgive, Lawrence; I was mad with pain and jealousy. It was my love that made me so bitter."

He held her close in his arms.

"Let it be a lesson to both of us, darling. It might have wrecked our lives for years, if not for ever. But for the laming of my horse, I should have gone to India thinking you a false woman, Maude."

"Hush!" she said, softly. "After all, it is only A PASSING SHADOW."

A. K.

Humorous.

"You cannot place a, the singular article," said the preceptor, "before plural nouns. You cannot say a pigs, a women, a—"

"Nonsense!" cried the clerk, "the prayer-book knows better than you, I should think, and doesn't it teach me to say, every Sunday, a-men?"

A minister with a rather florid complexion went into the shop of a barber, one of his parishioners, to be shaved. The barber was addicted to heavy bouts of drinking, after which his hand was, in consequence, unsteady at his work. In shaving the minister he inflicted a cut sufficiently deep to cover the lower part of his face with blood. The minister turned to the barber and said, in a tone of solemn severity, "You see, Thomas, what comes of taking too much drink."

"Ay," replied Thomas, with the utmost composure; "It makes the skin very tender."

The invitation to a recent apple-bee in New York ran as follows: "1309 FIFTH AVENUE, 12-4-80.—How de-do. You'd better hitch up next Wednesday night and come over to our house to an apple paring bee. Tell your wife to bundle up and come along. It will do her good. Some of the nicest boys and girls in the neighborhood are coming. If the barn is full you can hitch the horse to the trees across the road. Paring begins at early candle light. Don't forget your jackknife. John H. Johnston." The replies were all in the same primitively rural style, one of which read: "WAVERLEY PLACE, N. Y., 12-7-'80.—Wife reckoned how she could not come no way; cause she had the candles to run, the saggies to make, the carpet-rags to color and a chunk of cloth to set in Bige's trousers; and the old mare has got a chestnut in one of her ears, and is lame a little, but we are coming if we have to walk. Perkin's oldest boy is coming over to milk and feed the chickens, so that we can get away early. Wife is all in a pucker about how to get herself up, whether to wear her plain linsey-woolsey and calash, or her new speckled chintz and bunnit. Unless you send word with Hubbell's boy when he comes over to mill in the morning we shall come just as we are. Your obedient servant, —. P. S.—Can you lend us a lantern to come home with?" The refreshments consisted of pumpkin-pie, doughnuts, cheese and cider, and the occasion was one of genuine mirth and enjoyment.—[Troy Times.

Minute May's Department.

Answers to Enquirers.

FALSE COUSIN.—What should a gentleman do if teased about a lady he does not like? **ANS.** It is very vulgar to tease and especially so when a lady's name is brought in. If the teasing should come from ladies one can do nothing but bear it good naturedly, and certainly avoid any disclaimer that might seem disrespectful to the lady; if from young men one should teach them to have better manners in future.

CLAUDIA G.—1st. What salary does the President of the United States receive? 2nd. Will President Arthur now receive the President's salary, or only the Vice-President's as before? 3rd. Will Mrs. Garfield now receive any of the President's salary? **ANS.**—The President receives \$50,000 a year. 2nd. President Arthur would, of course, receive the President's salary from the time he came into office, and Mrs. Garfield would receive whatever the Legislature might award, but President Arthur has very generously donated the balance of this year's salary to the Garfield memorial fund, which is literally giving \$25,000, the largest donation made. We believe the fund now amounts to over half a million.

HIRAM B.—It is not in good taste to tuck the napkin under the chin or anywhere else; it should be laid on the knees and used to wipe the mouth and fingers, not as a bib; to see one use it in that capacity gives the unpleasant impression that he cannot eat without slopping his food over his shirt front.

F. A. D.—Is it impolite to ask a lady if she loves you? After you have been acquainted with a lady for a long time and you have been intimate friends, when she is about to leave for another country and you never expect to see her again, and you visit her at her home, is it impolite to kiss her good-bye? **ANS.**—You must tell her that you love her first. Otherwise, it would be very rude, indeed, to ask such a question. 2nd. You have no right to kiss any lady unless you are engaged to her. It is to be supposed that any lady who may be young and pretty enough to tempt one to kiss her will some day be engaged and married, and surely no husband would like to know that his wife had been kissed by every masculine friend she may have had. We receive some extraordinary letters on the subject; some people seem to have no sense of delicacy.

HOUSEKEEPER.—Is it good style to have small vegetable dishes, such as we see at hotels, or are the larger ones as fashionable for private families? 2nd. When helping guests at table is it correct to say "may I assist you to the potatoes," or should one say "may I help you?" 3rd. This question is answered above. 4th. When a servant passes the dishes is it necessary for guests to say "thank you" for everything? **ANS.**—No, these little dishes spoil the appearance of the table, and have an untidy look. They are appropriate for hotels, but in private houses the large handsome dishes of the dinner set are much nicer. 2nd. "May I help you" is correct, as *assist* means that each should do a part, whereas when the hostess means that she will give a portion of some dish, she, of course, will do it herself. When guests pass dishes to each other they do not say "may I help you," but will you have a piece of cake, or whatever it may be. When a guest undertakes to serve any dish, he or she may say "may I help you to some preserves, &c." This is not so much table etiquette as it is the mere using of words in their right place. 4th. No, one may occasionally say "thank you" to a servant, but to do so continually would be in bad taste, as of course it is his or her duty to wait on table. When refusing a dish even from a servant one may say "not any, thank you." These rules do not arise from any lack of courtesy to a servant, but simply because it would be absurd to continually thank any one to do his or her duty.

Recipes.

PUMPKIN PIE.

Cut the pumpkin into as thin slices as possible and in stewing it the less water you use the better; stir so that it shall not burn; when cooked and tender stir in two pinches of salt; mash thoroughly and then strain through a sieve; while hot add a teaspoonful of butter; for every measured quart of stewed pumpkin add a quart of warm milk and

four eggs, beating yolks and whites separately; sweeten with white sugar and cinnamon and nutmeg to taste, and a saltspoon of ground ginger. Before putting your pumpkin into your pies it should be scalding hot.—[Margerie D.]

TO RESTORE VELVET.

The best way to restore the pile of velvet is to put a wet cloth over a very hot iron, hold the velvet lightly and smoothly in the steam which rises. This is preferable to the old way of dampening the back of the velvet and drawing it over the iron. Velvet ribbon and even sack backs which have been badly pressed may, if treated in this way, be made to do good service.

PICKLED RED CABBAGE.

Cut the red cabbage in thin slices, spread it on a sieve and sprinkle with salt. Let it drain for twenty-four hours, dry it, pack it in pickle jars, fill them with cold vinegar, put in spice to taste, and tie the jars up firmly. Open the jars in a few days, and if the cabbage has shrunk, fill up with vinegar.

SCALLOPED CAULIFLOWER.

Boil until tender; clip into neat clusters, and pack the stems downward into a buttered pudding-dish; beat up a cupful of bread crum to a soft paste with two tablespoonfuls of melted butter and six of cream or butter; season with pepper and salt, bind with a beaten egg, and with this cover the cauliflower; cover the dish closely, and bake six minutes in a quick oven; brown in five more, and serve very hot in the dish in which they were baked.

BUCKWHEAT CAKES.

One quart of buckwheat, one teaspoonful of salt, two tablespoonfuls of Indian meal, one of molasses; put in tepid water to make a batter, with yeast sufficient to make them light, compressed is the best.

CHOCOLATE CREAM DROPS.

Take two cups of white sugar, and half a cup of water; put it in a saucepan; heat until it boils, and then boil hard five minutes precisely. Set the saucepan into a dish of cold water. Stir till the mixture creams and cools enough to handle; then mould into small drops, laying them on a buttered platter. Take half a cake of Baker's chocolate; scrape fine, put in a bowl, and set into the top of a steaming, not boiling, teakettle, till dissolved. Then take the creams singly, drop into the chocolate; roll over quickly; rake out with a fork, and put on to a buttered plate. Be careful not to let the chocolate cook, or it will thicken. Tested in the family of
O. C. T.

Preserving Hams and Shoulders.

Hams should be neatly trimmed and cut round, to imitate as closely as may be the city cut hams to be seen in most grocery stores. With such patterns before them there is surely no excuse for any farmer who cuts the hinder part of a hog into a square, unsightly piece, and calls it a ham. Make a pickle strong enough to just float an egg; stir in this sugar or molasses sufficient to give it a slight sweetish taste. Cover the hams with this pickle, and allow the packages to stand where the temperature is uniform and above freezing. For hams of twelve pounds four weeks will be sufficient; larger hams must remain in the brine longer. In general terms, from three to seven weeks embraces the extremes of time required for domestic curing of hams, varying as to the size of the hams, temperature and time when it is anticipated they will be used. When it is designed to preserve them through the summer caution must be observed not to remove them from the pickle too soon.

Hams may also be cured with dry salting. This is done by rubbing them often with salt and sugar, and bunching them up on platforms or tables covered with salt, and covering each ham with salt. When taken up to rub, which should be done half a dozen times, have a shallow box at hand in which to do the work.

Shoulders for family use require much the same treatment as hams, and both should be smoked with hickory wood. The preservative principal of smoke is creosote. Smoke made by burning corn-cobs is highly esteemed, but those engaged in curing meats on a large scale consider that the purest, sweetest smoke is obtained from dry hickory sapwood stripped of its bark. If the smoking process is hurried the creosote will not have time to penetrate the entire substance of the meat, but

ten day's smoking is in all cases sufficient, unless the pieces are unusually large and very thick.

The farmers' smoked meat may, like the hams of commerce, be covered securely with canvas, and further protection by a wash, the recipe for which has been several times given in these columns, or packed well in bran or dry ashes.

The room in which any kind of cured meat is to be kept should be dry and cool, and the darker the better.—[N. Y. World.]

One of the members of our family has a great horror of hash, always qualifying the dislike with the added phrase "except at home." I improved a dish the other day that was well received, and the hash-hater especially seemed to appreciate it. As a good method for using up cold mutton or beef it is really excellent. Take any bones there may be in the meat; put them in the stew-kettle, over night with a head of celery, and an onion stuffed with cloves with water to cover it. In the morning when required for use, strain off the liquor. Then cut your meat fine as for hash, add pepper and salt to taste, and two ounces of onion to every pound. Place in a deep dish a layer of mashed potatoes, a layer of the meat and another of potatoes. Pour over it your gravy; cover and bake for an hour in a moderate oven; take off the cover a few minutes before serving, in order to give it a "handsome brown." Serve in the dish in which it is baked.

Speaking of celery reminds me that this vegetable ought to be at hand in every farmer's cellar; but if it is not procurable, it has been proved that old unsalable celery seed imparts flavor to soup—and can be bought very cheap of seedsmen. A few days ago we prepared too much at once for the table, and found it could be kept for several days by rolling in a clean, damp cloth and putting in a dark cool place. When once more placed in water for a while, it becomes as crisp and cold as ever. I think, apart from any medicinal virtues ascribed to it, there is nothing in mid-winter that so brightens a table, and whets the appetite as the green and yellow, crisp, nutty stalks of this only half appreciated vegetable.

MIDNIGHT IN A PRISON.—There is something very solemn in a large convict prison at midnight. A faint sound of healthy slumber comes from the cells where the convicts sleep. Perhaps there are a thousand, perhaps only five hundred, undergoing punishment; but whatever may be the number, one is conscious that nowhere else save in a convict prison could so many human beings sleep with so little to interrupt the sense of calm repose. In the same number of people taken from the ordinary world, there would be slight sounds arising from nightmare following on indigestion—perhaps from some reminiscence troubling the conscience on the question whether the strong steps taken for payment of that bill were not under the circumstances slightly harsh, or some other disturbing recollection; there might also be uneasy thoughts and dreams creative of restlessness. None of these troubles disturb the sleep of the habitual criminal. This is not because his conscience lies easy on him, but because he does not possess the article known to the rest of the world as a conscience. Hence he neither enjoys the satisfaction of its healthy and genial condition nor the troubles attending on its inflictions, and it is with him essentially that the "Prayer for Indifference," by Greville, as it may be found in the old "Elegant Extracts," is granted.—[Blackwood's Magazine.]

REMEDY FOR POISON OAK.—Dr. S. A. Brown states in the "Medical Record" that he has found a specific to the troublesome eruption produced by the poison oak or poison ivy so common in our woods and along old fences. This specific he finds in bromine, which he has used with unvarying success in at least 40 cases. He uses the drug dissolved in olive oil, cosmoline, or glycerine, in the strength of from 10 to 20 drops of bromine to the ounce of oil, and rub the mixture gently on the affected parts three or four times a day. The bromine is so volatile that the solution should be renewed every 24 hours. The eruption never extends after the first thorough application, and it promptly disappears without 24 hours if the application is persisted in.

To make silk, which has been wrinkled appear like new, sponge on the surface with a weak solution of gum arabic or white glue, and iron on the wrong side.

Timely Advice to Girls.

The following advice to the girls is being extensively distributed among families of the eastern States: Don't go with a man if he is a stranger to you, or one whose reputation you are not acquainted with. Remember that in ordinary business the same rule is applied as a protection against the loss of money. No banker or money lender would trust a stranger; no business man would sell his goods on time without guarantee against loss or deception. Why then should a woman, young or old, trust her virtues and herself to a man she does not know whether he is honorable or not? Look at the foot-prints of time and see how many of your sex have been driven to a life of shame by ignoring the rule. Avoid all Sunday and Sunday night dances and the wine-cup. In marrying make your match; but wait till you reach the age of twenty-three or twenty-five. Do not marry a man to get rid of him, or to oblige him, or to save him. A man who has formed bad habits, what is he? What is there of him you can love? The man who would go to destruction without you would quite as likely go with you, and perhaps drag you along. Remember your future happiness depends altogether on the kind of a partner you get, as it is he that makes your home on earth a heaven or a home of sorrow. Therefore, be sure, take none other than one that is equally pure as yourself. Remember that man, when he seeks for a wife, seeks sobriety, virtue and purity in a woman. Why should not woman demand the same of man? Drunkenness turns a man out of himself and leaves a brute in its place. Do not marry for a home and a living when, by taking care of your health, you can be strong enough to earn your own living. Do not go with a licentious man, as his words will ultimately prove as the bite of an adder and the sting of a serpent. Be kind and true to your own sex. If by chance one should fall to-day, do not slumber, but help her, as she may be up to-morrow. Do not let fathers, mothers or aunts sell you for money or position into bondage, tears and life-long miseries, which you alone must endure. Do not meet any man clandestinely, as it may be to your sorrow. Do not place yourself habitually in the society of any suitor until you have decided the question of matrimony. Human wills are weak—girls, especially, often become bewildered and do not know their error until it is too late. Therefore wait until the age of twenty-three or

twenty-five is reached. If younger you are but children. Get away from all other influences except "good mothers." Settle your head and make up your mind alone. A word from a good mother will not harm you, as she is the last and crowning handiwork of God, the link connecting heaven and earth, the endowment of purity, holiness and heavenly grace, the most perfect combination of modesty, patience, devotion, affection, gratitude, and fit for any high or holy trust. Did not she watch over you from infancy to childhood, from childhood to girlhood? Forget not, a promise may be made in a moment of sympathy, or even half delirious ecstasy, which must be redeemed through years of sorrow, toil and pain. Forget not, he only that is free from vice is fit to be your companion, and no other. Drop the company of him at once who has uttered a word unbecoming to true manhood, for if a man is true to himself, then it must follow as the day the night, he cannot be false to woman. As you make your bed so you must sleep. Take none that has ever slandered or betrayed one of your sex, or broken a promise. He is not worthy of a wife, nor will he ever be true to one.—[Exchange.

Revenge is a momentary triumph, the satisfaction of which dies at once, and is succeeded by remorse; whereas forgiveness, which is the noblest of all revenge, entails a perpetual pleasure. It was well said by a Roman emperor that he wished to put an end to all his enemies by converting them into friends.

Female Society.

What is it that makes all those men who associate habitually with women superior to others who do not? What makes that woman who is accustomed to, and at ease in, the society of men, superior to her sex in general? Solely because they are in the habit of free, graceful, continued conversation, with the other sex. Women in this way lose their frivolity, their faculties awaken, their delicacies and peculiarities unfold all their beauty and captivation in the spirit of intellectual rivalry. And the men lose their pedantic, rude, declamatory, or sullen manner. The coin of the understanding and the heart changes continually. Their asperities are rubbed off, their better materials polished and brightened, and their richness, like gold, is wrought into finer workmanship by the fingers of women than it ever could be by those of men. The iron and steel of their characters are hidden, like the character and armor of a giant, by studs and knots of gold and precious stones, when they are not wanted in actual warfare.

An Easily Made Chair.

We give an engraving of a very cheap yet strong and comfortable chair which may be made as elegant as the tastes of the maker may dictate. This chair, as will be seen by reference to Fig. 1, consists of a barrel cut off about the second hoop so as to form a complete back with half arms at the side. The barrel thus cut is mounted on two strips of

rummaging in gossipy rubbish for something to talk about. Sometimes she will bring in the last marriage as a substitute for a subject; her visits to the newly-married lady, who has unwittingly fallen a victim to the alert vision and senses of her attentive visitress. The latter already has a full catalogue of the "knows" and "don't knows." And any want of judgment discovered in the young wife is held as a sweet morsel among the list of shortcomings. These watchers generally degenerate into back-biters—carrion crows of society.

It is truly distressing to see how painful some young people who are more refined than sensible, or wealthier than either, are made aware of the want of something to talk about, when they resolve to speak fluently, ere the fine wine of love has stimulated them to utter extravagant and pretty speeches. Witness one, for instance, who has started out on that never-worn-out topic, the weather. How he is suddenly halted by that enemy of a proverb beating through his brain, "there is nothing new under the sun!" just when he was most hopeful of nice invention. After a silence, broken by moving his chair or feet, which have suddenly become objects of interest, and while the lady is chasing after thoughts for presentation, he ventures an opinion "that it was fine yesterday and is bad to-day; it will be fine to-morrow." The next moment he is again beating about life's heap of petty trivialities for pearls of price, which are won only with knowledge and often sorrow.

For the Sick Room.

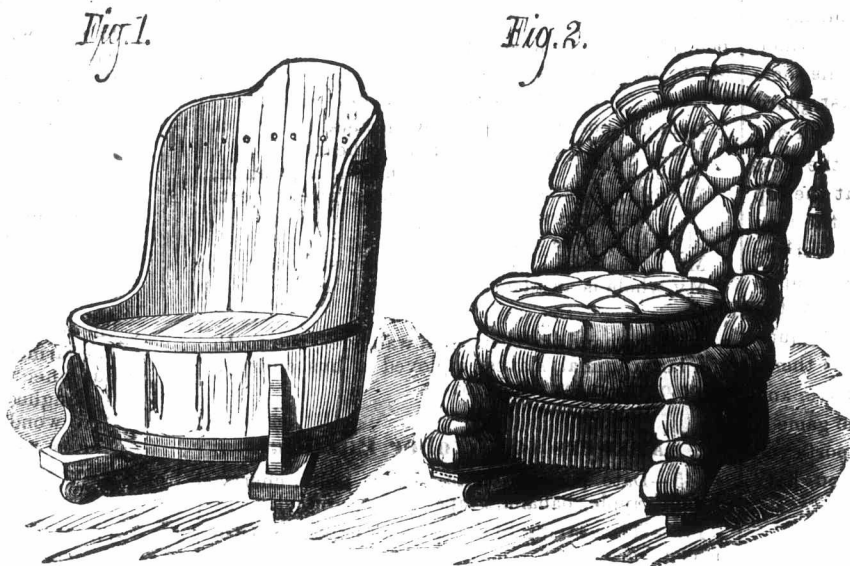
In preparing a meal for any one whose appetite is delicate, it should be made to look as tempting as possible. The tray should be covered with the whitest napkin, and the silver, glass and china should shine with cleanliness. There should not be too great a variety of viands, and but a very small portion of each one. Nothing more quickly disgusts a feeble appetite than a quantity of food presented at one time.

The patient never should be consulted before-hand as to what he will eat or what he will drink. If he asks for anything, give it to him, with the doctor's permission, otherwise prepare something he is known to like and offer it without previous comment. One of the chief offices of a good nurse is to think for her patient. His slightest want

should be anticipated and gratified before he has time to express it. Quick observation will enable her to detect the first symptom of worry or excitement and to remove the cause. An invalid never should be teased with the exertion of making a decision. Whether the room is too hot or too cold; whether chicken broth, beef tea, or gruel is best for his luncheon, and all similar matters, are questions which should be decided without appealing to him.

Household troubles should be kept, as far as possible, from the sick room. Squabbles of children or servants never should find an echo there. In the event of some calamity occurring, of which the sufferer should be informed, the ill news should be broken as gently as possible, and every soothing device employed to help him bear the shock.

Above all, an invalid, or even a person apparently convalescent, should be saved from his friends. One garrulous acquaintance, admitted for half an hour, will undo the good done by a week of tender nursing. Whoever is the responsible person in charge should know how much her patient can bear; she should keep a careful watch on visitors of whose discretion she is not certain, and the moment she perceives it to be necessary, politely but firmly dismiss them. She must carry out implicitly the doctor's directions, particularly those regarding medicine and diet. Strict obedience to his orders, a faithful, diligent, painstaking following of his instructions will insure to the sufferer the best results from his skill, and bring order, method and regularity into domestic nursing.



A CHEAP AND COMFORTABLE CHAIR.

wood, having casters under their ends, and brackets above to form the legs and to add to the appearance of the chair. A head is fitted to the circular portion, and the whole is neatly upholstered, as shown in Fig. 2.

Of course it is necessary to select a good barrel bound with iron hoops, and a little care should be taken in the upholstering to disguise the barrel form as much as possible.

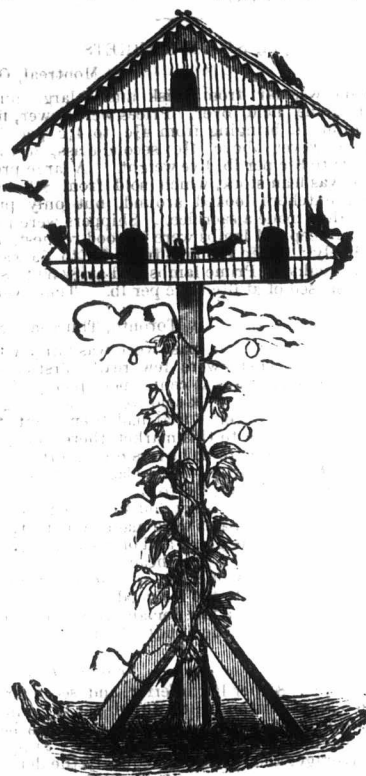
Something to Talk About.

Model progress has given inventions to almost every demand of restless humanity; but it has signally failed in one particular, for which it is probably not to blame—that is, it has never invented for people something to talk about. If this want were properly supplied, it would be regarded as the finest stroke of economy—since it would curtail two-thirds of the most grievous sin of mankind. Now where two or three are gathered together, the first query running along the keen thread of satiety is "what shall be talked about?" It is said that women, especially in groups or confidential circles, or on sick-beds, become the most pitiful victims of the annoying want. And you might as well ask why a man seldom likes his wife to stay with her relatives, as to inquire what would satisfy this demand. Some have various palliatives; and when you wish one of them, perhaps, to impart a beautiful thought, fact, or fancy which it has been a burden to enjoy alone, expecting a quick appreciation and understanding as kindred offerings from her, she is seen

Notes on Ornithology.

BY ORNIS.

As the English Sparrow (*Pyrgita domestica*) grows commoner, discussions begin to rise as to whether or no it is really a beneficial bird. Some argue that it destroys a large quantity of insects, while others maintain that it eats few insects and drives away our native birds. Our own observation has not been sufficiently extended to form a decided opinion, but so far it goes to prove that they eat few insects, and on account of breeding very early, take possession of boxes and nooks around houses before our native birds begin to breed, thus forcing them to seek homes elsewhere. Although a pugnacious bird, it seems in this place to have limited its quarrels to those of its own kind, and to have left the Bluebird and Swallow in peace. As we have said, it builds in boxes set



up for it, or in nooks around the house; but it is in no way particular, and if these are not handy, will build against a wall among a clump of vines or even in trees. The eggs are generally six in number, and this, combined with the fact that they breed three or four times a year, renders them by far the most prolific birds we have, so that they bid fair to become in a few years either a great blessing or a great nuisance, possibly the latter.

Any one will be amply repaid if he will nail a few boxes to the side of his house, just under the eaves, or erect one on a pole as in the accompanying engraving. It may pass one summer uninhabited, but the second will surely bring birds of some kind, and we know a house with several of these boxes where this year Bluebirds, White-bellied Swallows, Sparrows and Wrens built all on one side of the house, producing altogether about thirty birds. This is a good way also to keep the trees healthy, and at the same time we have a lot of semi-domesticated birds around which will be a pleasure in more ways than one.

The Massachusetts Agricultural Society concludes that salt as a manure has the property of hastening the maturing of all grain crops; that wheat on salted land will ripen six to ten days earlier than on unsalted land, all other conditions being equal. That it increases the yield from 25 to 50 per cent. That it stiffens the straw and prevents rust and smut. That it checks, if it does not entirely prevent, the ravages of the chinch-bug. The quantity used may be from 150 to 300 pounds per acre; but the greater quantity is the better.

Mr. F. C. Eastwood, of Manchester, England, says the greatest per cent. of starch is found in small potatoes, such as are generally considered unmarketable. Farmers who sell their potatoes to starch manufacturers should bear this in mind.

The Michigan Farmer says: Many of our farmers are becoming alarmed at the ravages of a large white grub that has made its appearance in the wheat fields. It has already done a good deal of damage on some farms, and it will probably be necessary to plow up some pieces.

FALL CAMPAIGN !!

Grand Premiums for Workers.

THE CHOICE OF
The Offer, } FOR ONE NEW
The Accepted, } SUBSCRIBER.
Life's Voyage, or

Language of Flowers and Floral Conversation.

BY UNCLE CHARLEY.

Contains the Principles of the Flower Language; Flowers with their Expressions, Flowers by the Poets, a Fascinating Story, Floral Decorations, Cemetery Decorations, Skeleton Leaves, &c.

AND THE CHOICE OF
Homeward, or The Curfew, } FOR TWO
Balmoral Castle, } NEW
Lorne and Louise, or } SUBSCRIBERS

Game of Botany.



Uncle Charlie's Illustrated Game of Botany.

The most desirable Game for Children ever offered to the public.

In playing the elements of the Science of Botany are easily and thoroughly acquired.

MME. DEMOREST'S Celebrated PAPER PATTERNS to the value of 25cts. for ONE new subscriber, and to the value of 60cts. for TWO new subscribers. Choice to be made from our illustrations in Fashion Department or Mme. Demorest's Portfolio.

Our engravings, "The Offer" and "The Accepted," by Thos. Faed, R. A., and the colored lithograph, "Life's Voyage," have been described in our Dec. No., 1876; Jan., 1877, and April, 1878, respectively, and after a most careful examination of hundreds of valuable engravings, we have not been able to find any more pleasing or suitable. They are without doubt unrivalled premiums.

In April No., "Homeward, or The Curfew," by Joseph Johns, was described, and a cut but faintly suggested the merit and beauty of the large engraving, 22 x 28 inches in size, now offered; and in May No., 1881, a small wood-cut of the chromo, "Balmoral Castle," is given. This engraving, 24 x 30 inches in size, is of elegant finish and design. The last two mentioned were published at Two Dollars each under copyright.

"Lorne and Louise" was fully described in our Dec. No., 1879, and but a few copies remain in our hands.

OUR RULES

The name sent in must be a new one, and the subscription for one year (\$1.00) must be enclosed.

The prize is for the old subscriber who sends in the new name, and not to the new subscriber.

Choose your prize when remitting, otherwise a choice may be made for you.

To any subscriber, to any member of a subscriber's family (boys and girls), to all postmasters and school teachers, who send in new subscribers, these prizes will be mailed, postage paid.

Stock Notes.

The FARMER'S ADVOCATE prize of \$100 for the Provincial Exhibition of 1882, will be awarded for the best herd of milch cows.

In our next issue we hope to give an illustration of the Groff herd of fat cattle, winners of the FARMER'S ADVOCATE prize of \$100.00 at the late Provincial Exhibition.

Mr. John Carroll, of St. Catharines, Ont., advertises in this issue a number of Shorthorn bulls, Cotswold and Leicester rams. See his advertisement.

The well-known Ayrshire breeders, Thos. Guy & Son, of Oshawa, Ont., have recently shipped to Manitoba ten very choice Ayrshires. Among the number are several noted prize winners. Besides the above Ayrshires they also send a few pure-bred Durham bulls and a number of Suffolk and Berkshire hogs. They intend to sell the above stock at public auction in Winnipeg, Man. Since our last issue we have received their catalogue of Ayrshire cattle, also a communication from them, from which we learn that their herd has won between \$800 and \$900 in prizes

this year, besides a silver medal at Toronto for the best bull, and several diplomas at the various exhibitions; also four herd prizes, viz.: 1st and 3rd at Toronto, 1st at London and Lindsay. They conclude their communication by saying: "We think a good deal of your paper, and admire your fearless and straightforward manner in exposing wrong wherever it exists, and advocating and commending the right."

Messrs. Green Brothers, of Oakville, with Mr. George Andrews, recently shipped from the Oakville station, Ontario, two carloads of very superior animals, consisting of six Shorthorn bulls of good pedigree, together with some exceedingly good Shorthorn grade cows in calf, and some with calves at their feet, and eight Poland China pigs.

Mr. John Dryden, M.P.P., of Brooklin, Ont., has sold his fine three-year-old cow, Florence, with her heifer calf, to Messrs. Green Brothers, Oakville. The calf is by Richmond Prince; Florence is in calf again by Mr. Dryden's imported bull. Mr. D. writes that the demand for Shorthorns is good this fall at remunerative prices. He has now four nice heifer calves, dropped within the last two weeks, the get of his imported bull. They are all A 1.

The exportation of horses from Montreal to the States for the past fiscal year shows a falling off in number, as compared with the previous year, but an increase in value; the number being 7,093 costing \$683,110, as compared with 8,267 costing \$670,657, for 1880.

Messrs. A. G. Thompson & Co., of Toronto, Ont., shipped 250 head of fat cattle for the Liverpool market by the Grand Trunk, on the 2nd inst. They will be transhipped to the steamship Manitoban at Point Levi.

Mr. John Geary, of London, Ont., recently made some extensive sales to American buyers at advanced figures. To C. Driggs, of Palmyra, Mich., he sold one buck; to Mr. Campbell, Col. U. S., 6 ram lambs; to Thos. Walker & Sons, Wayside Stock Farm, Westchester Co., Pa., 27 head including one aged imported ram, one yearling ram, two aged imported ewes, twelve shearing ewes, and eleven ewe lambs; to Uriah Lorne, Skeels Crossroads, Ohio, four 2-shear ewes and one yearling ram.

Mr. Spencer, who advertised Shropshires and Southdowns in the September number of the ADVOCATE, writes us that he is shipping sheep nearly every week to various parts of the country. He says the demand for Down sheep was never so good as at present.

Messrs. John Elliott & Sons, of Kingston, Ont., have concluded their year's business of shipping cattle to England. During the year they made 48 shipments. The number sent was 7,000 cattle and 5,000 sheep. They met with no serious mishaps. Mr. D. Elliott states that this year the business has been unprofitable, owing to the high freights and the glutting of the English market with Australian mutton and Yankee dead meat. The dealers in the Montreal market having attempted to "bull" the market by taking all the space in outgoing vessels, but found their attempt a failure; the Kingston firm got a number of English steamships to come to Canada and deliver for them. The average price paid in Canada per head for cattle was \$80. These sold in England at from £20 to £25, leaving but a bare margin after expenses. The best cattle came from west of Oshawa, as did also the sheep.

Commercial.

FARMER'S ADVOCATE OFFICE,
 London, Nov. 3rd, 1881.

The past month has been one of unusual warmth, with warm rains and fine growing weather. The result has been that the wheat plants are in fine condition for the winter. Pastures have been unusually good, and the make of butter and cheese has been good and the quality very fine.

WHEAT.

The trade in this article has been rather quiet, when compared with the excitement of the previous month. Prices had gone to such a pitch that a reaction was bound to come. It must also be borne in mind that through freights have been unusually low, and should they advance to the average figure for this time of year that advance alone would make a decline in wheat of 12 cents to 15 cents per bushel. It will thus be seen that should the English markets remain about as they are and freights advance, that cause alone will make a still

further decline in wheat. The speculation in wheat has been something enormous the past two months, so much so that many of the Chicago houses had to keep their employes at work away into the small hours of the night.

Wm. H. Trafton, Jr., of New York, reviewing the grain trade of the past week, says:

"We have had a fairly active spot demand for wheat, and a good degree of activity in options, the early futures not so active as the later months, and at times there has been less confidence in the current values for the future being maintained, which has been largely due to unfavorable English and Continental advices, to the material increase in the visible supply, and the large quantity afloat for English and French ports. The quantity now afloat for Marseilles is sufficient to meet the requirements of that city for some months, and the floating supply for the United Kingdom is equal to their foreign requirements for some months to come, notwithstanding the shipments from this coast have been so light. From all advices to hand this week from Chili, Australia, New Zealand, British India, Austria and Russia, we are quite certain that Great Britain, Germany and France, will obtain adequate supplies from sources other than this country to tide them over to the middle of January, when they count on much larger supplies from the Pacific coast to carry them through to May, without calling on this coast for more than 230,000 quarters weekly. Now, it is very plain to all that our visible supply at the present time is quite sufficient to meet their requirements for some ten weeks to come, but they claim that they will be able to get along without anything of moment from this coast until after the holidays, when they will want some of our strong wheats and flours, but far less than we have estimated. It is very evident that their large supplies of flour from the Pacific coast are quite certain to exert a most important influence on the future value of wheat, far more so than is generally supposed, and to its great abundance, and low prices current for it, is the present great decline and depression in flour here chiefly due, and we have no doubt this Pacific coast flour will continue for many months to be a most important factor in the trade."

BARLEY

Is in good demand, and prices are well maintained. No doubt the high price of corn has something to do with the price of this article.

PEAS

Have not moved very freely as yet, notwithstanding that prices have got up into the seventies. At these prices they are too high for export. The mills are taking a large proportion of them at these prices.

APPLES.

The English market keeps steady and also Montreal. The shipments of apples from Montreal are only about one-quarter what they were this time last year. Want of cars is making it very difficult to move them promptly, and a sudden change of temperature would endanger many of the shipments. Cable reports advise the sale of some Montreal shipments at 2 1/2.

POTATOES.

Buyers are still running about the country picking up potatoes, and one would suppose from their anxiety to buy that there was going to be a potato famine. If prices go much higher we think the demand will fall off about in the same proportion as the price advances. It will, therefore, be well for farmers to use a certain amount of precaution and not look for fancy or exorbitant prices.

CLOVER SEED.

The market for this article can scarcely be said to have opened in Canada, although there is a good deal of business doing in the States, both at Toledo and Chicago. How prices will rule it is very hard to say. From reports we have seen there seems to be plenty of seed all through the west. Still, we do not think the outlook justifies excessive low prices, as the best advices report a probable good demand from France, Germany and England.

CHEESE

Has ruled very dull, with a downward tendency. So little has there been done the past month that it is hard to say what the price really is. However, factorymen are somewhat more willing to meet the views of buyers, but not enough to lead to business, the dealers offering 12c for Sept. and October, and the sellers asking 12 1/2c for the same. No doubt there will be a move at some price within the next two weeks, as the first of November closed a large per centage of the fac-

tories, and they will be anxious to clear out their stocks by the 20th. Even at 12 cents we do not think dairy men have any reason to complain, and many have themselves only to blame for not getting more. Dozens of factorymen who refused 13c would gladly accept 12 1/2c to-day. From a comparison of the shipments this year and last from Montreal and New York, we find that the shipments of this season so far have been in excess of last year, and we do not think the make of September and October is much short of last year.

BUTTER

Has been in sympathy with cheese, and very little has been done for the past month. The fine pasturage of the fall month has improved the make both in quantity and quality. As soon as the holders are willing to take the market value for their butter it will move off. Whenever the price of butter is forced up over 17c to 18c it becomes dangerous to hold.

FARMERS' MARKETS.

LONDON, ONT., 3rd November, 1881.

Table listing various agricultural products and their prices in London, Ontario, including wheat, corn, oats, and various flours.

TORONTO, ONT., 3rd Nov.

Table listing various agricultural products and their prices in Toronto, Ontario, including potatoes, apples, butter, and eggs.

GRAIN AND PROVISIONS.

MONTREAL, 2nd Nov.

Table listing various agricultural products and their prices in Montreal, including wheat, corn, and various flours.

HALIFAX, 2nd Nov.

Flour market inactive; choice pastry, \$3 to \$9; superior extra \$7 15 to \$7 20; spring extra, \$6 85 to \$7; strong bakers, \$7 30 to \$7 50. Yellow kiln-dried cornmeal, \$3 90; fresh ground cornmeal, \$3 80; Canada oatmeal, \$5 75 to \$5 90.

WHOLESALE PRODUCE MARKETS.

NEW YORK, 2nd Nov.

Table listing various agricultural products and their prices in New York, including flour, corn, and various oils.

BOSTON, MASS., 29th Oct.

Table listing various agricultural products and their prices in Boston, including butter, creamery, and various flours.

LIVERPOOL, ENG., 3rd Nov.

Table listing various agricultural products and their prices in Liverpool, including flour, corn, and various oils.

CHEESE MARKETS.

Liverpool, Eng., Nov. 3, 5 p.m.

Per cable, 58s. Little Falls, N.Y., U.S.A., Oct. 31. Market very dull; sales, 6,000 of September (factory cheese) at 12 1/2c to 12 3/4c; 800 boxes of farm dairy cheese, sold at 12 1/2c to 12 3/4c; 250 packages of butter sold at 27c to 35c.

Four thousand boxes cheese sold to day at 12c to 12 1/2c; 2,800 consigned. Leading price, 13c. Ingersoll, Nov. 1. Twenty-three factories represented. Sellers say: "Buyers offer prices which we will not accept at present, and therefore will not register our offerings." Buyers offer 14 1/2c to 15c for September and October make; sellers ask 12 1/2c to 13c.

Belleville, Nov. 2. The cheese market is very dull. The only local transaction during the week was the sale of August cheese at 10c, and September and October makes at 11c.

London, Ont., Oct. 30. Eight thousand seven hundred and seventy-five boxes offered, but no sales made.

LIVE STOCK MARKETS.

Montreal, Oct. 31.

The demand was far from brisk and a large number of cattle had to be held over. Prices were lower, first-class beef for shipment bringing from 4 1/2c to 4 3/4c per lb., very little selling however, above 4 1/2c; second-class, 3c to 4c, and third-class, 2c to 3 1/2c per lb. live weight. A large proportion of the cattle was lean stock, which sold from \$18 to \$20 per head. Local butchers looked around, but only purchased when the dealers made a sacrifice. Shippers were poorly represented. Sheep and lambs were in good request, and were picked up lively. Sheep brought from \$4 to \$5 each; they were of poor quality. Prime lambs sold at \$2 50 to \$3. Fat hogs were disposed of at 6 1/2c to 7c per lb. They were in demand.

Toronto, Thursday, Nov. 3.

The local cattle market the past week was fairly active, and prices maintained. There were few really first-class stock, and the best price paid was 4 1/2c per pound for a few picked lots. Most of the stock sold well considering quality, and several lots of "stockers," that had been sent to Montreal, were brought back to this market, there being no sale for them below. There are no buyers for export.

CATTLE.—For local market.—First-class, 4c to 4 1/2c; second-class, 3 1/2c to 3 3/4c; third-class 2 1/2c to 3c.

SHEEP.—The market was quiet and steady with few offerings, and the demand small. Sales were made at 4c to 4 1/2c per lb.

LAMBS.—The demand is good, and prices firm. All offerings sold readily at \$3.50 to \$4.50 per head.

CALVES.—There are few offerings, and prices are firm at \$12 to \$15 for choice and \$6 to \$10 for good.

HOGS.—There has been a fair demand this week, and prices are steady. Sales were made at 6c to 6 1/2c per lb.

London, Eng., Nov. 3.

Best beef, 7 1/2d to 8d per lb.; inferior, and secondary, 6d to 7 1/2d per lb. Best mutton 10d to 10 1/2d per lb.; inferior and secondary, 9d to 10d per lb. The cattle trade has been dull, and prices have tended against the seller. Supplies were about the average, and were quite equal to the demand.

Liverpool, Nov. 3.

Best mutton, 7d to 9d per lb. The supply of cattle was large; of sheep, less than last week. Sheep sold at an advance, except for middling quality, which was unaltered.

Glasgow, Nov. 3.

Best beef, 7d to 8 1/2c per lb.; inferior and secondary, 6 1/2c to 7d per lb. Best mutton 9 1/2c to 9 3/4c per lb.; inferior and secondary, 8 1/2c to 7d per lb. The number of cattle at market to-day was rather larger than last weeks, and the quality, as a whole, of rough and inferior animals. Of sheep there was an ordinary number and many of them of middling and inferior quality.

THE APPLE MARKET.

Kalbel & Andreae, of London, Eng., write under date of 14th October:—"Since our last report of the 8th, we have received 50 barrels Canadian apples ex Scotland, and 25 do. ex Viking, direct for London. As soon, however, as later on the red fruit will make its appearance in anything like reasonable quantities to attract the attention of the large buyers, a good competition will bring prices to the proper value of the fruit. Prices obtained were:—Sound Waggoners, 9s 6d; sound Jennings, 11s 6d; sound 20-oz. Pippins, 10s to 14s; sound Phoenix, 15s; while all the other lots of selected Kings, red-cheek Pippins, chiefly Greenings and Blenheim, came wet and wasty, and realized from 6s 3d to 9s 9d."

Liverpool—2,000 barrels from Montreal, 5 from Quebec. The demand for sound red fruit was active, but green fruit was neglected, showing no improvement. United States fruit—Baldwins, 10s 6d to 20s; Spitz, 14s to 15s; Kings, 14s to 21s; Greenings 12s to 13s. Canadian—King Pippins, 18s to 24s; Fameuse, 14s to 19s; 20 oz. Pippins, 15s 6d to 20s; Greenings, 13s to 15s.

Glasgow—Arrivals in this week 937 barrels from Canada. Prices ranged:—Baldwins, 11s to 12s 6d; Cranberry pippins, 15s; Fameuse, 14s; Jennings, 10s 6d; Phoenix, 12s; Spitzenberg, 8s; Golden pippins 12s 6d; Blenheim, 17s.

Mr. Abel Steel, of London Township, Ont., sold to Devoe & Co., of Buffalo, this week, two carloads of cabbages. One car went through to St. Louis, and the other was distributed from Buffalo to other centres. There were 6,200 head in the two carloads. These were sold for \$310, and were grown on an acre and ninety rods. This piece of ground, besides yielding this, raised \$168 worth of cauliflower, and \$60 worth of other cabbages, sold in London market. Five hundred and thirty-eight dollars from this amount of land pays, especially when no barn-yard manure was used. The soil is a vegetable mold at the top, with a marl bottom.

FARMERS CONSIST OF TWO CLASSES:

One has liberal views, is open, frank, candid. The other may be contracted in his views, close and deceptive.

One believes he can learn something yet, and desires to do so. The other thinks he knows enough and desires to know no more—that is, if he has to exert himself to do so.

One desires to have the best farm, best stock, best house and surroundings, and to read the best publication in reference to his calling.

The other is content to let his fields run down—the cheapest implement, stock and seed are good enough; if he can be induced to take any publication relative to his calling, it must be the cheapest.

One desires open, free discussion. The other desires to work in darkness.

One man may desire the interest of agriculture to stand first. The other may desire party to predominate. Beware of that man who says he is too poor, has papers enough, who takes some inferior publication, or says one condemnatory word against THE ADVOCATE that has been established and is supported without your being taxed and compelled to support it.

One man says THE FARMER'S ADVOCATE is the only journal in Canada that is devoted to the interest of the farmer; that it is the best agricultural paper in Canada; that it has always advocated the farmer's interest, and that every farmer should take it; and these facts are the opinions of upwards of

TEN THOUSAND OF THE BEST FARMERS IN CANADA

If you are not a subscriber, you cannot expend \$1 that will do more good to yourself and your country than by taking the ADVOCATE for one year. If you are a subscriber, you can show this to a neighbor and add your remarks. You know the ADVOCATE has been improved every year, and every additional subscriber helps us to add more improvements.

THE advertisement of the Ontario Commercial College at Belleville, Ont., should command the attention of our readers, and particularly those in Eastern Ontario. One of the principals is he who prepared the set of farm accounts for the Ontario Agricultural Commission. Send for their circular.

B. GOTT, of Arkona, Ont., has forwarded his circular of nursery stock, in which he warrants satisfaction to his customers. He is a reliable nurseryman and intending purchasers will do well to obtain his catalogue.

A farmer in Middlesex County has grown on a piece of land 11x39 yards (400 hills) 50 bushels of Late Rose potatoes, all good marketing and sound products.

Mr. Alex. McKenzie, of Alvinston, Ont., who, with his family went to Tom Hughes', Rugby, in Tennessee, last spring, is tired of his experience in that sunny climate, and is on his way back to "Canada, Our Home."

Ploughing matches are in order, and a sulky-plow contest for prizes was held on the 4th ult. on Mr. Charles Coombs' farm, lot 27, con. 4, London township, near London, Ont.

NEW ADVERTISEMENTS.

W. H. BROWNE,
COLUMBUS, ONTARIO,

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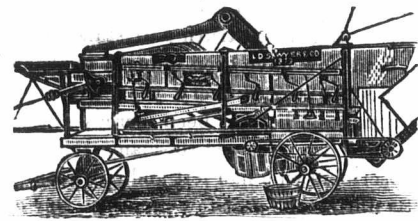
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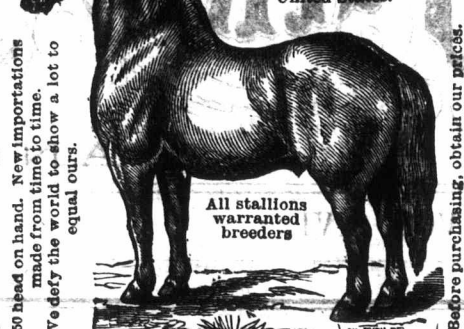
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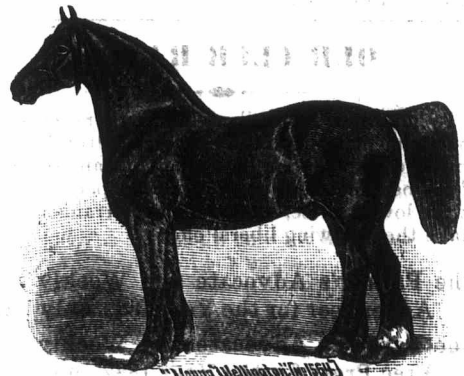
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