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Vol. V. No. 9.

TORONTO, CANADA, MAY 1, 1868.

POSTAGE FREE.

### The Month.



May is welcomed by everybody with expressions of gladness. We have indeed no "May-day" festivities such as are common in some countries. Our variable climate hardly admits of it. We have known the first of May, in some rare instances, to be very wintry. Within a week of that date, the present year, we have had a snow-storm which left the ground with a white wintry covering of from two to six inches in depth. Nor do we ever have such a profusion of blooming flowers as would render the first of May an appropriate time for a floral festival. Nevertheless there is universal joy at the advent of May. At this date anything wintry can only be spasmodic and ephemeral, and let appearances be what they may, "we know that summer is nigh."

The mean temperatures do not rise so fast this month as last. Having given them thus far, for a few leading places in the Dominion of Canada, we may as well continue them throughout the year, as they may be useful for consultation and comparison.

Stratford.....	47° 73
Hamilton.....	50° 87
Barrie.....	48° 22
Toronto.....	48° 30
Bellefleur.....	50° 42
Montreal.....	50° 25
Quebec.....	48° 30
St. John N.B.....	46° 51
Halifax.....	47° 00

It is noticeable that, at points where the cold of winter is very severe, the mean temperature is now quite as high as at places considered to have a much milder climate. Thus a Quebec May is precisely like a Toronto May, while Montreal is within three-fifths of a degree of the Hamilton average the present month. In June it is rather warmer in Quebec and Montreal than it is in Toronto and Hamilton.

The rapidity with which vegetation advances, when once growth has commenced, is one of the peculiarities and charms of our Canadian climate. No sooner is the frost out of the ground than the grass begins to sing, "Here I come creeping, creeping everywhere." Very little sunshine makes the pulses of the sugar-maple bound with life, so that the sap streams out wherever an incision is made in the bark. After a very few warm days, the children exclaim,

"See the tender catkins cover  
All the slender willows over!"

In fine, the change from winter to spring is almost magical. It is as if the scene had been touched by some Fairy's wand, and suddenly transformed from dreariness and death to life and beauty.

The present season has been somewhat peculiar. For about ten days toward the end of March, we had weather warm and sunny enough for the end of May. The grass became green, and made a visible start in all moist places. The willow catkins came out in the swamps. A fine run of maple sap took place. Not a few farmers sowed their wheat and other grain crops; indeed we have heard of one or two dreadfully beforehand people, who had finished their spring seeding by the first of April. It would be hardly unjust to say of such people that they made themselves "April fools" by their excess of promptitude, for it is arrant folly to sow seed when the ground is cold, and the conditions of growth do not exist. Farmers cannot be too prompt in breaking up their land and preparing for seeding; but it is poor policy to sow under circumstances that render it certain that the seed will lie for weeks in a cold, ungenial soil. Much seed is wasted thus, while the plants that get a premature start are chilled and stunted by the state of the ground and air. After the wondrously fine March weather, we had a relapse into frosty nights and windy days, which lasted for about a month, checking vegetation indeed, but furnishing a fine opportunity for carrying on all manner of out-door work. We are inclined to think that farm operations are in an unusual state of forwardness the present season, that crops will be got in early, and that, other things being equal, we may look for an extremely favourable year. So far as our observation and means of information enable us to judge, the fall wheat is in splendid trim, and grass lands promise well. Very little rain has fallen, and light land has become quite dry. The backward weather has checked the fruit buds to a degree that renders it pretty certain there will be no untimely nipping, so that we may fairly hope for a good fruit yield. On the whole, appearances justify a most favourable augury for the season of 1868.

The calendar of work for May is very similar to that for April. Sowing and planting are the prominent labours of the month. We would urge upon our readers the importance of doing everything in the best and most thorough manner possible. It

never pays to do farm work hurriedly and superficially. The maxim "once well done is twice done" is often illustrated in agricultural affairs. There is less excuse than usual for hasty ill-done work the present season, because of the favourable weather we have had for active operations.

We strongly advise our farming readers to make extra effort this year in certain directions where neglect and failure often prevail. *First*, be sure to grow an adequate supply of carrots, mangolds, and turnips for the winter feeding of stock. Horses should have carrots daily all through the winter. They are most healthful and beneficial feed when only dry fodder can be had. Milch cows, growing stock, and cattle that are fattening, should also have roots along with their dry fodder. *Secondly*, take care to have a good garden. How few farmers grow an adequate supply of vegetables and fruits for home consumption! Yet nothing is easier with proper management. To succeed in this, a bit of ground should be fenced off so that pigs and poultry cannot invade it; it should be so arranged that most of the work can be done by horse labour; early and tender plants should be started in a hot-bed and duly transplanted; last, but far from least, the garden must be kept clear of weeds. *Thirdly*, plant some trees, stock the orchard and shrubbery; line the roadside and lane. The country is far too bare and shelterless. Myriad voices exclaim:

Save us the Forest! already is done  
More mischief than time can restore;  
And most of the landmarks of boyhood are gone,—  
We cannot, we will not lose more.  
If forester's part could but rise from the dead  
To look on the scenes they had known,  
They would look in amazement; their Forest has fled,  
And the pride of its glory is gone.

Save us the Forest! that children may roam,  
Or gambol in innocent glee;  
Their shouts shall ring loudly 'neath Heaven's high dome,  
Telling all that the Forest is free.  
No carpet of Turkey or Brussels, whose ply  
The loom of the cunning one weaves,  
With Nature's own loomwork one moment can vie,  
The Forest's soft carpet of leaves.

O save us the Forest! the tolling ones cry,  
Who dwell mid the smoke and the heat;  
In the long summer sunshine delighted we fly  
Away from the alley and street.  
From anvil and hammer, from counter and pen,  
Too seldom, alas! can we stray;  
We need such a refuge from Babylon's din—  
Then save us the Forest, we pray

O save us the Forest! the home of the dove,  
Whose plumage bestowers each spray,  
Discouraging sweet music, like Love's thrilling words,  
From dawn till the closing of day.  
The Oak and the Maple, the Ash and the Fern,  
No hand of the spoiler should seize;  
The castle and mansion are buildings of man,  
But the buildings of God are the trees

## The Field.

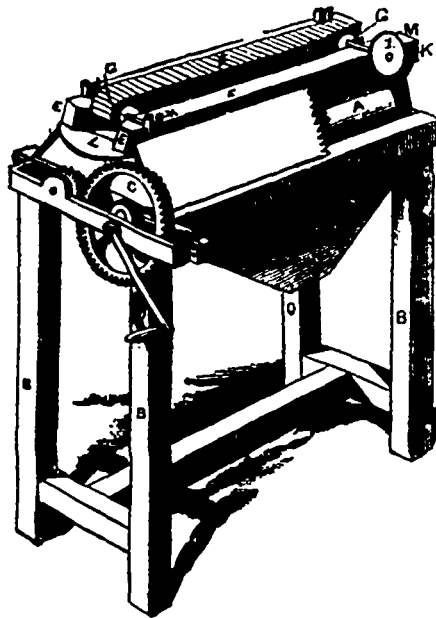
### "Bush" and "Clearing."

AN esteemed correspondent sends us the following communication :

There is an epoch in the career of nearly every Canadian farmer, where almost insuperable difficulties arise, where debt and trouble begin, and discontent fastens itself in the family, and which oftener causes the dispersion of the sons, and the loss of the property, than any other epoch which happens in the man's life. It is when he has cleared up all his best land, and before he has got the ground free of stumps, when bush-farming ends, and good scientific farming cannot begin for want of room.

The average of the best lands in Canada do not contain more than sixty per cent. of high, dry, wholesome land, such as is sure to bring a good crop of wheat on a newly chopped fallow, without draining or other expense. Of course some farms are all good, but this is rare; second-rate farms do not contain more than forty to fifty per cent. of such land, and third-rate farms not so much. The rest of the farm is either low and flat, or pine or hemlocky, or something else. It is land that eventually will make good meadow, but is by no means certain to produce a good crop of wheat the first year after clearing it up. So long as the settler can clear up ten acres each year of good dry land, and get a good crop of wheat as the first crop, so long is he prosperous. If his means admit of his laying the land down to clover with the first crop of wheat, so as to form a good covering that will keep down thistles and all kinds of rubbish, his land is improving for five or six years, and when the small stumps are rotten and he can plough close round the large ones, he can then depend on his second crop of wheat; but supposing him to be so situated that he cannot clear the proper quantity of new land each year, and is obliged to sow a second crop of wheat or other grain immediately following the first crop, then his troubles commence; he gets some crop, it is true, but more thistles and weeds, and lays the foundation of future trouble beyond calculation. Many a farmer on a third or fourth rate farm goes on in this way (particularly if he has only fifty acres of land), until he actually farms himself out of house and home; and if he does not lose the land, it is only because it is so uninviting to others, that no one envies him the occupancy of it. There are two cures for this evil; the first is that all the family who can work out for hire should do so, and their earnings go towards the general fund; and this oftener happens than people in the upper walks of life would believe; the second and more reliable cure is "more forestland." Well, the reader will naturally think, how can this be? The man is already ruined by clearing land, how should he improve his circumstances by continuing the same course? The following case will show—John Horsey, (the name is not real, though the fact is) took up one hundred acres of third-rate land in Amaranth, it turned out to be a very frosty place, and although good land, was low and very mucky in places; the consequence was, no fall wheat, and spring wheat frozen year after year with summer frosts. He had a pretty good stock on the farm; but he had nine children; he could keep his family with difficulty, but pay he could not. After ten years, he found himself with forty-five acres cleared; his land unpaid for, and a heavy store bill. What could he do? Crops were a comparative failure, stock grew and increased and just kept him going, but the loss of his farm was imminent, and ruin stared him in the face. Fortunately for him, the Township has a very bad name for new settlers, and the lot just across the road was vacant, and wild. Horsey is a Yorkshireman, and slow, but with a good deal of the traditional keenness of the Yorkshireman about him. The owner of the wild lot had

a cleared farm of his own, was tired of paying taxes, and only wanted the wild land for his boys as they should grow up. Horsey offered to clear up the farm, build a barn, and pay taxes, for the free occupancy of the place for eleven years; and the owner thinking that a cleared farm for his boys would do better than forest land, consented. Horsey's two eldest boys were seventeen and nineteen years old, and were willing to work with their father; the man himself was sufficiently skilled as a bush carpenter to build the barn, (a double log one with shingled roof); the old farm would find food, and the landlord, knowing the facts, was merciful. Horsey and his boys went to work a year and a half ago on the new place; they have now the barn built, and forty acres cleared, and ready to put into spring wheat this spring; the land of the new farm is of first-rate quality, is high and rolling, and will be tolerably certain of a good crop of spring wheat, and if it should fail, he can burn off the stubble next harvest and put in a crop of fall wheat; meantime every spare hour will be employed in chopping and clearing more land on the place, and there is no doubt that the old farm will be paid for in full within two years, or three at the outside. The ashes and spare stock have furnished him with money to pay up his store bill and make a payment on his land, and those who know the facts consider his future as certain, and his troubles at an end. He is now following the old farm extensively; every month during the summer will see the stumps out more and more, and in three years it will be all in clear fields and come under the usual Yorkshire culture of deep ploughing, well fallowed, with more or less manure each year. When once he has the forty-five acres of the old farm producing well, he will clear up the wet part, and experience of the neighbourhood has shown that under these circumstances the frostiness of the land disappears, and good crops result with tolerable certainty. This is a case that speaks well for the latin adage "*Similia similibus curantur*," or in the vernacular—cure yourself with a hair of the dog that bit you.



Improved Corn-Sheller.

THE accompanying engraving represents a new Corn-Sheller, made on an improved principle. It is claimed by the inventor that this machine will shell more corn in a cleaner manner, and with less labour than any machine ever brought before the public. It consists of the revolving roller A, in which are inserted teeth or pegs, and which is made to revolve by means of the wheel and pinion C and crank D, or in any other convenient manner. Above this roller the two frame pieces E E, are fixed in such a manner as to form a sort of trough or passage down which the corn can pass and be kept in contact with the roller A; between them is the endless band F F, which is allowed to rise and fall by means of the slots H H, or their equivalents, and is put in motion by means of the rollers G G and pulley I, from the axis of the roller A. The action of the machine is

as follows:—The corn is fed in at L and is drawn toward M by the endless band F F, by which it is pressed down and kept in close contact with the drum A, and is yet allowed to turn and present a fresh surface to the action of the teeth or pegs on the roller A, by which means the grains of corn are rapidly stripped from the cob and fall into the hopper N, while the cobs are thrown out at M. A great advantage of the endless band is, that very small cobs may be fed in immediately after very large or irregular ones, and be equally well cleaned, the endless band pressing equally on the small end of the cob as the larger. The machine is easily worked by one man, and will shell, perfectly clean, one hundred and fifty bushels per day.

We believe this to be a good machine, well adapted for doing its work; and wherever corn is grown in Canada some sort of Corn-Sheller is indispensable. In the Western States it may be pardonable to feed and market corn whole, but with us a more economical method is essential to profit. The advertisement of Mr. D. Codd, in the present issue, will supply the necessary information respecting the price, &c., of the above useful machine.

### On the Importance of Thick Sowing of Clover Seed.

To the Editor of THE CANADA FARMER :

SIR,—I experience great pleasure in reading the numerous and interesting articles on the various subjects which appear from time to time in your highly-valued and extensively circulated journal, and although there will occasionally appear something very unique and puzzling from some of your correspondents, yet from the discussion of some subjects there is much to elicit and call forth valuable information and profitable reflection to those interested in agriculture and horticulture. But I feel somewhat surprised never to have met with an article touching on the subject at the head of this communication.

There are, however, but few farmers, I am well aware, who know as I do, from many years' experience, the real value and importance of thick sowing of clover seed; a few advantages of which it is now my desire and aim here to point out, as briefly as I possibly can.

Many farmers think five pounds of clover seed to the acre, with a few pounds of Timothy, a sufficiently liberal seeding to secure a heavy crop of hay, or good pasturage. As far, however, as my experience goes, which has been pretty extensive, I have never seen that accomplished yet! But I have seen from such seeding twenty to thirty cwt. of hay per acre, and perhaps, in a very favourable season, a trifle more, though more often less! and the pasturage has been commensurately meagre.

Now let us consider how trifling the additional cost is of ten pounds more seed to the acre, in comparison with the gain (which is certain) from this additional outlay! If fifteen pounds of clover seed are sown, with four or five of Timothy, to the acre, or even without, I will guarantee, in a favourable season, a cutting of three tons or three tons and a half of hay, the first year, and two tons and a half the second year, and more especially so, if a hundred or a hundred and a half of plaster to the acre, is sown each year as early as vegetation begins to stir, or, in other words, a ton and a half more grass shall be cut to the acre, for the extra quantity of clover seed sown, independently of at least a double quantity of pasturage being gained thereby. But there is another equally important consideration to be taken into account, never thought of by many, resulting from this thick sowing of clover seed. The clover root is the best preparation or auxiliary that you can possibly have for a wheat crop. From this process I have had my winter wheat better in quality, and far heavier in bulk and in weight, after ploughing up my one year clover, which had been eaten off by all kinds of stock close

to the ground after mowing, than I could produce in any other way; and surely a heavy crop of wheat cannot be grown at less cost and time. I think it well to state that the system of farming which I followed was that known as the "four field," the clover down early one year—never sowing less than fifteen to eighteen pounds of clover seed to the acre, neither Timothy nor any other grass seeds being sown. And no system of farming, in my humble opinion, will pay like it, provided the soil (gravel or sandy loam) be suitable. Fallow for turnips, afterwards barley or spring wheat; then clover, and winter or spring wheat to follow. The clover root buried deep, but with one ploughing for the wheat. With this system your land shall always be clean, and in good heart, and every crop a good one.

As the Pea crop is of so much importance in this country to some farmers, the "five-field" system might perhaps be carried out with advantage, without impairing the condition of the soil. Peas after wheat, and then fallow again.

There is another matter which should also be taken into account when sowing any kind of grass seeds. Many seeds get under clots of earth and stones, and consequently never see daylight; many others, when germinating, are eaten off by insects; and then the birds, too, when any seeds are left uncovered, must have a share; but worse than all, in this variable and treacherous climate, how many plants, when just above ground, are cut off or killed outright by frost, when we have thought all safe from that fell destroyer—so that where five pounds only of seed are sown to the acre, how greatly the crop you expect is diminished from these causes, over which you have no control.

Again, how often, in this climate, do we see one-half, aye, sometimes two-thirds of a field of clover destroyed when the plant is just nicely up, by a scorching hot sun, for days and weeks in succession! Surely, therefore, there must be a better chance for a heavy crop of clover from a thick sowing of seed, than from a thin one. Every man who can reason on any subject must surely see it as clearly as I have found it to be so. At a future time, Mr. Editor, if it be your wish, I may again take up my pen to say a few words on the advantage of clover hay over Timothy, and the best mode of curing that crop for fattening cattle, as also on the great advantage of a liberal use of plaster for small crops, where the soil needs it.

Truly yours,  
LEICESTERENSIS.

Guelpb Township, April 10th, 1868.

NOTE BY ED. C. F.—We regret that the foregoing communication was not in time for our last issue. Though late in the season, it may still be useful, and at any rate will induce observation and comparison of the effects of thick and thin seeding. We need hardly say that we shall be most happy to receive the additional communications kindly promised at the close of the above letter. Our correspondent is a gentleman of intelligence and experience, whose views are entitled to have much weight with our readers.

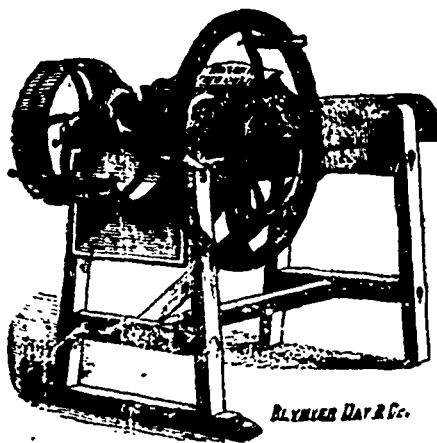
### Should Potatoes be Planted Whole?

In order to solve this question, a gentleman in Baltimore, Md., tried four experiments in planting potatoes—either whole, or cut in halves, or into eyes—with the following results:

- No. 1.—Potato, weighing 12 ounces, cut up in pieces of one and two eyes each, produced 6 pounds
  - No. 2.—Potato, cut in halves, weighing 12 ounces, produced 5 1/2 pounds
  - No. 3.—A whole potato, weighing 9 ounces, produced 1 pound 2 ounces
  - No. 4.—The sprouts of one potato, weighing 8 ounces, produced 1 pound 2 ounces
- Width apart, No. 1, 10 inches; No. 2, 18 inches; No. 3, 24 inches; No. 4, 8 inches.

The object in trying the experiment was to ascertain if planting whole potatoes possessed any advantage over the old plan of cutting the potatoes in

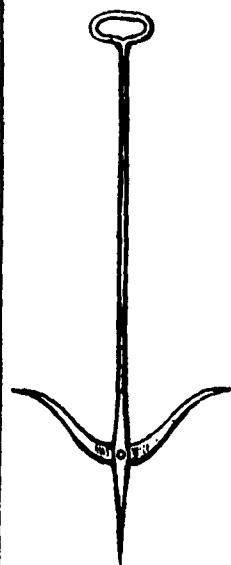
small pieces. The above results appeared to be conclusive in favour of cutting into eyes or halves. The best cultivators now grow no longer in hills, but in rows 3 or 3 1/2 feet apart, with pieces dropped in the rows at distances of 12 or 15 inches apart. This method has always proved satisfactory, giving [a much larger return per acre, a greater proportion of large potatoes, and a greater freedom from rot or disease than the hill system.—N.Y. Ind.]



### Eureka Cutting Box.

The above cut represents a hay and straw cutter, sold in several sizes, by Messrs. A. T. Bates & Co., 195 Washington Street, Chicago. Having had an opportunity of inspecting the operation of this machine, we can speak of it in confident terms of eulogy. It works with great steadiness, ease and rapidity. The self-feeding arrangement is effective. It does not clog or choke up. The knives work without jerking or unsteadiness, and are so enclosed that it is impossible for any accident to occur. There is, so far as we know, no better machine of the kind before the agricultural public. Four sizes are manufactured, the smallest at \$20 and the largest (for horse power) at \$64 American currency.

### Buettel's Patent Hay Fuller.



The accompanying illustration represents a useful implement for pulling hay or straw from the stack or mow for feeding and other purposes. It consists, as shown in the cut, of a strong shaft of iron, provided with a loop handle at one end, and a sharp point at the other. For a short distance from the point, the shaft is gradually thickened, and opened out so as to admit of the insertion of two prongs, one on each side. These prongs may be of any desired length, and are kept in place by a pin, on which they move freely as on a hinge. When the instrument is inserted into

a body of hay or straw, the prongs are laid flat against the shaft, and offer no impediment to the passage of the implement; but on attempting to withdraw it, they necessarily spread out and bring a quantity of hay, or whatever the material may be, along with them.

By this contrivance, it is stated, hay or straw can be expeditiously and readily withdrawn from the stack without the necessity of removing the covering, and so exposing any fresh portion to the weather. Much of the seed and dust in hay is, at the same time, shaken out in the process, and it is thus fed to the animals in the best possible condition. For par-

ticulars of price, &c., we refer to the proprietor's advertisement in the present issue.

### Another Farm Balance Sheet.

To the Editor of THE CANADA FARMER:

SIR,—I have read in your paper a statement of farming accounts by "Ulmus." His account is certainly very discouraging; but lest beginners should suppose that farming in Canada is utterly unprofitable, I send you a statement of my account for 1866-67. My account for the year 1867 shows, at 31st Dec., a balance to Credit of \$1315.62. The account I send, from 1st July, 1866, to 1st July, 1867, is, however, a fairer statement, as it can include no more than one year's crop.

My farm is 150 acres, 130 of which are under cultivation. I have cleared it myself except a few acres, and have learned anything I know about farming from hard experience, as when I began I hardly knew wheat from oats. I pursue the mixed system of farming, and keep a good deal of stock, but not so much as to have to pay \$300 a year for feed. I raise about 800 bushels of wheat a year—average 20 bushels per acre. My item for feed and seed bought will appear large, \$215.60. The reason is, that in that year I changed my wheat, both Spring and Fall, and had a large quantity of Clover and Timothy seed to buy. I do not value my stock in the account, as any increase in value was caused by the temporary high price of cattle.

		CALDER.
1866-67.		
July.	To Wages.....	\$518 50
	" Blacksmith.....	12 75
	" Cattle bought.....	194 00
	" Threshing.....	18 00
	" Feed and Seed bought.....	213 60
	" Saddlery and Hardware.....	88 28
	" Plaster.....	20 56
	" Implements, Lumber, &c.....	126 80
	" Taxes, Insurance and Sundries..	66 47
July.	" Balance.....	1005 26
		\$2214 22

		CR.
July.	By Wheat sold or used in house...	1194 91
	" Cattle sold.....	336 50
	" Feed sold.....	116 08
	" Beef, Pork and Mutton sold and used, and Dairy Produce....	439 94
	" Seed sold.....	38 71
	" Wool.....	69 88
	" Sundries.....	18 20
		\$2214 22
1867.	July 1st. By Balance.....	\$1005 26

THE following rule for ascertaining the number of bushels of apples, etc., in bins and boxes is recommended as simple and accurate: For the number of "even" bushels, multiply the number of cubic feet in the bin by eight and point off one decimal. For "heaped bushels," multiply by eight twice, and point off two.

SHARPE'S IMPROVED TURNIP.—We can confidently recommend this turnip to intending cultivators as one of the best Swedes ever introduced into this country. It has won golden opinions and first prizes in all directions. For sale by Messrs. Sharpe, Seedsmen, Guelpb.

WHAT RABBITS COST ENGLISH FARMERS.—At a recent meeting of the Staindrop Farmers' Club, a paper was read on the comparative appetites of sheep and rabbits. Two hogget sheep and twelve full-grown rabbits had been put up, and fed for six weeks on oats, cut clover, and bran. At the end of that time it was found that nine rabbits in captivity ate as much as two sheep, and, of course, when free, they destroy much more than they consume. Some estimate may thus be formed of the injury done to tenant-farmers by rabbits. A farm on which 900 rabbits are shot yearly, is taxed far more heavily than if its tenant had to maintain a flock of 200 of his landlord's sheep. The sheep, too, would be useful in fertilizing the land, whilst rabbits are of no use at all in that capacity.

## Canadian Natural History.

### The Black Bass.

(*Gristes Nigricans*)

IN the Natural History department of the CANADA FARMER for the 1st of January, we gave a brief account of the family of Perches, and an illustration of the largest of Canadian species, the Striped Sea Bass. The same general characteristics of the family apply to the species next in importance, the Black Bass, represented in the accompanying engraving, for which we are indebted to "Frank Forester's Fish and Fishing." From the same work we extract the following account of the appearance and habits of this well-known Canadian fish:

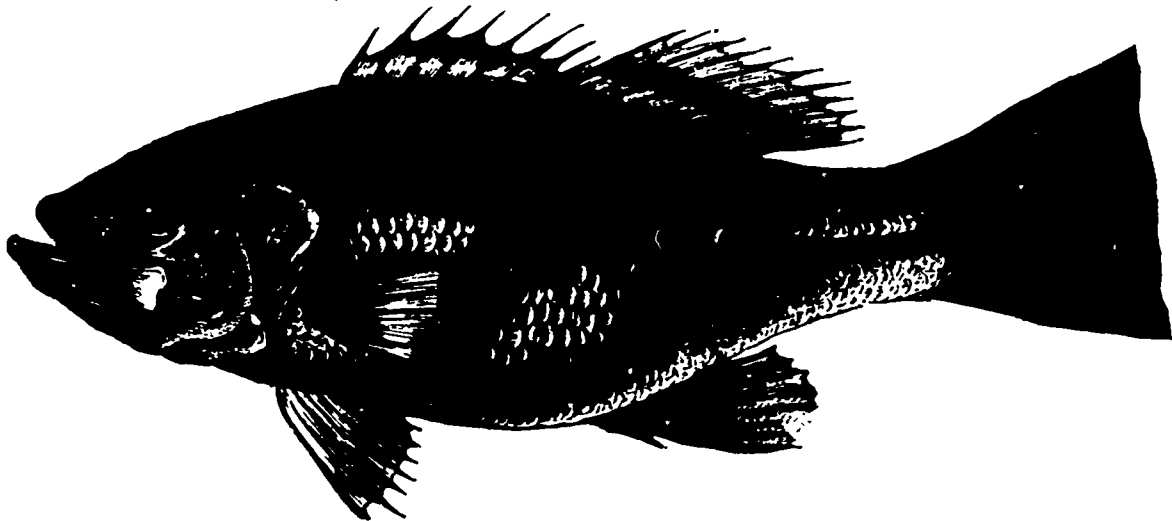
This is one of the finest of the American fresh-water fishes; it is surpassed by none in boldness of biting, in fierce and violent resistance when hooked, and by a very few only in excellence upon the board.

Peculiar originally to the basin of the St. Lawrence, in which it abounds from the Falls of Niagara downward, if not through its whole course, it has made its way into the waters of the upper Hudson, through the canals. It is said by Dr. DeKay to be found generally in the small lakes of the State of

ated. Scales on the operculum large; a single series on the suboperculum, much smaller on the preoperculum, ascending high up on the membrane of the soft dorsal and caudal fins. Eyes large; nostrils double. Operculum pointed, with a loose membrane. The lower jaw is somewhat longest. The jaws are smooth and scalcless. Both jaws are armed with a broad patch of minute conic acute reserved teeth. An oblong patch of rasp-like teeth on the vomer, and a band of the same kind on the palatines. Branchial arches minutely toothed. Pharyngeal teeth in rounded patches.

The dorsal fin is composed of nine stout spines, the second dorsal of one spine and fourteen soft rays. The pectorals have eighteen soft rays, the ventrals one spine and five soft rays, the anals three spines, and twelve soft rays, and the caudal sixteen soft rays.

It is somewhat doubtful to me whether the fish known in the waters of Lake Erie and those generally above the Falls, as the Oswego Bass, is not distinct from this fish, though it is also occasionally called Black Bass. There is very evidently some confusion about the matter, as I am well assured that another fish of the same family, the *Corvina Oscula*, is at times confounded with it, and called by the same name, though in truth it but slightly resembles it. During a tour recently through the great lakes, I had abundant opportunities of learning the



New York, but I conclude that this must be limited to those which communicate with the great lakes or the St. Lawrence. It is taken abundantly in Lake Champlain, but it is in the swift glancing waters of the St. Lawrence, among the exquisite scenery of the Thousand Islands, that it affords the greatest sport to the angler.

It bites ravenously at a small fish or spinning-tackle, or at the deadly and murderous spoon, an instrument so certainly destructive that the use of it is properly discouraged by all true anglers as poaching and unsportsmanlike.

The finest sport can be had, however, with a long light Salmon-line, treble-twisted gut, to defy its numerous and exceeding acute teeth, and a large fly, with a body of scarlet chenil and four wings, two of the silver pheasant and two of the scarlet ibis. As the Black Bass attains to the weight of six or eight pounds, and is excelled in vigor, speed and agility only by the brook Trout, the Salmon Trout and the True Salmon, the sport which he affords when thus hooked can be very readily imagined; nor can he be brought to the basket by anything short of the best tackle, and the most delicate and masterly manipulation.

In colour, the fish is of a dusky bluish black, sometimes with bronze reflections, the under parts bluish white, the cheeks and gill-covers nacreous of a bluish color.

The body is compressed. Back arched and gibbous. Profile descending obliquely to the rostrum, which is moderately prolonged. Scales large, trun-

habits of this fish, which swarms in all the Canadian lakes, though not found north of them. It is taken in Seneca, Crooked, and Cayuga Lakes, and in the first is of rare excellence. I lean to the opinion that the differences between this and the Oswego Bass arise merely from difference of condition and feeding-grounds.

### Early Birds.

To the Editor of THE CANADA FARMER:

SIR,—On the 15th of April, while spreading manure on some meadow land, I was surprised to find a nest of young birds, almost full fledged. The parent birds had dug a hole in some cow-droppings, and there built their nest, and to-day I visited the place, and found the young, three in number, hopping about on the ground. Now, Sir, the eggs must have been laid not later than the first week in March, during some of the coldest weather we have had during the winter. I should like to know how the parent birds managed to get through the snow to build their nest, and how they managed to keep their eggs from freezing, before the period of incubation. They must have been on the nest from the time the first egg was laid, almost incessantly, for we have had weather cold enough, since the first of March, to freeze such a tiny thing as an egg through in five minutes. These and similar thoughts have passed through my mind frequently since the first time I saw the early fledged birds. What a wonderful thing instinct is, which teaches these feathered songsters to take such care of their eggs and young! and these are but a small part of the Creator's works, the minutest of which, if attentively examined, discloses a thousand wonders, and obliges us to adore and admire the Omnipotent Hand that created them.

GEORGE DOIDGE.

Edgecombe Farm, Columbus,  
April 20th, 1868.

### The Woodcock.

To the Editor of THE CANADA FARMER:

SIR,—As you seem to be devoting much attention in imparting to the youth of Canada a knowledge of its very interesting ornithology, I am induced to bring under your notice an instance of early nesting, on which I stumbled while, on the 10th inst., crossing the corner of Mr. Price's sugar bush in the fifth concession of Camden. The rareness of the instance is an additional reason why I am desirous to bring it under your notice, and that of the readers of the CANADA FARMER. The nest was that of a female woodcock—built on the ground, under the branches of a low balsam tree, and entirely covered from view. The eggs were four in number, of a greenish ash colour, dappled with irregular brown spots. The weather was very cold, the ground having been covered with snow for nearly a week. The eggs must have been laid during the warm weather at the beginning of this month. It seemed to be close hatching, as it was quite tame, and when raised from the nest retired only a short distance from it. Whether it could in such unfavourable circumstances communicate sufficient heat to hatch the eggs, I have no means of knowing, as I left that part of the country soon after I dis-

covered the nest. This was the first instance of the woodcock I have seen in Canada. Indeed I was not aware that it was found on this continent at all. It seems to be much smaller than the Scottish woodcock, and, as is the case with the snipe, and some other long-billed birds, its bill is shorter. In the north of Scotland, where I have been familiar with it, it is a bird of passage, making its appearance in November and the beginning of December, and leaving early in the spring for Norway, Sweden, and other parts of northern Europe. It very rarely breeds in Scotland. I never knew an instance of it myself, but I was told by a friend of mine that it sometimes remained all summer in the Forests of Glenmore and other places, on the northern slopes of the Grampians. It is always a very shy bird, and lives in low coppices and near marshes. It is erroneously said to live by suction, like the snipe, yet, unlike that bird, it never wades or frequents marshes or exposed places without wood or brush. It ranks high as a game bird, but is very difficult to bring down, from its angular movements, as well as quick flight. I am informed that the lighthouses of the northern coasts of Scotland prove fatal to large numbers of them on their way to that country. Whether they travel by night, or are benighted in crossing the German Ocean, I do not know; but it is well known that the light attracts them as if by fatal necessity, and, in their swift flight they dash against the lantern, and drop down dead.

DUNCAN DAVID GOW

Caubray, April 22, 1868.

## Stock Department.

### Affection in Animals.

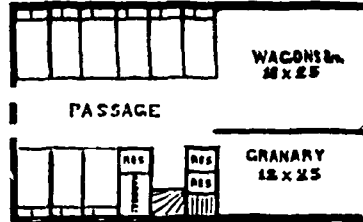
An article in a recent number of the *Turf, Field, and Farm*, after describing the evidences given by dogs, camels and horses, that they are sensible to kindness and appreciate and remember good treatment, concludes as follows:

Birds show as much affection as is shown by animals. A lady returning from Cuba, two years ago, brought a parrot and presented it to little Katie. The bird was fresh from the tropics, and the child had just been transplanted from the genial climate of Kentucky to the chilling atmosphere of New York. New faces and new scenes greeted the eyes of both child and parrot—the latter named Pouta—and each seemed to look to the other for comfort in the lonely hours of the slow revolving days. Katie took the bird from the cage, gently stroked its head and back, whispering endearing words to it all the while, and the bird nestled more closely to her young breast, with a kind of low clucking indicative of sympathy. Time passed, and the bird of green plumage and the bright-eyed, flaxen-haired girl, became inseparable companions. Katie fed her pet with the choicest sweetmeats, laughed with it, cried with it, and developed in its heart a strong, overdoing we'll of affection. Two years have strengthened the early tie, and now the attachment of the parrot for her kind protector is remarkable. When Katie is long absent, it will mope and piteously cry for her; if she enters the room when the bird is in one of these sad moods, it will fly to her with a wild scream of delight, and when she takes it in her hand, it will kiss her lips, lay its head against her warm, rosy cheek, and repeat the endearing phrases that she has taught it. At such a time lay your hand roughly upon the flaxen-haired girl, and Pouta's eyes will turn green with rage, her feathers ruffle up, and she will fly at you with savage fury. Strike her, but you cannot beat her off. When she fights for the idol of her heart, there is no cowardice in her nature. She will scream and renew the attack until you desist, or she lies panting and exhausted on the floor; and when strength returns to her, and the rough hand has been removed from the object of her affection, she will flutter back to that object with cooling words of comfort, as if she were the only protector that Katie had in the world. It is a remarkable instance of devotion, and we must accept it as another evidence of the fact that kindness begets kindness—that the affection of animals and birds is not the weak, ephemeral, effervescence of the moment. The sentiment that attaches them to reasoning beings is not impulsive; its growth sometimes may be slow, but when once matured, its fidelity is only measured by the lines that mark the limits of life. Surely from these examples we can deduce a lesson. Let men, in controlling animals, remember that they are capable of affection, that they are faithful when an attachment is formed, and then make this affection the key to the government of them. If you have a balky, a vicious, or an unruly horse, harsh treatment will not make a better animal of him, or render him more tractable. The more punishment inflicted upon him by impulsive hands, only widens the gulf that separates you from the sentiment by which he may be controlled. Be kind to him, win his confidence, and then he will cheerfully obey your every command. Do not approach him as a mechanical, unthinking brute, but approach him as you would approach a reasoning being. An animal that is capable of such warm attachment, is capable of understanding who is worthy of such attachment. Kindness is the golden key to affection, and from affection spring obedience and fidelity.

### A Good Horse Barn.

W. B. SMITH, of Syracuse, has erected a good and convenient barn, chiefly for the use of a part of the horses which he employs in his extensive nursery. The accompanying figure is a plan of this barn. It is thirty feet wide, and seventy-five feet long. The passage through the centre is ten feet wide, and admits readily the driving of wagons through it. The stalls on each side are ten feet long, (opening at the rear into the passage,) and glass windows are placed in front of each. Most of the floor of these stalls is made of slats, one and three-fourths by three inches, and an inch apart, through which all the liquid manure escapes, and drops on the manuring compost heaps below, leaving the stalls always dry. Adjoining the granary are reservoirs for the temporary

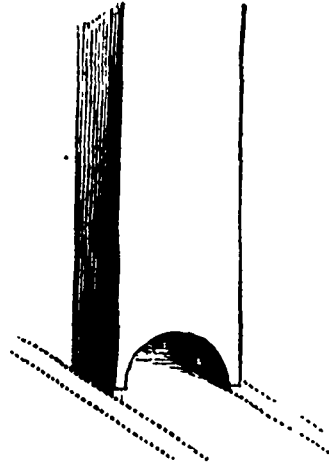
reception of feed for the horses, so arranged that three different teamsters may each draw feed from these separately, without interfering with the supplies of his neighbor. In the absence of an arrangement of this sort, as every one who employs several teamsters knows, they are tempted to take more than their due proportion of grain, and to interfere with their regular supply. Once a month these reservoirs are each filled with just enough feed to last the month through, and the granary is then locked. Each man is furnished with an accurate measure, and a padlock and



key to the slide at the bottom, through which he draws the feed. The bottom of each reservoir is made sloping, so that all will run out through the opening, which is high enough from the floor for sliding the measure beneath it. By this contrivance, (which is not entirely new,) the owner or manager secures perfectly uniform and regular feed for all his teams, with only a few minutes attention once a month—the reservoirs being marked or graduated, so as to show precisely the amount of their contents.

The cellar or basement is eight feet high; the main floor nine feet, and the upper portion, which is all hay-loft, is ten feet more to the eaver.

The arrangement for feeding hay to the horses is the same as that now adopted in some of the best stables. The hay is thrown down from above through



a square board tube, placed perpendicularly and standing in one end of the manger. A semi-circular opening, next to the manger as shown in the figure, allows the horse to draw from the bottom of the tube all the hay that he wants, without the inconvenience of having his eyes and nose filled with hay-seed, or of breathing on and encountering unpalatable the hay which he does not eat, resulting from the use of racks. These tubes may be about eighteen or twenty inches square, and should be as smooth as possible on the inside, the lower end being two or three inches larger than the upper, so that the hay will drop or settle freely, and not become fastened or lodged in it. Openings, with doors opening outward or with slides, may be placed at different heights, for convenience in throwing down hay, as the height of the snow varies.—*Country Gentleman*

PRODUCTION OF SEX.—J. W., of Etobicoke, states that for five or six years past he has invariably succeeded in obtaining a heifer calf by taking the cow to the bull before milking. We publish his statement according to his request, but we very much doubt whether the rule he thinks he has established will be borne out by a more extended experience. The same correspondent wishes his brother farmers to be reminded that Alsike Clover matures its seed the first season, and should not, therefore, be sown with Timothy or other grass.

## Treatment of Brood Mares,

MARES should be treated during gestation as naturally as possible, whether by this is meant either the actual time of birth or the whole period of bearing. Their work should never be severe or long continued, and their keeping such as would supply both mare and foal with ample nourishment. Too high condition might not be better than moderate order, but it would be vastly preferable to any stinky or scanty fare. In the event of breeding at three or four years old, they should be at pasture all the season if possible, and in the winter should have no work, only moderate exercise, to keep them growing constantly. Breeding later in life, after the mare has been worked, she should be kept at grass as much as possible, and if required to work, great care should be taken to prevent any over-work, or undue exposure, and the feed should be liberal to support not only the mare but the foal. With care and good treatment, the colt may not suffer or be any the worse for the use of the mare during the earlier stages of pregnancy, but no such tax as hard work and breeding can be imposed on any animal, without injury. For some time before the birth, she should be at pasture if possible, and if not, should have a box stall and a yard for exercise, and entire freedom from restraint in her motions, by tying, &c.

Generally speaking, no other or peculiar care is required than nature gives the mare the instinct to seek for herself, though if we artificially interfere with this instinct, we ought to provide as nearly as may be the natural conditions of the animal.—*Hon. J. S. Keyes.*

## Summer Fatted Hogs.

To the Editor of THE CANADA FARMER

SIR,—There has been a great want experienced with regard to summer fatted hogs. Indeed, we might say it has continued ever since pork-packing in Canada has become an established branch of its trade.

Numerous letters have appeared in the CANADA FARMER from time to time, setting forth the advantages of summer feeding, and in all cases where the experiment has been fairly made, it has proved to be satisfactory; but after all the publicity which has been given to the subject, the subscriber was much surprised to discover last summer that not a few farmers and dairy-men expressed their regret at being ignorant of the fact that there was a some market for their fat hogs even in the dog-days; had we known this, they would say, it would have been convenient for us to have had our hogs ready much earlier.

As before stated, the English appetite for Bacon is growing more and more for the fresh, newly-made article, and prejudiced against such as becomes hard, salted, and rancid by a few months' keeping. Our curing houses are supplied with ice in abundance, and there should be plenty of fat hogs to keep them going. There is every reason to expect prices will be good, the best guarantee of which is the low stock of bacon in England at the present time.

J. T. DAVIES,

Ontario Packing House, Hamilton.

NOTE BY ED. C. F.—We may add that, besides the writer of the above letter, in whom we have every confidence, there are, both in Hamilton and Toronto, other dealers who are prepared, we understand, to buy fat hogs during all seasons of the year. We may mention the name of Samuel Nash, Market Street, Hamilton, and William Davies & Co., Toronto, as reliable parties engaged in this business.

CHAFF FOR FODDER.—"Cultivateur" writes: "In your issue of March 2nd, an able article appeared 'On the Food Value of Straw;' I would like to know whether the chaff of the oat and wheat straw is included in the table of chemical analyses? What is the theoretical value of oat and wheat chaff for fodder? I understand that considerable wheat chaff is fed to horses in some parts of England, but I do not know whether it is that the chaff is more valuable as fodder than finely cut wheat straw, or because there is less trouble in preparing it for the stock. Now if chaff is more valuable than straw, the farmers should know it, or very much is wasted by them for manure every year."

NOTE BY ED. C. F.—The chaff, if it has been kept dry, and has not been soured by heating in a damp mass, contains usually more nutriment than straw, and as every practical farmer knows, affords excellent fodder.

## The Dairy.

### New Cheese Factories.

To the Editor of THE CANADA FARMER :

SIR,—Having recently become a subscriber to your journal, I thought I would write to you on a subject which interests us all (especially all who live in the County of Oxford.) As you are well aware, Oxford is a great cheese-making county, and all that pertains to cheese-making is of deep interest to us here; and I, in common with many others, have read with pleasure (and with profit) the many articles which have from time to time appeared in the columns of the CANADA FARMER, and it is under these circumstances that I now address you. The cheese-makers in the Township of Norwich, where I reside, are now preparing for the summer campaign, and, judging by the new factories which are going up, we are not likely to suffer for want of adequate means to make up the milk within an area of three miles. There are three new factories, besides two old ones. Mr. Chapin, of Holbrook, is putting up a very large factory near that village, and as he is a gentleman of great experience in cheese-making, both here and in the States, I doubt not but that he will do a large business. Mr. Moore, an Irish gentleman, is putting up a new factory about two miles and a half from Holbrook. He intends to make the cheese up for a cent and a half a pound, find everything, and give two-thirds of the whey back. I bespeak for him a large business, as most of the other factories are charging two cents per pound for making up. Mr. Branchflower, a gentleman of great experience in cheese-making, also intends to put up a factory. These are the three new ones. The two old ones within the three miles area, are Messrs. Fawson and Moyer. It is evident that we shall not be at a loss for means to make up the milk. Many in this county will not sell any more milk, because, to use their own expression, "it don't pay." Others labour under the impression that milk-selling pays better than raising crops. I, for one, believe that in the long run milk-selling pays the best, and I hope to see, after this season, a great many return to this branch of farming.

NEW SUBSCRIBER.

Norwich, April 21.

[NOTE BY ED. C. F.—We thoroughly believe in the good effect of competition; but it must not be forgotten that it is quite possible materially to damage the associated system of cheese-making, by having too many factories within a limited area. In a postscript, our correspondent makes an enquiry respecting the new Postal Regulations. We refer him to the Editorial on the subject, in our issue of April 1st.]

### Dairy Cattle.

The following extract from the *Utica Weekly Herald* contains the substance of Professor Brewer's address at the annual meeting of the American Dairymen's Association held in Utica, and which, for want of space, we were unable to include in the report of the proceedings:—

Professor Brewer began by saying that cheese-making was both an experiment and a branch of established industry. When considered in its details, it seems to be merely an experiment, but when considered as to the vast pecuniary interests connected with it, it may be regarded as well established. He went on to remark that the present age is characterized by a division of labour in a remarkable degree; in agriculture, however, less than in other departments of industry. But if we would reap the greatest possible profits from agricultural industry, we must avail ourselves of improvements wherever they come from. Farmers are, indeed, very ready to accept and test improvements in farm machinery; but are slow to do so in the matter of raising stock and introducing new plants and improving land and its productive power. Professor Brewer said he was not learned in the manufacture of cheese, and he would, therefore, make no reference directly to that. He proposed to speak of the producers of the cheese-making element—cattle, and their relations with cheese and butter. There is obviously a great difference in cows. It

would seem wise in cheese manufacturers to select the animals which would make the most and best cheese from a given quantity of milk. Cattle have been domesticated from the earliest times, and from the earliest times there have been different breeds. The word breed is loosely used. What do we mean by a breed? In scientific language it has a definite meaning; in general use it has not. On a given limited area there will spring very little variety of breed from wild animals. The same wild stock would develop many varieties if allowed to spread over a large area. They are permitted to live under different conditions, and eat different kinds of food, and hence take on a different character. Man's selection is vastly more important than the agency of nature in this matter. We may "breed to a point;" that is, breed for some special characteristic in an animal. Cattle were, for instance, originally used as beasts of burden, and were required to be strong and hardy. We require that they should produce milk and beef as well as do labour under the yoke. The speaker did not think that an animal is adapted for all these uses. He thought the Devon combined more excellencies than any other breed. Breeds are local. They are derived from a particular locality. Their characteristics grow out of local wants. The mixture of two breeds will develop in the offspring the points of excellence of both. The mixture of the second generation brings no sure results. Our breeds we call "improved breeds," because we have taken them from some place and improved them. But we have not yet produced a single permanent breed of improved cattle. In England, beef has always been an important item of food. This has been the object of English breeding, and from English breeds we have derived our improved cattle. Prof. Brewer illustrated at some length the fact that so much more attention is paid to horse-breeding than to the breeding of cattle. A single horse has won its owner \$54,000 in four years. An English horse won, during his life-time, about \$1,000,000. The utmost care is therefore taken to breed horses up to the condition of achieving the greatest possible speed. This is not the case with cattle. A cow will not bring a greater price for giving a pint more of milk. The breed that has done most for American stock is the Durham; yet it has been severely criticised. But the Durham was not bred for labour or for milk, but for beef; and for that it is unequalled. Some of the finest Durhams have failed to produce milk enough for their calves. It was not intended for a dairy animal. Certain crosses in France have produced very good dairy animals, however. We raise cows for milk. The most noted English breeds raised for milk are the Alderney and the Ayrshire.

The milk of cows varies, both in quantity and richness. We may breed cattle for either of these purposes. The Guernsey Islands are peculiarly adapted for the production of butter. Great attention is paid to the milking properties of the cattle, which are of the Alderney breed. They are small, live best on short pasture, and give large messes of milk, considering their size and the quantity of food they eat. It has been found by experiments in Connecticut, that a cross of the Alderney with native cattle produces a breed that yield a large and rich quantity of milk. The Ayrshire breed of Scotland was produced by judicious crossings. They are a small breed, but larger than the Alderneys. Six hundred gallons of milk is a good average for these cows in a dairy of thirty or forty. The Ayrshires do not carry their good qualities into other lands as the Alderneys do. In France a most valuable breed has been produced by a cross of the Durham with the Alderney and then with the native cattle. The Bretons of France have an excellent breed for milk. It is small in size. One instance was mentioned in which the cow produced eight times her own weight of milk during a year. These cattle are not as valuable when taken to other localities. They derive their characteristics from the condition of that country and from the peculiar needs of the people.

Mr. Brewer referred to the cattle he had found in Switzerland. Here he found fine cattle, but when taken away from the locality where they were bred they deteriorate. When they are taken away they are placed in different circumstances and have different food, and hence they cannot remain as in their native region. So it is with cattle found in Germany and other European countries. The purport of all this is that a great field is open in this country for experiments in this matter of breeding. There never has been an attempt to make a breed of cattle, because there has not been heretofore an object for making such breed. Now such an object is presented. Cheese-making has come to be so important a branch of business, that to make a cheese-making breed of cattle is a work definite and to be accomplished. In regard to the question whether the cheese-making business is likely to be overdone, the speaker said he could anticipate the result of the discussion of the

question, and say that many would raise the cry of overdoing. Considered individually, such a cry might have some weight, but considered generally, there is no danger of overdoing the business. There is always room for the best quality of any article, and the best cheese-maker will always find market for all he can make. There is never room for a poor article, whether it be produced by the individual or by a community. To get the greatest profit in this business the farmer must do as any manufacturer does—he must produce the best article. In order to produce the best article of cheese, attention must be paid to all the different materials from which the cheese is made. It is not enough to improve the mode of making cheese from milk, the milk itself must be improved, the animal must be improved, must be made the best possible, the same as the apparatus in a factory must be the best. Attention must be paid to breeding cattle so as to obtain a cheese-making breed of cattle. The speaker closed by urging the importance of the subject upon the attention of cheese makers generally. In answer to the question whether the male should not be the best that could be obtained as well as the female, the speaker said it was of the utmost importance that the male should be cared for and improved in every particular.

On motion a vote of thanks was given the speaker for his able address.

Mr. Lewis, of Herkimer, made some remarks indorsing the arguments of Mr. Brewer. He said he had a cow which he had got by improving and crossing. She has given sixty-four pounds of milk each day for one hundred consecutive days. He thought more attention should be paid to the subject of improving the breed of cheese cattle.

## Entomology.

### The Wheat Midge and its Parasites.

We have long been of opinion, and have given expression to it before now, that the best mode of counteracting the evil of which so many are now complaining—the ravages of the Wheat Midge—is to use the means which Nature supplies, and destroy the foe by obtaining and encouraging its own peculiar insect enemies. It is now a pretty well ascertained fact, that the Wheat Midge was imported into this country—probably at Quebec in some unthreshed wheat—about forty years ago, and has gradually spread all over Canada and the neighbouring States. In England this pest has long been known by Entomologists and farmers, though it has never attracted any very general degree of attention, its ravages being so comparatively unimportant; the largest amount of wheat it was ever known to destroy there in a single year was five per cent. of the whole crop. In the States it has been reckoned to have frequently rendered worthless fifty per cent. of the entire crop, and sometimes even as much as eighty or ninety per cent. in a particular county. In the year 1854, the Secretary of the New York State Agricultural Society computed, from the returns of that year, that at the very least—placing everything at the lowest figure—this insect had destroyed of that season's crop the almost incredible amount of fifteen million dollars' worth of Wheat! The question at once arises, why is there this difference between the Old and the New World? Why should the Midge be comparatively harmless in England, and fearfully destructive in America? There is but one answer, and it is a plain and simple one. In England the Midge has at the least three parasites to keep it in check. HERE IT HAS NONE. Man has been the unwitting instrument by whose means the Midge has gained access to this country, and cannot man introduce also the remedy for the plague? We believe that he can. The science of Entomology, particularly in England, where it numbers its thousand votaries, has not been left behind in the advance made by all the arts and sciences in recent times; there are many men in England competent to trace out and collect the parasites that we want, while there are many on this side of the Atlantic able to introduce them to the foe. Surely, then, the experiment, even if somewhat costly, is worth

trying, and there is no reason for supposing that it should fall, if properly carried out.

Some may ask, how is it, if the Midge was imported into this country from England, that its parasites did not come with it? The Hessian fly is another imported insect, but its parasites have come too—why this difference? Why should not what has happened in one case take place also in another? The reason is, that the natural history of these two insects is very different. The larvæ of the Hessian fly lie dormant in the depression they make in the straw for a considerable time, and are then liable to be carried wherever straw is taken; its parasites live inside the larvæ, and therefore they are just as liable to be carried about also. But in the case of the Wheat Midge, the larvæ lie dormant for months in the dry wheat heads, and may then be carried anywhere, so long as the wheat is unthreshed. The parasites, on the other hand, only attack the larvæ when they are exposed, crawling on the wheat ears, or down the straw to the ground. Dr. Fitch, in his able essay on the Midge, has shown that a large proportion of the larvæ descend into the ground to undergo their transformation, while some remain permanently in the ear. The latter escape the ichneumon's attacks, and are thus imported uninfected by the parasite, the former get largely stung in their passage to the ground, whence there is little probability of their being accidentally removed. It is thought indeed by some that only the larvæ thus stung descend into the ground at all. These ichneumonized larvæ, then, are what we want imported into this country; the difficulties attending the experiment are undoubtedly great, the objects being so very minute, and their capture at the proper period uncertain, yet we do not doubt that it can be successfully performed. Of course it will be necessary to engage skilled entomologists in England, and pay them for their time and trouble, as well as provide for other necessary expenses; but surely the expense will be but trifling when compared with the benefit likely to ensue.

We may mention here, before concluding, that we are now in correspondence on this subject with a friend who is one of the most distinguished entomologists in England, and a high authority on British Diptera (two-winged flies), to which order the Midge belongs. As soon as we hear his views on the subject of the importation of the parasites, we trust to be able to give our readers some definite information on this important matter. If the project can be shown to be readily feasible, we have little doubt that steps will be taken for its speedy consummation.

### Entomological Speculations.

To the Editor of THE CANADA FARMER:

SIR,—One of the most remarkable things in nature is, the persistency with which certain insects will affect the same spot, and the same seed, year after year, notwithstanding the circumstance that there can never be any communication between parent and offspring. These facts are more observable in large insects than in small, although there is little doubt that the same rule holds good throughout all nature.

The cause of this peculiarity is a mystery. Thus with the midge:—If you sow a patch of wheat in a garden miles away from any other wheat, and the wheat is from seed originally affected by the midge, notwithstanding that the seed has been cleaned in every possible way, yet the chances are, indeed the almost certainty is, that the wheat plant so raised will be affected by the midge. Now, where does the insect come from? In the ordinary course the midge fly pierces the husk enveloping the grain, and deposits its orange-coloured egg. The egg is really a worm, or if it is not a worm, it hatches into one in a few days, without casting any shell, and becomes active in devouring the plumula of the growing berry of the grain. Having thus made a wound, it keeps it

open, and the whole future substance of that particular grain is devoured by the destroyer. The insect then goes through the usual transformations into a chrysalis, and either remains in the ear of the wheat, and is carried into the barn or stack with it, or it leaves the ear and buries itself in the earth, to come forth as a fly the next spring, and continue its ravages. Where, then, does the midge come from in cleaned wheat, which is dressed, and taken possibly hundreds of miles away, and sown in a place where midge was never heard of before? And yet it does come. It is certain, or at least as certain as anything can be, that none of the chrysalises have been carried. How, then, is the insect perpetuated? Is it possible that the midge lays two kinds of eggs, one which becomes a worm at once, and runs its course, and the other small and invisible, which clings to the growing grain, and remains with it until it finally finds a favourable place for development? Another and more visible instance is found in the large black spiky caterpillar which frequents the various kinds of poplar, particularly that called the Tacamahac, or cotton wood; but it feeds more or less on all the poplar tribe. The butterfly from which the worm arises, lays its eggs on the underside of the leaf of the tree. The worms come forth in due time, and if not stopped, spread all over the tree and destroy the leaves; but if closely watched and removed they do but little injury. Still, though you may be certain that you have destroyed every worm, and although (the tree being deciduous and shedding its leaves) you are quite certain that all the leaves have been removed, and destroyed in the fall of the year, yet the following year, the same branch of the same tree will be again affected; and if you cut off the branch the preceding year before the worms have travelled at all, the nearest branch to the affected one will again be covered with worms in due season, and so will continue for many years, notwithstanding that every pains is taken to remove them before the insect transformations into chrysalis and fly are perfected. Here it would again appear that the fly must lay two kinds of eggs, one for immediate transformation, which is deposited on the leaf, and the other destined to remain for future development in favourable season, and to keep up the species, and which must be deposited on the bark of the branches. If this is the case, it is a fact not generally known, and one which deserves further research.

Our friends the robins, thrushes, and cat-birds are the great enemy of this poplar worm; chickens will not eat them; but every evening, just before dark, the neighbouring robins, thrushes, and cat birds make a raid on the trees so affected, and if they are not disturbed and frightened off, soon make a clean sweep of the insects. If the birds, however, are disturbed or frightened, they quit even this their favourite food, and then woe betide your trees for next year; for unless the worms are destroyed they come out the following year in immense numbers.

CUT WORMS.—People make a great fuss about grubs in the garden, eating off the Cabbage and Cauliflower plants, and it is very annoying to have to plant three or four times; but those who complain so bitterly are seldom aware of the habits of the grub. This insect is hatched under ground, and under the surface of the earth is his home; he is the offspring of a beetle, and comes forth in the spring and early summer. People who garden well, are of course very fond of planting their cabbages and cauliflowers in newly-dug ground; and so far as the plants are concerned it is the best way; but digging, although it kills the weeds, does not kill the grub. They come out all the same, whether the ground is clean or weedy. Now, if the cabbage plot has been well dug and cultivated in the spring, by the time the cabbage and cauliflower plants are ready to go out, the ground is covered with small weeds. The neat gardener kills all these, and plants his cabbages. Meantime out comes the grub, and as he has nothing else to eat, he goes straight to the nearest plant, and so from plant to plant, until he finishes the lot, unless he is caught and sacrificed in the meantime by the irate Gardener—and well may he be irate when he gives seventy-five cents a hundred for his cauliflower plants. But what is the poor grub to do? Live and eat he must, so long as he is allowed to exist, and if he has nothing else to eat, he must eat cabbage or cauliflower. We one year tried the plan of leaving the first crop of weeds undisturbed, and only moving a spade-full of earth for each plant. The plants grew just as well among the weeds as they did on the bare ground, and the grubs seemed to prefer the weeds, for the plants were left untouched. The trial was successful, and when the cabbages and

cauliflowers were large enough, the weeds were destroyed, and a good crop obtained; but the trial was too much for our orderly propensities, and we returned to the bare beds and the loss of plants by the grubs. There may, however, be a lesson in this for those who prefer cabbage plants to disorderly beds.

C.

NOTE BY ED. C. F.—We are much obliged to our correspondent for the account he has given us of his experience among insects, and, while we cannot but differ from some of his conclusions, we trust that we shall hear from him again on these and similar subjects.

With regard to the Wheat Midge, we can only account for its appearance in distant places by the supposition that the seed-wheat was brought to the new locality unthreshed, or else imperfectly cleaned; perfectly clean seed, free from any chaff or refuse, could not carry the midge, larva or pupa, nor could it convey the eggs. The eggs are laid by the parent midge-fly, when the wheat is in flower, in the interstice between the two outer chaff-leaves, as we may term them, and in any other crevice in the heads that it can find. The eggs hatch out in less than a week (the eggs, of course, cannot be worms, though worms come from them), and are so minute that they can hardly be noticed by the naked eye, while the shells must be even less discernible. As, then, the eggs are laid in the chaff before the grain is developed, and hatch out in a few days, they cannot be carried about with the mature grain; it is also contrary to nature for one fly to lay two sets of eggs, one to hatch immediately, the other not for months afterwards. The larvæ of the midge live while they are feeding inside the chaff and attached to the kernel; when they have done feeding, some descend to the earth and there complete their transformation, while others stay in the ears. In dry weather the larvæ become quiescent, and continue so for a long time without feeding, but revive again on obtaining moisture. Thus, then, they are most liable to be carried from place to place either in the ear or among the chaff.

The Caterpillar on the Poplar is that of the Common Camberwell Beauty Butterfly (*Vanessa Antiopa*, Linn.), of which we have given a description and figures in vol. III, 1866, page 247. It commonly infests willows as well as the different species of poplar. The reappearance of the caterpillars on the same trees from which others have been completely removed, is no doubt the result of there being more than one brood in the year, and also of the Butterfly possessing the power of hibernating. The last crop of butterflies in the autumn lives over winter, and comes out very early in the spring to lay its eggs. The suitable aspect and condition of a tree, or its branches, which caused its selection in the first instance, is probably the reason why it is chosen by successive broods; this is a circumstance, however, which we have not noticed ourselves.

The Grub that cuts off the Cabbage plants is commonly called a Cutworm; it is the caterpillar of a Moth, not of a Beetle. The plan of leaving weeds for it to attack is a new one to us, and will probably prove useful in many instances; the unsightly appearance they make is of course a drawback, though not to be compared to the loss of the plants.

### State Entomologist in Missouri.

We were much pleased at hearing from our friend Mr. C. V. Riley, of Chicago, that he had recently been appointed State Entomologist in Missouri. While we congratulate him on his appointment, we must also congratulate the State upon the choice that has been made, as well as upon the enlightenment and progress shown in the creation of such an office. Mr. Riley was for a long time Editor of the Entomological Department of the *Prairie Farmer*, and did good service in elucidating the natural history of many noxious and useful insects. We have no doubt that he will enter vigorously upon the duties of his new office, and that we shall ere long hear of many useful results of his labours.





## Salt in Hydrophobia.

To the Editor of the CANADA FARMER.

SIR.—On the 16th March, 1868, the following communication appeared in the *Daily News*, of Montreal, since which time it has been copied into the *Globe*, of Toronto, and various other papers in this Province, and several communications have been sent to other papers confirming the correctness of my sanguine anticipations that an antidote has at last been found for "rabies." I will beg it of you as a great favour if you will insert this, my letter, with the original communication to the *Daily News*, in your journal. The following is the letter referred to:

"Some months ago I was greatly interested in an account given to me by a friend who had been engaged in carrying lumber from Belleville to Oswego, U.S. The gentleman referred to is Capt. Paul, of this town, who is a very intelligent and well-informed man. Capt. Paul, some two or three years ago, while lying with his schooner at Oswego, discharging his cargo, observed a dog which belonged to a friend in the same trade, running at large, having apparently been left behind by his master. Capt. Paul took hold of the dog, with the intention of carrying it back to his master at Belleville, but the poor dog, having been feeding on any offal he could find in the streets, had become half famished and savage, and bit Capt. Paul's hand severely in the forefinger, and it soon swelled up. At first he did not anticipate any serious consequence from the wound, and had no reason to apprehend anything like "Hydrophobia." But the swelling gradually increased, and extended to the whole arm. A broad red streak extended on each side of the bitten finger up to the shoulder on the outside, and to near the armpit on the inside. The reader may readily suppose that Capt. Paul, though a brave and resolute man, became alarmed. Not knowing well what to do, the idea, I believe providentially, occurred to his mind, that "salt" might be an antidote in his case. He at once took a sharp pen-knife and scarified the finger all around the wound, which bled plentifully. He then moistened some common salt with vinegar, and rubbed it into the wounds perseveringly. As I said before, the red streaks had already extended to near the shoulder on both sides of the arm. Gradually the red streaks disappeared until they were confined to the hand. The application of the salt and vinegar produced a copious discharge of watery fluid from the wounds in the hand. He then applied a common flour poultice for some time, until he thought the danger was past. After reflecting on this occurrence for some time, I recollected a circumstance related to me by my wife, who is well known in England and Canada from her writings. Mrs. Moodie informed me several years ago, that a lady of her acquaintance, while on a visit to a friend at Gosport, opposite to Portsmouth, was severely bitten by a rabid dog in one of her hands, just as she was about returning in the ferry-boat to Portsmouth. The hand gave her much pain, but on immersing it in the salt water, the pain was greatly abated. In this manner she kept her hand in the salt water all the way back to Portsmouth, which is about a mile from Gosport. By this means the salt water proved an effectual antidote to the poison of the wound from the dog's teeth. Immediately after biting the lady, the dog bit a coachman and a boy, both of whom died of *Hydrophobia*. On referring to Dr. Watson's "Lectures on the principles and practice of Physic," p. 369, I find the following words while speaking of a case of *Hydrophobia*:—"One day, as Mr. Abernethy was going round the hospital, he saw and spoke to the boy, who said he thought himself getting well, but that he had that day an odd sensation in his fingers, stretching upwards his hand and arm." Going up the arm, Mr. Abernethy saw two red lines, like inflamed absorbents—they

doubtless were so. He affected to make light of the matter, ordering a poultice, and recommended the boy to take some medicine. Early the next morning Mr. Abernethy visited the ward, pretending he had some other patient there whom he wished particularly to see; and when going out again he asked the boy in a careless tone how he was. He said he had lost the pain, but that he was very unwell, and had not slept all night. Mr. Abernethy felt his pulse, told him he was a little feverish, as might be expected, and asked him if he was not thirsty. The boy said he was thirsty, and that he should like some drink. When, however, the cup was brought, he pushed it from him. He could not drink. In forty-eight hours he was dead."

This statement agrees so exactly, in many particulars, with Capt. Paul's description of his case, that I thought it worth while to transcribe it. The facts just stated point so decidedly to salt, or salt and vinegar, as an antidote to Rabies, that I would fain hope that the subject may be more thoroughly investigated by others better qualified to judge of the matter. I remember in England, during the prevalence of "Cholera Asiatica" in 1832, that by injecting salt and water into the veins of the arm, a brief abatement of the symptoms took place.

J. W. DUNBAR MOODIE,  
Late Sheriff, County Hastings."

Belleville, 1868.

NOTE by Ed. C. F.—We sincerely respect Col. Moodie's earnest desire to extend the benefit of what he considers a valuable discovery, and cheerfully give publicity to his communication, though we cannot feel the same confidence as he entertains in the efficacy of the remedy proposed.

FALL SOWING OF GRASS SEED.—John Sutherland, of Blanchart, writes:—"As we have a stiff clay soil to contend with, it is often very difficult to get grass seed to catch in spring in dry weather. I have been thinking if deferring sowing until fall would not answer better, as soon as the crop comes off."

ANS.—Under the circumstances, and indeed in many localities, Fall sowing would be advisable for grass.

## The Canada Farmer.

TORONTO, CANADA, MAY 1, 1868.

### Iowa Agricultural College.

SOME two years ago, we laid before our readers an account of the Royal Agricultural College, Cirencester, England, accompanied by an engraving of the building and surroundings. We have now much pleasure in submitting an illustration and account of a similar institution which has come into being in the young and flourishing State of Iowa. All must admit that the establishment, so early in its history, of a College presenting such noble proportions as that here represented, speaks volumes as to the intelligence, forethought, and energy of the population of the State just named. Such an example ought not to be lost upon the farming community in our Province and Dominion. We trust it may have some effect in stimulating us to effort in a like direction.

The idea of an Agricultural College for the State of Iowa was first broached in 1858, when a bill was passed appropriating \$10,000 towards the undertaking. The Trustees were appointed and empowered by this bill, who in 1859 purchased a farm of 648 acres and commenced to make improvements thereon. At the Legislative session in 1860, a vigorous effort was made to repeal the bill passed in 1858, on the grounds that a majority of the tax-payers did not demand the proposed institution, that the cost of such an enterprise would far exceed its benefit to the State, and that it being a time of monetary embarrassment, it was needful to exercise all possible economy in the expenditure of public funds. This effort came very near being successful, and was only defeated by the skillful tactics employed by the lead-

ing friends of the College, and by the wise resolve to ask no further appropriation from the public treasury until the dawn of more auspicious times. In July, 1862, Congress made its truly wise and liberal appropriation of land for the creation and endowment of Agricultural Colleges in the several States of the Union. Under this Act, 240,000 acres fell to the share of Iowa. The condition of the grant was, that any State accepting it must erect the necessary College buildings without using any of the proceeds of the lands for that purpose, within five years from the acceptance of the grant. On this condition Iowa accepted her share of the grant, and within the prescribed time erected the noble edifice represented in the accompanying illustration. Thanks to the stream of emigration which has been steadily flowing westward, and to the judicious manner in which the agricultural lands have been leased, sold, and the proceeds invested, the College is already realizing a yearly income of \$30,000. With the necessary buildings erected, and this handsome endowment secured, all is now ready for organization, and the choice of Presidents and Professors. To do this in the wisest and best manner possible, a Committee was last year appointed by the Board of Trustees to examine into, and if need be, visit other Agricultural Colleges already in operation, and report as to the course that should be resolved on. This Committee appears to have done its work very thoroughly, visiting most of the institutions in existence in the United States, from whose organization and plan of working anything useful could be learned. Their investigations extended through twelve States, and besides actually visiting a number of Colleges, they had personal interviews or correspondence with many of the leading agriculturists and horticulturists in various parts of the country. The observations made, and the conclusions arrived at by this committee, are embodied in an elaborate report, from which we quote the following outline of a plan of organization which they recommend to the Board of Trustees.

*First.*—That we need at least a President, four full Professors and two Assistants, in the organization; and that the President should be chosen at as early a day as practicable, that he may assist and advise in filling up the Faculty, and fitting up the College building.

*Second.*—That the following studies shall be included in the course of instruction, viz.: Natural Philosophy, Chemistry, Botany, Forestry, Horticulture, Fruit-growing, Animal and Vegetable Anatomy and Physiology, Geology, Mineralogy, Meteorology, Entomology, Zoology, Veterinary Art, Plain Mensuration, Leveling, Surveying, Book-keeping, Practical Agriculture, Landscape Gardening, with such other branches as may be added by the Faculty and Trustees.

*Third.*—A system of instructive labour on the farm, in the garden, orchard, nursery, and in such mechanical trades as may be from time to time provided for.

No student to be exempt from labour except in case of sickness or physical disability. The labour to be made instructive by being conducted and taught in the most thorough and systematic manner.

The students to be paid by the hour a reasonable compensation, which shall be applied upon board and other necessary expenses.

*Fourth.*—The Boarding Department to be under the supervision of a Steward selected by the Trustees, who shall make all purchases, furnish the supplies for the table, keep the accounts of his department under proper guards, and have general control of everything pertaining to the Boarding Hall.

*Fifth.*—The admission of students to be on the basis of one or more for each Representative in the popular branch of the General Assembly; to be selected in a manner to be fixed hereafter, subject to such examination of qualifications as to education and moral character as may be determined by the Trustees and Faculty.

*Sixth.*—Politics and sectarianism of every description to be carefully excluded, and never to be permitted to control the selection of students or members of the Faculty, and under no circumstances to be taught in any department of the College.

*Seventh.*—The exercise of great care in the selection or purchase of apparatus, instruments, furniture and fixtures, that all be of the most approved style; and that appropriations be at once secured for laboratory, library, cabinets, &c.

*Eighth.*—That three or four non-resident Professors—men of eminence and great attainments in particular sciences, such as Geology, Natural History, Chemistry, Horticulture and Fruit-growing,—be engaged to deliver each a series of lectures to the students, and such others as may desire to hear them, during each year, that the College may have the benefit in this way of the best talent in the country."

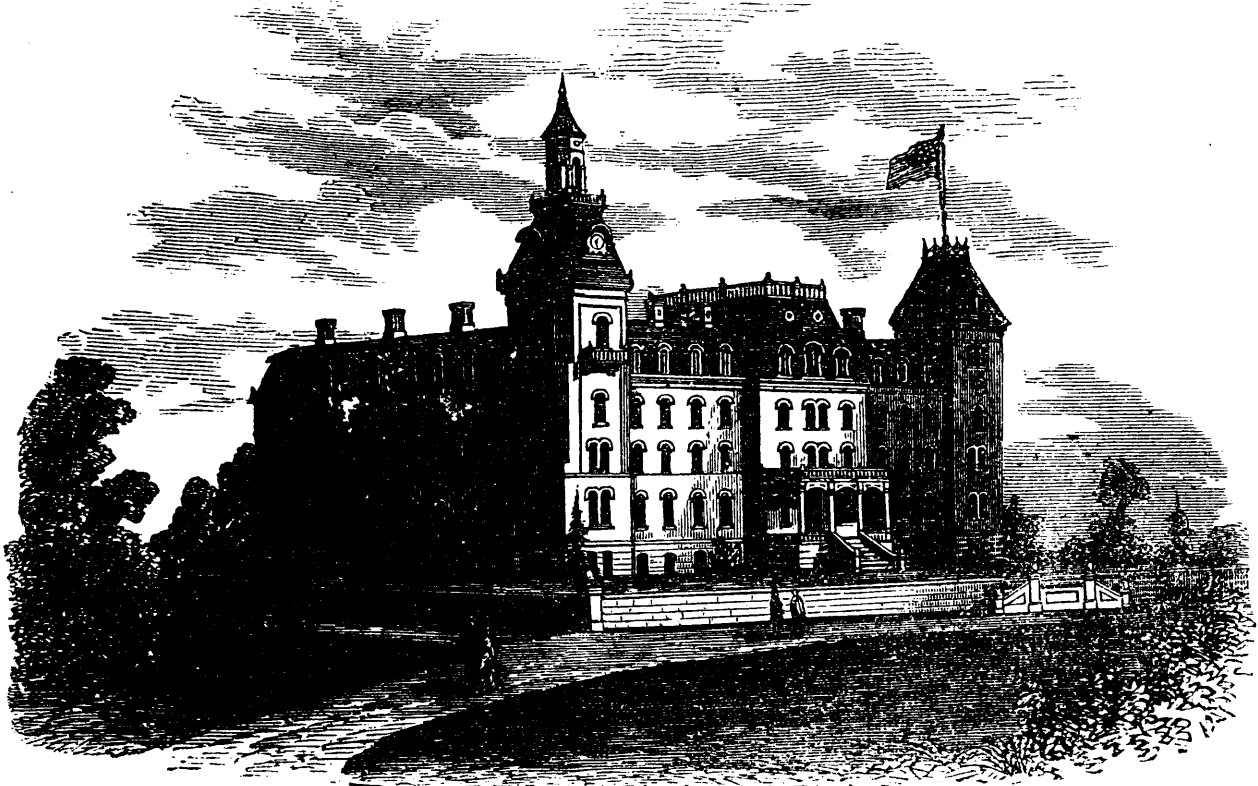
among the necessary institutions of growing civilization, destined to supply the great desideratum so often felt by the sons of toil, that will enable the most lowly and obscure of farmers' sons to secure a thorough education suited to their wants and avocations."

### The New Agricultural Mechanical and Industrial Museum.

At the late meeting of the Local Legislature, power was given the Commissioner of Agriculture and Arts, under the provisions of the "Act for the encouragement of Agriculture, Horticulture, Arts and Manufactures," to establish a museum illustrative of these industrial pursuits, and also a library in the same departments. Since that time the practical working out of this scheme has been commenced and although little has as yet been actually ac-

and will, when received, be placed in the large building formerly used as the library, a building, quite capable of accommodating all the practical inventions brought into use for some time to come. Thus, it is expected, a benefit will accrue to the manufacturer, by having his implements placed before the eyes of parties in want of them, and by drawing their attention to the latest improvements in the line of their wants.

While it is intended to make the collection as full and perfect as funds and the disposition of manufacturers will allow in reference to Ontario, so, not only to serve the primary end stated above, but also that visitors and intending settlers may be able by a careful inspection to form a correct idea of its industrial state and capabilities, efforts will be made to collect materials from the sister Provinces, the mother country and the United States. By this means not only will comparison to a degree be



IOWA AGRICULTURAL COLLEGE.

The Committee made it a special subject of enquiry whether it was desirable to introduce the manual labour system into their College, and although they found it had not worked so well as was expected in some institutions where it had been tried, yet they were thoroughly convinced it was a most important feature, and one that, under wise management, could not fail to be of most beneficial influence. On this point they dwell at considerable length in the body of their report.

In regard to the appointment of President and Professors, the Committee recommend the choice of young men who have studied under eminent teachers like Agassiz of Cambridge, Dana and Johnson of Yale, Chandler and Dwight of Columbia, who have a name to make for themselves, and who are able and willing to work at the foundations of industrial education so as to ensure a fabric of strength and permanence to the State.

The foregoing details have been culled from the "Second Report of the Trustees of the Iowa College," dated Jan. 27, 1868; a pamphlet of 96 pages, which we have read with very great interest. We cannot better conclude our summary than by quoting a sentence which, along with much more in the Report, has our fullest endorsement. "Agricultural Colleges are now

complished, the plan adopted offers an insight into the manner in which the requirements of the Act are being complied with. As a nucleus, the library of the late Board of Arts and Manufactures has been transferred to one of the rooms occupied as the department of the Commissioner, and about 1,500 volumes of technical works placed on the shelves. These principally refer to the industrial sciences, and will be increased by works on agriculture and horticulture, in order to render it as widely useful as possible. The works issued from the English patent office, embracing a very large collection, are among the books on the shelves, and arrangements have been made to secure the regular receipt of these as they are issued. This, it may be stated, is all that has yet been actually accomplished towards carrying out the provisions of the Act, but the department, without having hitherto carried much into effect, has betaken itself to numerous expedients to attain the end in view. Professor Buckland, who under the name of Secretary, really occupies the position of deputy Commissioner, has the working out of the scheme in hand. He has already placed himself in communication with the manufacturers of Ontario and the adjoining Provinces, soliciting specimens of their principal mechanical inventions. These may either be loaned or presented to the Museum,

afforded, but opportunity offered for suggesting improvements and encouraging advancement. Grain and cereal products of all kinds in the straw from different sections of the Province will be collected as specimens, in order to further another primary end in the formation of the museum—the promotion of immigration and the fostering of the material interests of the Province. The freight on all such specimens is to be paid by the department in every instance, where they are thought worthy the outlay for the purposes contemplated. Communication has been established with the Department of Agriculture at Washington, and arrangements made for the exchange of periodicals issued from that office with those published on the same subject under the supervision of the Local Government.

Last week, we understand, Professor Buckland left for Europe to prosecute inquiries, ascertain facts, and complete such arrangements as will tend to the advancement of agriculture and the industrial arts in the Province. His instructions are of a very general character, inasmuch as the Commissioner has not thought that he can bind his deputy by detailed orders, and has almost given him a *carte blanche* on which to act. Professor Buckland, under these instructions, intends placing him-

self in communication with the leading agriculturists in the United Kingdom with a view to receive suggestions as to the progress of the art, inspect machinery, and receive specimens both of grain and implements for the Museum. Benefits are expected to be derived from an observation of the Russian wheat, a hardy species adapted to our climate, and of this and other kinds Mr. Buckland expects to bring specimens for testing, which, if found suitable, will be more largely imported for sale to the farmers generally. The above sketch affords an idea of the scheme originated in compliance with the Act so far as it has been thought practicable to carry its provisions out. Much that is permissible under its provisions, as for instance, a horticultural museum, a museum of insects and birds, beneficial or the reverse to the interests of the farmer, will have to be left for future action. It may be well to state, for the information of intending contributors, that it is not an animal museum that is being formed, and that nothing will be received that has not a practical bearing on the industrial arts. Various offers of animals and birds not indigenous to the country, have been received but refused.

By a circular lately issued from the department, the societies embraced within the statute are asked to co-operate towards the attainment of the object contemplated, by forwarding specimens. In this way it is hoped that a sufficient number will be received to open the museum by the next meeting of Parliament.

The Government has also set to work in another direction to meet the objects of its organization. Mr. Edwards, formerly Secretary to the Board of Arts and Manufactures, and now occupying the position of Accountant and Treasurer, has addressed a number of circulars to the different Mechanics' Institutes throughout the Province, with a view to future action. Much good can be done by preparation in this direction; but what form this will take, further than putting them in the position of being entitled to the Government grant, does not appear as yet.

### The Free Land Grants.

THE Commissioner of Crown Lands has published an announcement that the lands in certain townships in the district of Muskoka, and upon Parry Sound, are open for location, under the Free Grant and Homestead Act of the Legislature of Ontario. The reasons given by Mr. Richards for beginning the free grant experiment in the Muskoka district are, that there is more good land there than in any other part of the Province now vacant—that the land offered is easy of access either by way of Collingwood and Parry Sound, or by way of Barrie and Lakes Simcoe and Muskoka, and that there are no timber licenses issued for that district, so that there will be no contention between lumberers and settlers. The Crown Lands Agent at Parry Sound is Mr. N. P. Wakefield, to whom applications for locations in the townships of McDougall, Foley, Humphrey, and Cardwell may be made. Parry Sound is on the North Shore of the Georgian Bay, less than a hundred miles from Collingwood, and may be reached from that place once a week by steamer. From Parry Sound the townships in question are reached by the colonization roads. Two of the townships are adjacent to the village of Parry Sound, while the others are not very distant. The colonization roads are the Great Northern, the Nippissing, and the Parry Sound roads. The other free grant lands are to be applied for at the office of Mr. R. J. Oliver, Crown Lands Agent at Bracebridge, on the Muskoka river. The townships of which he has charge are Watt, Stephenson, Brunel, Macaulay, McLean, Muskoka, and Draper. The route to Bracebridge is from Toronto to Barrie or Bell Ewart, by the Northern Railway; from thence to the river Severn by steamer; from the river Severn to Gravenhurst, on Lake Muskoka by stage; from Gravenhurst to Bracebridge by steamer or by the Muskoka road, and from Bracebridge to the respective townships by the Muskoka, Peterson and Parry Sound roads. The distance from Barrie to Bracebridge is about seventy miles, and Bracebridge is in the heart of the free grant district. In the winter, communication with both Bracebridge and Parry Sound is by stage from Barrie.

The Commissioner of Crown Lands has issued lists showing the lots open for location in each of the townships within the free grant district. There are in most of the townships a large number of broken lots. In some cases the lots contain only two or three dozen acres each. The law forbids the allotment of more than 100 acres to any settler, though the Commissioner permits a man who has taken up a free grant lot to buy another lot of 100 acres at 50c per acre—subject to the same reservations and conditions as the free grant lands, except that the actual residence and the building of the house will not be required.

The locatee of a free grant lot must be eighteen years of age, or upwards, and must make an affidavit setting forth that he or she is of the required age, has not any other free grant land—believes that the land applied for is fit for settlement and cultivation, and not chiefly valuable for mines, minerals or pine timber—desires the location for actual settlement, and not for the use or benefit, directly or indirectly, of any other person, nor for the purpose of obtaining the pine trees, or of obtaining gold, silver, copper, lead, iron or other minerals, or quarry of stone, marble or gypsum. Having sworn to all that, the locatee must perform settlement duties for five years. He must reside upon the place for that time, clear and put under cultivation two acres every year, and fifteen acres during the five years. During that time he must build a house, twenty by sixteen feet. The locatee is allowed a month to get upon his lot after it is located, and may be absent six months in any year without forfeiting his residence. If he fails in the performance of the settlement, all claim to the lot ceases.

The pine trees and all the mines and minerals upon the lots are reserved to the Government, except that the locatee may cut such trees as may be required for fencing, building, and fuel, and may also cut and sell all pine trees that require to be removed in the process of clearing—though in the latter case the trees shall be subject to the timber dues payable by lumbermen. After the patent issues, all the trees become the property of the patentee.

On the death of a locatee, his right and interest shall be vested in his widow, if he leaves any, during her widowhood, though she may elect to have her dower in the land instead. Neither the locatee, nor any one claiming under a locatee, can alienate the land or any interest in it, except by will, until the patent is issued. After the issue of the patent, no alienation or mortgage shall be valid for twenty years, or within the life-time of the wife of the locatee, unless by deed, and unless she be one of the granters and execute the deed in the manner required when married women convey their real estate. No land located under the free grant law is to be liable for debt during twenty years after the date of the location, except the debt is secured by a valid mortgage, but this exemption is not to interfere with the collection of taxes.

Such [is] the free grant law. Our view, that it should have been made more liberal, has been expressed already, and we reiterate it here. We shall not cease to agitate for future modifications in the Act that will be more to the advantage of the settler. Meantime we hope these lands will be promptly taken up. A large proportion of them are, we understand, of good quality, and their distance from market is not very great—not so great as in many cases where prosperous settlements have been formed. The facilities for travel to the free grant townships are already good—far better than they were in many parts of the western Peninsula when the pioneers went into it—and those facilities will every year become better. The settlers must take the land and the system together, make the best of them, and live in hope that more enlightened and generous legislation will put them in even more advantageous circumstances, by and by, than the Act provides for in its present shape.

### New Agricultural Exchanges

THE RURAL WEST.—This is a monthly agricultural, horticultural, mechanical and family journal, published at one dollar a year, at Quincy, Ill. It is not equal to the *Prairie Farmer* or *Western Rural*, but is we suppose of local value in the western portion of the huge prairie state.

THE DIXIE FARMER.—This is a weekly, published "way down in Dixie," at Columbia and Nashville, Tennessee. It is the same size as the *Country Gentleman*, but printed in larger type. The first number gives promise of excellence and usefulness. Its motto is a first-rate one, "Pray to God and keep the ploughs agoing."

THE RURALIST.—A monthly, with a very odd cover of dark, brown, glazed paper, lettered in bronze or gilding, which rubs off very quickly, leaving the words dim, if not illegible. It is published at Cincinnati, is chiefly horticultural, and appears to make grape-culture and wine-making specialties.

THE HOUSEHOLD.—A very neatly-printed, well-got-up monthly journal, "devoted to home interests." Though not an agricultural journal, it devotes considerable space to house and window gardening, while its general contents are fitted to be very useful in all farmers' homes. Published at Brattleboro', Vermont. Price \$1 a year.

### Literary Notices.

THE GALAXY.—We have received from the publishers, Messrs. Sheldon & Co., of New York, a copy of their popular monthly periodical, the *Galaxy*, which has already been before the public for four years, previous to the issue of the fifth volume, now in course of publication. The magazine contains a large proportion of the usual staple of popular literature, in the form of novels and tales, the tone of which appears to be unexceptionable. Besides this, are articles of a more solid and instructive character, such as, for example, "Five Years in Japan," "Words, and their uses," and a miscellany of useful and interesting information. Well executed illustrations enliven its pages, and aid in rendering the work an attractive, entertaining and useful contribution to American periodical literature.

The subscription price of the *Galaxy* is \$4 a year. The address of the publishers is 498 and 500 Broadway, New York.

THE AMERICAN SHORT HORN HERD BOOK.—The eighth volume of this important publication lately came to hand. The general character of the work is so well known to all Short Horn Breeders on this side of the Atlantic, that it is unnecessary to describe it at length. The present volume consists of nearly 600 pages, and records the pedigrees of American Short Horn Bulls from No. 6381, in the 7th Vol., to No. 7438, and of about 1900 cows and heifers. It also contains ten or twelve portraits of animals, all, with one or two exceptions, exceedingly well executed. The work altogether is got up in the usual neat and creditable style. It is published by Lewis F. Allen, Esq., Black Rock, Buffalo, N.Y., price \$6 by Express, or \$6.50, by mail, postage paid when sent. The book is one which no Short Horn Breeder in the United States, or even in Canada, if extensively engaged in the same line, can well afford to be without; and Mr. Allen is entitled to the hearty thanks of the admirers of that valuable race of cattle, for his industry and perseverance in continuing to publish so many volumes.

### Agricultural Intelligence.

#### The Rev. Patrick Bell, LL. D.

This reverend gentleman, to whom the oldest practical agriculturist in Scotland, the Marquis of Tweeddale, awards the palm of having designed the only reaping machine that he has ever found worth using, was born in 1800, and has been for many years the minister of the parish of Carmylie, in Forfarshire—a living of only £150 per year. We have from time to time, during the progress of the £1,000 testimonial, adverted to the circumstances under which Mr. Bell's invention was perfected; how, forty years ago, he arrived in Edinburgh with a model of it not much

bigger than a rat trap under his arm, to show to the Highland Agricultural Society authorities; and how he laboured at it secretly in an out-house, till the advent of that happy moonlight night when he and his brother got the horse out of the stable, harnessed it to the machine, and laid the corn-stalks low at last. This was in 1826-27; and the machine, which is still preserved as a trophy, was worked continuously up to last year. Mr. Bell had laboured, and other men, Americans more especially, had entered into his labours, and yet while thousands of pounds were saved annually by his machine, even Scotland had given no public recognition to her benefactor. Mr. Scott Skirving, of Camptoun, near Drem, introduced the subject to the East Lothian Agricultural Club on Oct. 5, 1866, and in the following January at the meeting of the Highland and Agricultural Society. Both acknowledged the justice of a claim which had been too long overlooked, and the society not only subscribed £100, but gave valuable official aid in the collection of subscriptions, which was equivalent to nearly £100 more. The clear sum collected still falls short of £1,000 by about £120, and it is to be hoped that English agriculturists, who owe as much as their Scottish friends to Dr. Bell's invention, will not hold back as they have hitherto done. Mr. Skirving was met with plenty of counter claims both in England, America, and Scotland; but the makers all seemed to be in the most blissful ignorance of the fact that there were claims long antecedent to theirs. One and all, with the exception of the American, had sunk into oblivion, because they were utter failures. The earliest of the American were copies from Mr. Bell's, a picture of whose machine had been given in the *Quarterly Journal of Agriculture* (1828), of which several copies were found to have crossed the Atlantic. Pliny and other Roman writers on agriculture mention some machine of the kind, which tore off the heads of corn and left the straw as valueless. In 1785-6 Arthur Young takes up the tale, and describes a machine of the same kind, and so do Mr. Capel Lofft, and Mr. William Pitt in his "Survey." In 1799 one Boyce took out a patent; in 1800, Richard Mear; in 1803, Hawkins, of New Jersey, U. S.; and in 1805, Plunket, of Depford, all produced machines; and in 1806, Mr. Gladstone, of Kircudbrightshire, got a premium for one from the Highland and Agricultural Society. Mr. Kerr, of Edinburgh, received several small grants from the same source; and Mr. Scott, of Ormiston, East Lothian; Mr. Joseph Mann, of Cumberland, and Mr. Ogle, of Alnwick, all tried their hands in 1815, 1820, and 1822, respectively. Their fame was, however, so fleeting that Mr. Bell had never even heard of any machine of the sort, except that made, amid his other countless activities, by the late Mr. Smith, of Deanston. In consideration of his invention, the Senate of the University of St. Andrews recently conferred on Mr. Bell the degree of Doctor of Laws.—*Exchange.*

### Fourth Annual Sheep and Shearing Exhibition.

We have received from Mr. J. T. Nottle the following Prize-List, intended for the Fourth Annual Sheep and Shearing Exhibition, to be held in the City of Hamilton on the 25th May, the day appointed for the celebration of the Queen's Birthday:

#### PRIZE-LIST FOR SHEEP AND SHEARERS.

(Open to the World.)

CLASS I.	
Best Aged Leicester Ram	8 00
Second do do	4 00
Third do do	2 00
Best Yearling do	8 00
Second do do	4 00
Third do do	2 00—\$28 00
CLASS II.	
Same prizes for Cotswolds as in Class 1.	28 00
CLASS III.	
Same prizes for Lincolns as in Class 1.	28 00
CLASS IV.	
Same prizes for Southdowns as in Class 1.	28 00
CLASS V.	
Best Merino Ram of any age	8 00
Second do do	4 00
Third do do	2 00
CLASS VI.	
Sweepstakes open to all other Classes.	
N. B.—An Entry Fee of \$1 on each Sheep to be paid in this Class only.	
Best Ram of any age or breed	16 00
Second do do	12 00
Third do do	8 00
Fourth do do	4 00

#### PRIZE FOR FLEECES.

Best Fleece according to value	8 00
Second do do	5 00
Third do do	3 00
Fourth do do	1 00

N.B.—Sheep and fleeces to be unwashed, and the sheep to be sheared on the ground.

#### PRIZES FOR SHEARING.

Best Shearer on sheep of any age	20 00
Yearling Aged	
Second best shearer on	8 00 8 00
Third do	5 00 5 00
Fourth do	3 00 3 00
Fifth do	2 00 2 00
To the Shearer who binds the neatest fleece	1 00

N.B.—Sheep to be unwashed. An entry fee of 50 cents to be paid by all shearers competing for the first prize of \$20.

H. J. LAWRY, President.  
J. T. NOTTLE, Secretary.

### New Material for Paper.

The high cost of rags for the manufacture of paper has led to long-continued and costly attempts to substitute other articles, such as wood, straw, bamboo, cornstalk, husks, etc.; but, owing to the great expense for chemicals, and the machinery necessary for converting the materials into pulp, the cost of paper has not, to any considerable extent, been reduced. It is now alleged that the okra plant, which grows luxuriantly in all parts of the United States, possesses all the requisites for making every description of paper, from the common wrapping to the finest book or bank-note paper, either sized or non-sized, without the addition of any other material whatever. It is claimed that this has been practically demonstrated, and that the discoverer has, within the past few months, manufactured by the most simple and economical process, in different mills, a variety of samples of papers which, although made under very unfavourable circumstances, possess all the characteristics of paper made from linen rags and manilla rope. If this should turn out to be true, it cannot fail very greatly to affect the price of paper, as the okra can be raised cheaply and abundantly.—*N. Y. Ind.*

### Veterinary Department.

#### Thread-Worms in the Air Passages of Lambs

THE North British *Agriculturist* has the following short notice of this affection:—"Young sheep are described as coughing vehemently, falling off in condition, in some instances suffering also from diarrhoea, and unfortunately dying in considerable numbers. An Oxfordshire correspondent states that his loss from this cause has nearly reached one hundred out of a flock of about five hundred. Enquiries as to remedies are, we perceive, made in the *Mark Lane Express* and various other journals. Many articles are used as palliatives, various patent nostrums are highly spoken of, but nothing that we have seen used proves so effectual as the mixture of oil of turpentine, linseed oil, and lime water. For sheep, now ten or eleven months old, a teaspoonful of the turpentine, and one ounce each of the other two ingredients will suffice. The dose given in the usual way, from a bottle by the mouth, should be repeated on two or three consecutive mornings. If after a few days' respite any of the sheep still cough, another dose or two should be administered. Inhalation of chloroform or of sulphur fumes has been tried, and found very serviceable, but for ordinary cases where many sheep are affected these remedies are not so convenient as the more familiar turpentine drench.

RINGBONE.—A subscriber asks "Whether Biniodine Ointment, or Iodine, is a sure remedy for Ringbone on horses? We have tried the blistering ointment according to the direction of a veterinary surgeon without effect. Is a cure ever effected by cutting out the ringbone, as it is called?" Biniodide of mercury, made into an ointment with lard, is one of the best applications that can be used for Ringbone or other bony enlargements. Ringbone, however, is a disease that often proves very difficult to treat. Cutting out the ringbone, as it is termed, is a barbarous operation, and very often renders the horse totally useless.

### The Apiary.

#### Hiving Bees.

WHEN bees are allowed to swarm naturally, everything should be in readiness before the swarming season arrives, so that when swarms come off there may be no confusion or difficulty in hiving. Hives should be kept cool, and if old, they should be well cleaned. If a swarm is seen issuing from a hive, do not get in a "flurry," but keep cool. Do not be so foolish as to blow horns, ring bells, and scare your bees to the woods; but stand quietly and watch their movements, and nineteen times out of twenty they will cluster all right. As soon as they have settled, prepare to hive them, an operation which may be successfully done, and without the least difficulty, as follows:—

First.—Bring a dish of cold water, and with the hand or a whisk of grass sprinkle the cluster well. This will make them perfectly quiet and easy to handle. Bring out a table, or if that is not convenient, spread a cloth or boards upon the ground, and if they are to be hived into a common box or straw hive, set it upon the table or place prepared for it, raise up one side an inch or more, and put under a stone or chip to hold it. Then shake your bees into a pan, basket, pail, or any dish that will hold them, and turn them down near the hive, and they will at once commence to enter. If it is desirable to have them enter faster than they are naturally inclined to do, take a wing and gently wing them in. As soon as all or nearly all are in, the hive should be carried to its stand, and well shaded if the sun is shining. New hives or newly painted hives should be shaded for several days, as bees cannot stay in an over-heated hive. If the bees cluster upon a limb, from which it would be difficult to shake them, the limb may be cut off with a saw and laid near the hive; the bees will soon leave and enter. Sometimes bees will cluster upon the body of a tree, when it is more difficult to get them off without irritating them. They should be well sprinkled, and very carefully brushed off with a wing or quill feather into a dish, and carried to the hive as before stated. An inexperienced person or novice, should in this case wear a bee-protector. It will give them courage, and they will move more carefully.

This plan of hiving will be found much better than the old method of shaking the bees into a hive, and then turning it over upon a table or board. I have known the queen to be killed by turning over the hive, and more or less bees are always killed in the operation. If moveable comb hives are used, they should be so constructed that the bottom board may be dropped at the rear of the hive for the purpose of putting in the bees when hiving. Swarms should never be allowed to stand where they are hived until evening, as is the practice with some, but should be moved at once to their stands, as some of the bees will go into the field to work in ten minutes after they are hived; and if left until evening large numbers will have commenced to work, and having marked the spot will return there the next day, and not finding the hive, will wander about, and many will be lost. Second swarms are generally far more irritable than first or top swarms; hence, these are far more likely to sting; but cold water will soon quiet them, and they may then be hived with safety.

#### A Bee Flower.

AN excellent bee plant is the *Phacelia tanacetifolia*, or Tansy-leaved Phacelia. It is a tolerably hardy annual, some seeds of which were brought into this country from California in the year 1832. Although but little cultivated, it is remarkable for its elegant foliage and fasciated spikes of violet flowers, which continue to blow during the greater part of the summer and autumn months, but chiefly in June, July, and August.

This plant is easily raised from seed, which should be sown in the spring in ordinary garden ground, and it requires no protection after the severe frosts are over. Besides being a great acquisition to apiarians and to amateur bee-keepers on account of the special attraction of its numerous flowers for bees, it is highly ornamental, and deserves to be generally grown in flower gardens, and in the neighbourhood of apiaries.—*Cor. Cottage Gardener.*

## Poultry Ward.

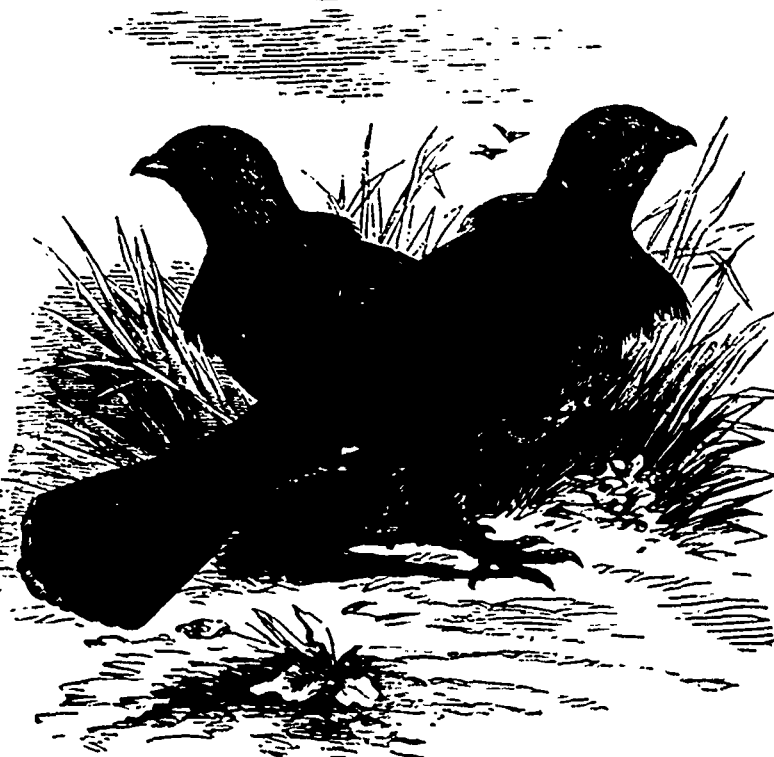
## Spring Exhibition of Poultry.

THE third Exhibition of Poultry and Pigeons, under the auspices of the Ontario Poultry Association, was held in the Agricultural Hall, on Wednesday and Thursday, the 15th and 16th of April, and was altogether an excellent show, in some respects superior to either of its predecessors. The spacious hall in which the exhibition was held is well adapted for the purpose, and enables the visitor to see the birds to advantage, whatever the state of the weather; and it is no small consideration with owners of fowl that their property have all the security and comfort of complete shelter in a spacious and well ventilated apartment. The birds were assiduously tended, and provided with all that they needed during their temporary captivity. To judge by their lively appearance and their clamorous jubilation, they must even have derived some pleasure from the excitement of the occasion. The show was equal to any previous exhibition as regards the number of entries, there being over 270 for adult birds. Some of the pens, though not many, were vacant, in consequence of the non-arrival of the expected occupants. The pens were well arranged, the classes kept distinct, and shown for the most part in an admirable light. On the left as the visitor enters the hall, were displayed a magnificent collection of those giants among poultry, the Buff and other Cochins, and those who are at all familiar with these exhibitions need hardly be told that Col. Hassard carried off the honours in this class, though he by no means stood alone, but on the contrary, won his honours in the face of a larger competition than usual. His birds were marked at low prices considering the quality of the stock, an indication that they were offered for sale, in consequence, we understand, of their owner's early return to England, an event which the association must sincerely deplore. Col. Hassard also showed some very beautiful white Cochins. Next to these were a fine collection of light Brahma Pootras, which for size, feathering, and general carriage, were splendid specimens of their kind. Messrs. Lamb, McLean,

R. A. Wood and Withers, were the principal exhibitors in this class, and others showed birds of great merit. The dark Brahmas were represented by only a few specimens, but among them a splendid pair of imported birds from England, exhibited by Mr. Varley, of the 13th Hussars, formed quite a noteworthy feature of the show, and distanced competition.

Of coloured Dorkings there was a good display; the honours of the class being divided between Messrs. Lamb and Peters, of London. The latter gentleman, we think, deserved even a higher distinction than was awarded to him for two splendid pair of Grey Dorkings. It is only just to him and Mr. Bogue, of London, to state that early in the spring, some of their finest birds were stolen, and the specimens which, with considerable spirit and at great expense, they sent to such a distance for exhibition, were, in consequence, not so numerous or perhaps so fine as they could have shown had they not sustained this serious loss. Two other London Poultry fanciers, Mr. J. W. Bailey, and Mr. J. Plummer, also enriched the exhibition with several excellent specimens in various classes. Indeed, the London exhibitors carried off the largest share of the prizes, to the amount of thirty against twenty-three awarded to Toronto.

The coloured varieties were succeeded by a few beautiful white Dorkings, in which Mr. Plummer and Mr. Bogue took the lead. The Spanish classes were pretty well represented, but scarcely equal to some previous exhibitions of the class. Toronto here won the honours in the persons of Messrs. Birrell and James McGrath. The different varieties of game, apparently a favourite class, to judge by the number of specimens exhibited, were also fairly represented. Some of the pens were, however, not properly matched, and excellent birds were disqualified on that account: but altogether there was a fine show of these noble-looking fowls. Mr. J. A. Ellis, of Toronto, was the successful exhibitor of Derby game. There were some fine duckwing specimens, in which class Mr. Ellis and Mr. Plummer, of London, gained prizes. Mr. James Beswick, however, showed specimens which did not seem, to say the least, at all inferior. The most noticeable of the remaining varieties of game fowl were a beautiful pair of white birds, exhibited by Mr. A. M. Howard. The different varieties of Hamburgs were well displayed on each side of the entrance to the Hall, in the upper tiers of pens, where their elegant forms and exquisitely



RUFFED GROUSE.

beautiful plumage were seen to advantage. Without entering into particulars, which the prize list below will furnish, we may say that Mr. Howard, Mr. Lamb and Mr. Peters, exhibited the most deserving birds in these classes. In the miscellaneous class, Mr. Millington and Mr. Joel Wootton had some fine black Hamburgs. The Polish variety, forming a striking group in consequence of their showy top-knots, occupied a considerable space, and among them were birds of very excellent quality. Mr. Lamb was the principal exhibitor—Mr. McGrath, however, taking the first prize in one variety, and showing good specimens in others, as did also Mr. J. E. Withers, and Mr. James Millington.

The French fowls were entirely unrepresented, and perhaps the varieties we have amongst us are really best adapted for the Canadian climate, though in England the Houdans especially are gaining considerable favour.

There was nothing very remarkable among the Bantams; indeed, some of the prizes taken were scarcely worthy of the honor. Where judges have to make choice only from an inferior lot, they should withhold a prize altogether, unless there is merit sufficient to deserve the award.

From bantams to turkeys, following the order of the prize list, is an extreme, and perhaps suggestive transition. There were only a few of these noble birds exhibited, some of them being specimens of the wild variety, for a fine pair of which Mr. Goldie, of Guelph, gained the first prize. The next class, Aylesbury ducks, had only very few representatives. Mr. Lamb's birds well deserved the first prize. Many exhibitors are very naturally averse to disturbing their birds as the season of incubation approaches, and this was one reason, no doubt, why there were not more of these birds in the exhibition. There were a few fine specimens of Rouen and other ducks, and but few geese, though some of these were noble birds, and a pair of African geese, shown by Mr. Lamb, are a novelty, we believe, in the Province.

A miscellaneous collection of birds concludes the poultry classes. Amongst them were a pair of beautiful peacocks, shown by Mr. Denison; a pair of English pheasants, imported from the mother country by Mr. James Beswick; white Guinea fowls; and a pair of ruffed grouse, an interesting variety of our Canadian game birds, was shown by Mr. Feeley, of Hamilton. Having on previous occasions illustrated the different varieties both of poultry and pigeons, we have, in the present instance, selected these birds for illustration, and the accompanying engraving gives an excellent representation of them. This species of Grouse is widely distributed over the American continent, their range extending from the 59° parallel to the Gulf of Mexico. The ordinary length of the bird is about 18 inches. The whole plumage is a beautiful mixture of brown and chestnut and grey, relieved by the black tufts which form the ruff upon the neck, and a broad band of the same colour at the extremity of the tail. The female is generally of a lighter colour than the male; the ruff, though present, being smaller, and of a duller black. It only remains to notice the pigeons, of which there was a beautiful display. In the Carrier and Pouter classes, Col. Hassard had few competitors; and his birds could doubtless carry off the prizes in a much more numerous exhibition. They showed to great advantage, and presented a remarkably pleasing group. These birds were also, like the Cochins, set down at temptingly low prices. In the remaining classes of pigeons there were many creditable specimens, and Mr. McGrath and Mr. Bailey especially won deserved honours.

During the two days of the exhibition there was a fair number of visitors. Among the rest, His Excellency the Lieut.-Governor showed his interest in the objects of the association by making his appearance in the Hall, and inspecting the birds. Many of the specimens changed owners at very good prices. The highest sum paid for any single pen was \$55 for a pair of Dark Brahmas, imported from England, and exhibited by Mr. Varley, of the 13th Hussars. These remarkably large and handsome birds were purchased by Mr. Peters, of London. Col. Hassard sold all his Cochins exhibited, which will now become dispersed in various parts of the Province.

The Judges on the occasion were Messrs. Van Ingen, of Woodstock; A. Riddell, J. Jones, and C. Martin, of Toronto. These gentlemen had no easy task to perform, and deserve great credit for the careful, patient, and impartial manner in which they discharged their onerous duties. On the whole, we believe, though some exhibitors would unavoidably be disappointed, that their awards gave general satisfaction.

PRIZE LIST.

POULTRY.

- CLASS I.—COCHIN CHINA (BUFF OR CINNAMON.)  
 First prize.....Lt. Col. Hassard.  
 Second prize.....Lt. Col. Hassard.  
 Two pens highly commended, belonging to same exhibitor.
- CLASS II.—COCHIN CHINA (WHITE.)  
 First prize.....Lt. Col. Hassard.  
 Second prize.....Lt. Col. Hassard.  
 Highly commended.....Lt. Col. Hassard.
- CLASS III.—BRAHMA FOOTKA (LIGHT.)  
 First prize.....Joseph Lamb, London.  
 Second prize.....T. McLean, Toronto.  
 Highly commended.....T. McLean, Toronto.
- CLASS IV.—BRAHMA FOOTKA (DARK.)  
 First prize.....W. Varley, 13th Hussars.  
 Second prize.....R. A. Wood, Toronto.
- CLASS V.—DORKING (COLOURED.)  
 (First prize given by Hon. G. Brown.)  
 First prize.....Joseph Lamb, London.  
 Second prize.....J. Peters, London.
- CLASS VI.—DORKING (WHITE.)  
 First prize.....J. Plummer, London.  
 Second prize.....J. Bogue, London.
- CLASS VII.—SPANISH.  
 First prize.....T. S. Birchall, Toronto.  
 Second prize.....James McGrath, Toronto.  
 Highly commended.....T. S. Birchall.
- CLASS VIII.—GAME (BLACK-BREADED AND OTHER REDS.)  
 First prize.....J. A. Ellis.  
 Second prize.....J. A. Ellis.
- CLASS IX.—GAME (DUCKWING AND OTHER BLUES AND GREYS.)  
 First prize.....J. Plummer.  
 Second prize.....J. A. Ellis.
- CLASS X.—GAME (ANY OTHER VARIETY.)  
 First prize.....A. M. Howard, Toronto.  
 Second prize.....A. M. Howard, Toronto.  
 Highly commended.....J. A. Ellis.
- CLASS XI.—HAMBURGH (GOLD PENCILLED.)  
 First prize.....A. M. Howard.  
 Second prize.....Joseph Lamb.  
 Highly commended.....John Peters.
- CLASS XII.—HAMBURGH (SILVER PENCILLED.)  
 First prize.....John Peters.  
 Second prize.....Joseph Lamb.
- CLASS XIII.—HAMBURGH (GOLD SPANGLED.)  
 First prize.....John Peters.  
 Second prize.....John Peters.
- CLASS XIV.—HAMBURGH (SILVER SPANGLED.)  
 First prize.....Joseph Lamb.  
 Second prize.....Joseph Lamb.
- CLASS XV.—HAMBURGH (ANY OTHER VARIETY.)  
 First prize.....James Millington, Toronto.  
 Second prize.....J. W. Hector, Toronto.  
 Commended.....Joel Wootton, Toronto.
- CLASS XVI.—POLISH (BLACK, WITH WHITE CRESTS.)  
 First prize.....Joseph Lamb.
- CLASS XVII.—POLISH (GOLD SPANGLED.)  
 First prize.....Joseph Lamb.  
 Second prize.....Joseph Lamb.  
 Highly commended.....J. W. Witherington.  
 Commended.....James Millington, Toronto.  
 Commended.....James McGrath, Toronto.
- CLASS XVIII.—POLISH (SILVER SPANGLED.)  
 First prize.....James McGrath.  
 Second prize.....James Millington.
- CLASS XIX.—POLISH (ANY OTHER VARIETY.)  
 First prize.....Joseph Lamb.  
 Second prize.....Joseph Lamb.
- CLASS XX.—FRENCH FOWLS.  
 No Entries.
- CLASS XXI.—BANTAMS (GOLD OR SILVER LACED.)  
 First prize.....John Peters.  
 Second prize.....James Goldie, Guelph.
- CLASS XXII.—BANTAMS (CLEAN-LOGGED.)  
 First prize.....J. Peters.  
 Second prize.....R. L. Denison.
- CLASS XXIII.—BANTAMS (FEATHER-LOGGED.)  
 First prize.....John Peters.
- CLASS XXIV.—TURKEYS.  
 (First prize given by Hon. Geo. Brown.)  
 First prize.....James Goldie.  
 Second prize.....J. H. Feeley, Hamilton.
- CLASS XXV.—DUCKS (ATLESBURY.)  
 First prize.....Joseph Lamb.  
 Second prize.....James Millington.
- CLASS XXVI.—DUCKS (ROCKY.)  
 First prize.....John Peters.  
 Second prize.....Joseph Lamb.
- CLASS XXVII.—DUCKS (ANY OTHER VARIETY.)  
 First prize.....Joseph Lamb.  
 Second prize.....J. Peters.  
 Highly commended.....J. Bogue.
- CLASS XXVIII.—GEESE (COLOURED.)  
 First prize.....Joseph Lamb.  
 Second prize.....Joseph Lamb.
- CLASS XXIX.—GEESE (WHITE.)  
 First prize.....Joseph Lamb.
- CLASS XXX.—(ANY OTHER VARIETY OF FOWL NOT INCLUDED IN THE ABOVE CLASSES.)  
 First prize.....Joseph Lamb.  
 Second prize.....R. L. Denison.  
 Highly commended.....J. Berwick.  
 Commended.....Joseph Lamb.  
 Commended.....R. Davies.

CLASS XXXI.—(SWEEPSTAKES FOR GAME COCKS.)

Won by J. A. Ellis.

PIGEONS.

- CLASS XXXII.—CARRIERS (COCKS.)  
 Prize.....Lt. Col. Hassard.  
 Highly commended.....Lt. Col. Hassard.  
 Commended.....Lt. Col. Hassard.
- CLASS XXXIII.—CARRIERS (HENS.)  
 Prize.....Lt. Col. Hassard.  
 Highly commended.....Lt. Col. Hassard.  
 Commended.....Lt. Col. Hassard.
- CLASS XXXIV.—FOUTERS (COCKS.)  
 Prize, (Tegetmeier's Pigeon Book, given by Messrs. Clewett & Co.)  
 Awarded to.....Lt. Col. Hassard.  
 Highly commended.....Lt. Col. Hassard.  
 Commended.....Lt. Col. Hassard.
- CLASS XXXV.—FOUTERS (HENS.)  
 Prize.....Lt. Col. Hassard.  
 Highly commended.....Lt. Col. Hassard.  
 Commended.....Lt. Col. Hassard.
- CLASS XXXVI.—TUMBLERS (SHORT-FACED.)  
 First prize.....Jas. McGrath.  
 Second prize.....W. J. Bailey, London.
- CLASS XXXVII.—TUMBLERS (ANY OTHER VARIETY, TWO PAIRS.)  
 First prize.....James McGrath.  
 Second prize.....James McGrath.
- CLASS XXXVIII.—JACOBS, OR FRILLS.  
 First prize.....D. Davis, Toronto.  
 Second prize.....D. Davis, Toronto.
- CLASS XXXIX.—PANTALS.  
 (First prize given by — Postlethwaite, Esq., Northern Railway.)  
 First prize.....James McGrath.  
 Second prize.....A. M. Howard.
- CLASS XL.—BARBS.  
 Second prize.....W. J. Bailey.
- CLASS XLI.—TURBITS—(NO ENTRIES.)
- CLASS XLII.—TRUMPETERS.  
 First prize.....W. J. Bailey.  
 Second prize.....W. J. Bailey.
- CLASS XLIII.—DRAGONS.  
 First prize.....James McGrath.

Horticulture.



The Gardener's Friend

A correspondent of the *Albany Cultivator*, rejoicing in the name of Snooks, has invented a very useful little machine which he has called "The Gardener's Friend." He says—"It will make rows without a line, cross-check for planting beans, peas, melons, &c., make holes for setting beets, cabbage, ruta bagas, onions, strawberries, &c., any distance from four inches to three feet apart in the row, and do it more easily, better, and in one-eighth time required by the old back breaking plan. The instrument costs but little, and can be made in two hours by any person who can use a saw and axe. The following cut shows its appearance:—

It consists of a wheel, made of boards, from 1 1/2 to 3 feet in diameter, and 2 inches wide. The handles may be made of any desired length and pattern. On the edge of the wheel six wooden pins 1 inch in diameter, wedge-shaped at the outer end, projecting 2 1/2 inches from the rim. Bore holes 1 1/2 inches deep and 4 apart around the wheel. In setting out turnips, onions, &c., leave all the pins in; for other plants, take out the pins as the distance apart requires. Operation—Decide on the distance you wish your rows apart, and stake off the distance at each end; wheel your Friend in position, wheel across to the opposite stake, and if you have not taken a dram you will have made a straight row, holes all made ready for the plants, in number from 50 to 1000, according to length of rows, and all done in the time required to walk the distance."

Orchard Culture.

The following communication has been addressed to us by an amateur horticulturist:—  
 A short time since, the writer was conversing with an Englishman from Somersetshire and Devonshire

on the subject of English farming. We talked about orchards, and how to grow them. He had planted a large orchard in Canada, and only regretted he had not done so the first year he went on his land. The writer mentioned the American and Canadian method of occasionally, and indeed often, working the soil of orchards for other crops. He condemned it altogether, and said that any man in England who did so in an apple country would be considered mad. The only crop for an orchard is grass—consumed on the land, not cut—and the leaves allowed to fall, and rot on the ground. The grass should never be eaten close down, and a thorough coating of manure should be added as a top dressing, every second year at all events. All the pomice of the Cider Press also goes on the orchard. Pigs are often kept in the orchard, to eat the falling fruit, but are well rung in the noses, to keep them from digging. The trees are kept well pruned, and the slightest falling off of the crop is met by more manure. Apple trees in England are known to live a hundred years, and some to attain a still greater age.

This man's statement was fully borne out by the writer's experience, both in Canada and England. In Canada, on one occasion, the writer rented a garden, with a few scrubbed apple trees in it; the fruit had been a failure, and the garden allowed to grow up to weeds. Cattle had been turned in, and all that could be bitten off the trees had been bitten off, until they were more like scrubby bushes than trees, and they were thickly covered with bark lice and moss. The land was a poor, wet, sandy loam, yellow, and was formerly covered with pine and oak, some of the pine stumps not yet out. The first thing done was to lay the whole place down to grass, sowing over the raked ground (not dug) the seeds from a hayloft. Some manure was used, but not much, but the whole was well plastered. The bitten branches were topped with a knife, and thinned out, until the heads were sufficiently opened. The trees felt the treatment immediately, and the second year made good shoots. They were kept judiciously pruned, never shortening a leading branch, but cutting off all old sprigs, and the second year bore a little fruit. The grass succeeded well, and produced heavy crops. The trees were so low that the place could not be pastured; so the first cut was made hay of, and the second allowed to rot on the ground. Plaster was liberally added each year, and in four years the trees had become large and healthy, shedding with the moss and loose bark, all the bark lice, and producing liberally. In five years the crop was almost too much for the trees, and since that time they have continued to bear equally well. Changes took place in the premises, so that it was inconvenient to add manure, but for twelve years the trees continued to increase in fertility, under the treatment of plaster, and rotten after-grass; and they are now very fine, healthy trees. During the whole of this time, not a sod was turned, nor any cultivation allowed. Had there been, it is believed the consequences would not have been equally satisfactory. One of the trees stood in what was used as a kitchen garden, but so long as the ground was dug around it, and crops planted, although manured, so long the crop of apples was poor; at length the cultivation was stopped, and the apples increased to a full crop. Depend upon it, orchards should never be ploughed or cultivated.

MORE SUPERB PANIES.—"An amateur" sends us from Hamilton three large and very beautiful panies, which he says, when freshly gathered, measured two inches and three-quarters one way, and a shade less the other. Having been sent by mail, simply pressed between pieces of card, they have necessarily shrunk, and do not now come up to that measurement. They still, however, retain their form and colour sufficiently to show that they must have been marvels of beauty. Two of them especially, one dark purple, the other primrose coloured, could hardly be surpassed for richness and purity of hue. They were taken, we are informed, out of a hundred or more of Messrs. Bruce and Co.'s seedlings, and speak well for the skill and success of the firm in this branch of Horticulture.

## Liquid Grafting Wax.

A correspondent of the *Gardener's Monthly*, who writes like an experienced orchardist, very strongly recommends a liquid grafting wax, which he has used for some years, and greatly prefers to any other composition. It is laid on with a brush, and must be applied as thinly as possible, since if too much is used, the surface hardens very quickly, and prevents the alcohol from evaporating through the impervious outer coating. It seals up hermetically all wounds of trees made intentionally or undesignedly, and protects them perfectly against all atmospheric influences. The fervid heats of an American summer do not soften it, nor does intense cold make it crack. A single application of it will last a year. It will make worsted shreds, or lindenbast waterproof, but if bandages are used they must be loosened in time, or they will injure the tree. The following is the recipe for making this most admirable preparation."

"1 lb. of Rosin,  
1 oz. of Beef Tallow,  
1 table-spoonful of Spirits of Turpentine,  
5 or 6 oz. of Alcohol, (95 per cent.)

Melt the rosin over a slow fire; when melted, take it off and add the beef tallow, stirring it constantly; let it cool down somewhat, mix the spirits of turpentine little by little with it, and at last the alcohol in the same way. Should the alcohol be added while the mass is too hot, much will be lost by rapid evaporation; if on the contrary it is too cool, it will form a viscid lump and must be slightly heated again. Stirring briskly is indispensable to mix the ingredients thoroughly.

"In well-corked bottles it keeps for years. If in course of time it becomes too thick, the addition of some alcohol will make it liquid again. For this purpose it must always be warmed. It is a good plan to put the bottle containing it in boiling or hot water to accomplish this."

## Fruit Prospects.—A Thief 'Sold'

To the Editor of THE CANADA FARMER:

Sir,—There have been so many rumors afloat regarding the fruit crop, that I have delayed writing to you until the warm weather set in. The hoped-for change came to-day with a fine shower. Most of our farmers have their crops sown, and put in with a fine tilth of the soil, and now, with at least a moderately moist season, we may hope for large returns. The prospects for the fruit crop are exceedingly good, in fact, never were better. The peaches are not injured to any extent, and the fruit spurs of the pear and apple indicate a heavy crop.

In pruning a young pear orchard this spring I found that somebody had been over the ground before, and cut away a large quantity of last year's wood, evidently for the purpose of obtaining grafts. And it so happened that in this part of the orchard there were a number of wild pear trees that I had planted for the purpose of testing any new variety that I wished to try. I hope their grafts will grow, for then somebody will find that "Honesty is the best policy." Although no reader of the CANADA FARMER is likely to resort to such ways as the above to get good fruit, I may say that any fruit grower that I ever knew, is always happy to give cuttings to any one who will ask for them, provided they have them to spare.

R.N.B.

Holmehurst, April 15.

## Planting Flowers for Autumn.

The following advice respecting the planting of flowers, by the *Country Gentleman*, should be acted upon by every person who possesses a square yard of flower plot:—

A well-managed flower garden will, at all times of the year, when out-door plants can bloom, present a fine show of flowers. From the time the first snow-drop or crocus shows itself, perhaps through a late fall of snow, until the severe frosts have performed

their work, and killed the last lingering roses, verbenas, &c., there should be a constant succession of bloom in all parts of the garden, so that no portion may appear unattractive. Considerable pains must be taken, and forethought exercised, to lay out and plant the flower garden in such a manner as constantly to present a good bloom. The late spring and early summer will have their bulbous plants and herbaceous perennials; the late summer its early sown annuals, and the autumn will have its dahlias, verbenas, and late sown annuals. This latter season, if the garden be properly managed, will not be any less attractive than the earlier months. Phlox Drummondii, planted in June or July, will equal or exceed the verbenas in beauty. Candytuft, mignonette, balsams, and many other annuals, from late sowing, will keep up a constant bloom until frost. The late blooming perennial phloxes will make a splendid display in the borders. The rose acacia, among shrubs, will put forth a second display of bloom. The snowberry, the althea, the euonymus, and a few other shrubs, will assist in the adornment of the garden in autumn. Roses of the perpetual blooming varieties, whether tender or hardy, will be in their glory through the fall months. In milder latitudes than ours, the chrysanthemum will be a distinguished ornament of the garden. Of bulbous plants, the gladiolus in its many varieties, all beautiful and showy, the tuberose, with its tall spike of pure and fragrant flowers, and the magnificent Japan lily, will constitute the stock.

**THE FUCHSIA.**—This deservedly popular flower is of exceedingly easy culture, and may with very little trouble be made a superb ornament in-doors, on the verandah, or in the open ground. Small plants in thumb-pots, early in the spring require only timely shifts and regular watering to become profuse bloomers by the latter part of the summer, and when the beauty of the general flower garden begins to fade, they will be in the height of their glory. A compost of rich loam, old well-rotted manure, and a slight admixture of silver sand, suits this plant best. Now is the time to secure a variety for late summer flowering. Many splendid varieties of this favourite flower are now in general cultivation, and easily obtainable by all who desire in-door or out-door floral decoration.

**WHAT PEARS TO PLANT.**—The *American Journal of Horticulture* answers this question by recommending the following twenty varieties, Madeleine, Doyenne d'Été, Rostiezer, Beurré Giffard, Brandywine, Clapp's Favourite, Bartlett, Belle Lucrative, Abbot, Paradise d'Automne, Swan's Orange, Sheldon, Seckel, Marie Louise, Urbaniste, Beurré Bosc, Beurré d'Anjou, Dana's Hovey, Lawrence, Vicar of Winkfield. The foregoing list gives a wide range of season of ripening, and a considerable variety in flavour. If only ten varieties are to be planted, Rostiezer, Brandywine, Bartlett, Sheldon, Seckel, Beurré d'Anjou, Urbaniste, Beurré Bosc, Lawrence, and Hovey, are suggested. To reduce the number still more, and plant only five varieties, for home use, Bartlett, Seckel, Beurré d'Anjou, Hovey and Lawrence would be the favourite kinds.

**RASPBERRY CULTURE.**—An enthusiastic raspberry grower writes to the *American Journal of Horticulture* in praise of this fruit, and contends that it is valuable not only for the purpose of "keeping up a succession," but because of its intrinsic merit. He says it can be produced profitably, abundantly, and universally, and hopes to see the time when it and other fruits, large and small, will be so extensively cultivated as to become the cheapest, as it will be the best diet for all; when the poorest man may "put forth his hand and pluck and eat of what is most emphatically the tree of life to all mankind." No doubt fruit-growing deserves far more general attention than it receives. The small fruits being easily raised, and bringing a quick return, amply repay the toil and cost of their culture.

## Poetry.

### By the River.

We stood by the river, my friend and I,  
One beautiful night in June;  
Oh, fair was the river and calm the sky,  
Our hearts were beating in tune—  
In tune to the last good night of the birds,  
In tune to the breeze overhead;  
In tune to the loving, musical words,  
That each to the other said.

We stood by the river, my friend and I,  
The summer was scarcely past;  
But a change had come over earth and sky  
Ere we saw the river last.  
A sw of the roses had died away,  
A song bird or two were hushed;  
But the earth looked mournful that August day,  
For our hearts were dry and crushed.

We left the still river, my friend and I;  
We saw it never again,  
And years, bearing changes to brow and eye,  
Have glided away since then.  
Oh, steadfast my friend with the earnest eyes,  
My friend with the brow serene!  
O'er the vanished past we may mingle sighs,  
Spite of weary miles between.

It will not be long, for my eyes are dim,  
Thy raven hair must be white;  
We shall meet once more by a river's brim—  
Death's river, dear, will not fright.  
A stranger will mark with a careless eye  
Two graves in the churchyard sod,  
While we stand by the river, my friend and I,  
That gladdens the city of God.

—Mark Lane Express.

## The Household.

### Best Mode of Roasting Fish, Ducks, &c.

THE very best way of cooking fish and fowl ever devised is familiar to woodmen, but unknown to city epicures. It is this: Take a large fish—say a trout of three or four pounds, fresh from its gambols in the cool stream—cut a small hole in the neck, and abstract the intestines. Wash the inside clean, and season it with pepper and salt; or, if convenient, fill it with stuffing made of breadcrumbs or crackers chopped up with meat. Make a fire outside the tent, and when it has burned down to embers rake it open, put in the fish, and cover it with coals and hot ashes. Within an hour take it from its bed, peel off the skin from the clean flesh, and you will have a trout with all its original juices and flavors preserved within it—a dish too good, as Isaac Walton would say, "for any but very honest men."

Grouse, ducks, and various other fowls, can be cooked deliciously in a similar way. The intestines of the bird should be taken out by a small hole at the vent, and the inside washed and stuffed as before. Then wet the feathers thoroughly, and cover with hot embers. When the cooking is finished peel off the burnt feathers and skin, and you will find underneath a lump of nice juicy flesh, which, when once tasted, will never be forgotten. The peculiar advantage of this method of roasting is, that the covering of embers prevents the escape of juices by evaporation.—*Trapper's Guide*.

### How to Manage Kerosene Lamps.

If the brass-work, cone, etc., is heated unusually hot, it will cause gas to generate in the lamps, which, as it produces pressure, will force itself up through and around the wick and ignite, causing the lamp to sputter, and even snap itself out. Now if when it is "sputtering" the brass work is cooled off, for instance, by wrapping a wet cloth around it, the lamp will cease sputtering and snapping and burn as it should.

An examination, while operating as above, will generally reveal charred and saturated wick burning around the base of the wick tube, or the flame of the lamp may impinge on the cone, owing to its being slightly turned or the wick having a ragged corner, causing the brass to heat and generate gas. Low proof oil, forming gas at a low temperature, is consequently more unsafe to use. If the wick fits the tube properly, blowing down the chimney is the best way to extinguish it, for the following reasons:—It is perfectly safe, the wick need not be trimmed for several days, thus obviating the necessity of regulating it every time it is lighted. A slight puff or a gentle blast of the fingers across the top of the chimney, in an upward, slanting direction, is all that is necessary. A tremendous and badly aimed blast is generally used, where a mere puff would suffice if properly directed. If the wick fits the tube, it is impossible to drive the flame down into the lamp by blowing into the chimney.—*Scientific American*.

**Miscellaneous.**

**A LOGOGRAPH.**—A logograph is a kind of charade in which one word is made to undergo several transformations and to be significant of several things by addition, subtraction or substitution of letters. The following, on the word *cod*, by Lord Macanly, is a good example of the logograph:

Cut off my head, how singular I act;  
Cut off my tail, a plural I appear;  
Cut off my head and tail—most curious fact,  
Although my middle's left, there's nothing there!  
What is my head cut off?—a sounding sea!  
What is my tail cut off?—a flowing river!  
Amid their foamy depths I fearless play,  
Parent of softest sound, though mute forever.

**JOSH BILLINGS' PHILOSOPHY.**—Among the multitude of Josh's wise sayings, the following are not the worst:—There is but they men hev character enuff to lead a life of idleness. Tru luv is spelt the same in Choctaw as in English. Those who retire from the world on account of his sin and peskiness, must not forget they have got to keep company with a person who wants as much watching as anybody else. When a man fast loses his health, then he fast begins to take good care of it. This is a good inducement, this is. Most people decline to learn only by their own experience. And I guess they are more than half right, for I do not spose a man can get a correct idea of molasses candy by letting another fellow taste for him. Success is very apt to make us forgit when we wasn't much.—It is just so with the frog on the jump—he can't remember when he was a tadpole, and other folks can.

**DURABLE PAINT.**—A recipe for making a durable paint was sent, not long since, to the "Société Encouragement," in Paris, which was said to have the hardness of stone; resists damp, and is very cheap. It had then been in use five years. Its component parts are: 50 of resin, 40 of finely-powdered chalk, about 300 fine hard sand, 4 of linseed oil, 1 of red oxide of lead, and 1 of sulphuric acid, all to be mixed. The resin, chalk, sand, and linseed oil are heated together in an iron boiler; the red lead and the sulphuric acid are then added, and all carefully mixed. The composition is applied while hot. If not found sufficiently fluid, it may be made thinner by adding more linseed oil. When cold and dry, it is said to form a varnish of the hardness of stone.

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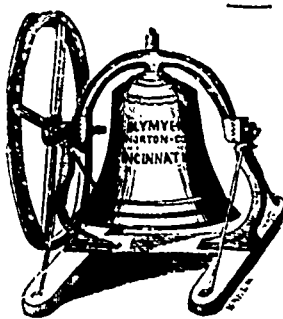
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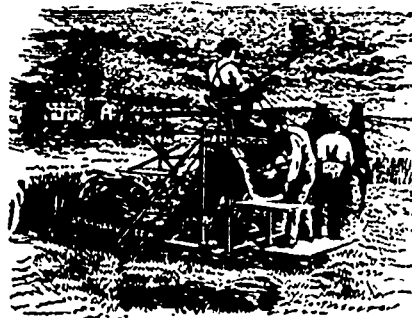
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WARRANTY.

We warrant the Marsh Harvester to be well made, of good material, and when properly used, not liable to get out of repair, to be a good grain-cutting machine upon which two experienced blinders can bind in average grain, on suitable ground, from eight to twelve acres in twelve hours, and that it will work on as rough ground as any other Reaper.

PAXTON TATE & CO.

Port Perry, March 23, 1863.

v5-7-1f

Markets.

Toronto Markets.

"CANADA FARMER" Office, April 29th, 1868.

The produce market since our last review has been dull and uninteresting. Although navigation is now open there has been little or nothing doing.

Wheat—The market remains unchanged. Holders are firm at \$1 68 for cargo lots of spring, with buyers at \$1 64 and \$1 65. One small cargo lot of spring sold early in the week at \$1 64, but the sample was not choice, and a few car loads sold at \$1 65. In fall wheat there was nothing doing. Street prices are: spring \$1 64 and \$1 65, midge proof \$1 66. No fall wheat coming in.

Oats—There has been nothing doing during the past week in this grain. Quotations are nominal.

Barley—The receipts of this grain are very small, and stocks being exhausted there is nothing doing. The nominal quotations are \$1 40 to \$1 45 for choice barley.

Peas—The market is quiet but firm. Lots are held at 92c, with a sale at 90c for a lot of 1,000 bushels.

Seeds—The market is quiet but firm. We quote clover firm at \$4, timothy, \$1 60 to \$2 25, fax seed, \$1 25 to \$1 60.

Flour—The market remains dull and unchanged. During the past week there has been very little doing—hardly enough to establish quotations. For No. 1 superfine holders are asking \$7 15. A sale took place yesterday at that figure. In extra and superior there was nothing doing.

Out Meal—The market remains nominally unchanged.

Pork—The market is quiet. A slight dullness has taken place. We, however, do not change our quotations. Mess, \$20 to \$21; Prime Mess nominal at \$16 to \$17.

Cut Meats—In fair demand. Smoked hams and rolls 12 to 12 1/2 city cured. Smoked shoulders, 9 to 10c.

Butter—New in good local demand. No good old in market. We quote for sweet yellow in large rolls or tubs 21c to 25c; old, if poor quality, offering at 14 to 15c.

Cheese—Unchanged, 10 1/2c to 11c.

Bacon—Steady at the advance; 9 1/2c offered for city Cumberland.

Eggs—Scarce and wanted at 14c.

Hides, Skins and Wool.—The following are the prices paid for skins:—Green Butchers' 5 1/2c; Farmers', 6c, Calfskins, 10c; Sheepskins, \$1 to \$1 30.

The following are the selling prices of hides.—No. 1 inspected, 7 1/2 to 8c; Calves Skins, 12c.

Wool is dull. Pulled sells at 23c. Fleece, none in the market.

THE CATTLE MARKET.

There has been an average trade done in cattle during the past week. Prices remain unchanged. 1st class, \$3 per cwt. 2nd class, \$7. 3rd class, \$6.

Sheep—Have been in demand and sold as follows:—1st class, \$7 each. 2nd class, \$6. 3rd class, \$5.

Lambs—Are beginning to arrive freely. Prices are:—1st class, \$3. 2nd class, \$2 to \$2 50. 3rd class, \$1 50 to \$2 00.

Calves—Of the better class have been scarce and in demand. We quote.—1st class, \$8 each. 2nd class, \$6. 3rd class, \$2 00 to \$3 50 each.

Montreal Markets.—Flour—Superior extra, \$8 to \$8 25; extra, \$8 to \$8 10, fancy, \$7 65, Welland Canal, superfine, \$7 57; to \$7 60; superfine No. 1 Canada wheat, \$7 55 to \$7 65; superfine No. 1 Western wheat, \$7 65 to \$7 75; superfine No. 2 Western wheat, \$7 30 to \$7 35; bag flour per 109 lbs. \$3 60 to \$3 70.—Wheat.—Canadafall, none; spring \$1 72 to \$1 73; Western, \$1 65 to \$1 70.—Oats.—Per 32 lbs., 49c to 50c.—Barley.—Per 45 lbs \$1 15 to \$1 20.—Butter.—Dairy, 15c to 21c; store packed, 15c to 22c.—Aches.—Pots, \$5 75 to \$5 80; pearl, \$6. Pork.—Mess, \$21 50 to \$22 00; prime mess, \$16 50 to \$16 75; prime \$15 75 to \$16.—Dressed Hogs, none.—Peas.—9c to 9 1/2c.—Rye Flour.—\$6 09 to \$6 10.

New York Produce Market.—Flour Dull, receipts 5,200 barrels and 5,900 bags, sub 5,600 lbs., at \$9 to \$9 65 for super State and Western, \$10 10 to \$10 80 for common to choice extra State, \$10 10 to \$11 25 for common to choice extra Western.—Wheat—More active; receipts, 10,200 bushels, sales, \$1,000 bushels at \$2 45 to \$2 46, No. 2 prime, \$2 71 to \$2 60, No. 1 spring at \$3 15, white Michigan, \$3 10, white Canada at \$2 50, No. 1 and 2 spring mixed.—Rye—Quiet.—Corn—Dull, receipts, 109,623 bushels, sales, 33,000 bushels at \$1 12 to \$1 16 for new mixed Western afloat, \$1 16 to \$1 17 old afloat.—Barley—Quiet; receipts \$18,100 bushels.—Oats—Quiet, receipts, 26,075 bushels; sales, 25,000 bushels at \$1 1/2c for Western in store, \$6c afloat.—Provisions—Pork firmer and in fair demand at \$29 15 to \$29 37 for new mess; \$27 50 to \$28 50 for old do.—Lard—Firmer, and quiet at 18 1/2 to 18 3/4c.

Milwaukee Markets, April 29.—Wm Young and Co's report.—Wheat—Receipts, 45,000 bushels; shipments, 3,000 bush. No. 1 lower, but active and firm at \$2 14, No. 2 lower, but active and firm at \$2 04.—Wheat firm at \$2 00.—Pork firm at \$23.—Freights firm at 12c.

Chicago Markets, April 29.—Wm Young & Co's report.—Wheat—Receipts, 43,000 bushels, shipments, 9,000 bushels, No. 2 firm at \$2 12.—Corn active at 58 1/2c; receipts, 82,000 bushels, shipments, 111,000.—Pork firm at \$29 50.

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