Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- ☐ Coloured covers/ Couverture de couleur
- ☐ Covers damaged/ Couverture endommagée
- ☐ Covers restored and/or laminated/ Couverture restaurée et/ou pelliculée
- ☐ Cover title missing/ Le titre de couverture manque
- ☐ Coloured maps/ Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black)/ Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations/ Planches et/ou illustrations en couleur
- ☑ Bound with other material/ Relié avec d'autres documents
- ☑ Tight binding may cause shadows or distortion along interior margin/ La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- ☐ Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/ Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

- ☐ Coloured pages/ Pages de couleur
- ☐ Pages damaged/ Pages endommagées
- ☐ Pages restored and/or laminated/ Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached/ Pages détachées
- ☑ Showthrough/ Transparence
- ☑ Quality of print varies/ Qualité inégale de l'impression
- ☑ Continuous pagination/ Pagination continue
- ☐ Includes index(es)/ Comprend un (des) index

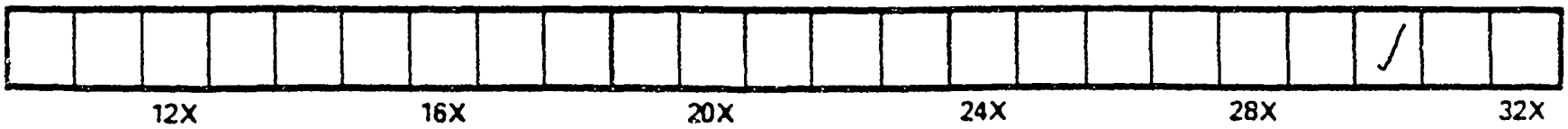
Title on header taken from:/ Le titre de l'en-tête provient:

- ☐ Title page of issue/ Page de titre de la livraison
- ☐ Caption of issue/ Titre de départ de la livraison
- ☐ Masthead/ Générique (périodiques) de la livraison

☑ Additional comments:/ Commentaires supplémentaires: Wrinkled pages may film slightly out of focus.

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X 12X 14X 16X 18X 20X 22X 24X 26X 28X 30X 32X



THE CANADA FARMER

VOL. II. No. 4. TORONTO, UPPER CANADA, FEBRUARY 15, 1865. POSTAGE FREE.

The Field.

Mr. Lawes' Wheat Crop of 1864.

SOME time ago we gave an account of experiments in wheat culture, carried on during a period of 20 years, by Mr. Lawes, a celebrated British agriculturist. It will be remembered that these experiments were made on three plots of land. One had received no manure whatever during the entire term; another had received annually fourteen tons of barn-yard dung; and a third had been manured with certain artificial mixtures each year. Mr. Lawes has published an account of his twenty-first crop (that of 1864), from which we take the following tabular view of his last two crops, and the average for twelve years:—

Bushels of Dressed Corn [Wheat] per Acre

Plots.		Harvests. 1863.	1864.	Average of 12 years, 1852-63.
3	Unmanured, ...	17¼	16	15¼
2	Farm-yard manure, ...	44	40	35½
7	Artificial manure, ...	53¾	45¾	36¾
8	do. do.	55¾	49½	38
9	do. do	55¾	51¾	34½
16	do. do	55¾	51	38¼

Weight per bushel of Dressed Corn [Wheat]—lb

Plots.		Harvests. 1863.	1864.	Average of 12 years, 1852-63
3	Unmanured, ...	62.7	62.0	56.5
2	Farm-yard manure, ...	63.1	62.5	59.3
7	Artificial manure, ...	62.6	63.1	58.4
8	do. do.	62.3	63.5	57.8
9	do. do.	62.1	62.6	57.[illegible]
16	do. do.	62.4	63.2	57.[illegible]

Experiments in Top-dressing Applied to Grass Lands.

THE report of the Secretary of the Michigan State Board of Agriculture, referred to in another column, contains an interesting account of some experiments in top-dressing applied to grass lands at the State Agricultural College Farm, during the past season.

A piece of ground, 24 rods by 24, in the College Park, was selected for these experiments. This field was sown with oats, the previous year, without manure, and seeded with timothy and clover, the latter predominating in the growth of the past year. The piece of ground selected appeared to be of even fertility, and the growth of grass and clover prior to the application of any top-dressing was very uniform. The ground was divided into eight equal parts.

No. 1 had no top-dressing, serving as a basis of comparison, showing the natural productiveness of the soil.

No. 2 received a dressing of plaster at the rate of two bushels per acre.

No. 3, five bushels of wood ashes per acre.

No. 4, twenty loads of pulverized muck per acre.

No. 5, twenty loads of pulverized muck and three bushels of common salt per acre.

No 6, three bushels of common salt per acre.

No. 7, twenty loads of horse-manure per acre.

No. 8, twenty loads of cow-manure per acre.

These dressings were applied from the 5th to the 10th of May.

The grass was cut June 20th and 21st by a "Buckeye Junior" machine, cured in small cocks, and drawn into the barn in good condition, June 25th. Each load was carefully weighed on Fairbanks' hay-scale.

The yield per acre of each piece, the kind of top-dressing employed, and the gain per acre, are given in the following table:—

EXPERIMENTS IN GRASS.

	Yield per acre.	Gain per acre	Gain per cent.	TOP-DRESSING APPLIED.
No 1	2,856	.....	.....	None.
No. 2.	3,917	1,061	37	Plaster
No. 3	4,515	1,659	57	Wood ashes.
No 4	4,566	1 710	59	Pulverized muck.
No. 5.	4,696	1,840	64	Pulverized muck and salt.
No. 6	3,813	957	33	Common salt,
No 7	3,70S	842	29	Horse-manure
No. 8	3,931	1,075	37½	Cow-manure.

The second crop of clover, &c., was cut by the same machine August 9th and 10th, was put up in small cocks August 10th and 11th. The cocks were turned August 12th, and drawn into the barn August 15th, each load being carefully weighed, as before.

The results are given in a tabular form, as in the first crop:—

EXPERIMENTS IN GRASS.

	Yield per acre.	Gain per acre.	Gain per cent.	TOP DRESSING APPLIED
No. 1.	1,742	....	....	None
No. 2.	3,056	1,314	75	Plaster.
No 3	2977	1,235	71	Wood ashes.
No. 4	3,306	1,564	89	Pulverized muck
No. 5	2,975	1,233	71	Pulverized muck and salt.
No. 6	2,467	725	41⅔	Common salt.
No. 7.	2,678	936	54	Horse-manure
No. 8.	2,856	1,114	64	Cow-manure.

These experiments were conducted for the purpose of calling the attention of farmers to the great value of the beds of muck, which lie too often neglected and useless, a prolific source of discomfort and disease, instead of what they should be—wealth and abundance. The results obtained by the application of pulverized muck, are so decisive, and so far beyond those obtained by the application of ordinary manure, that he must be blind indeed, who does not see that a swamp on a farm is a mine of wealth if properly improved. Let every one who reads the above, resolve to get out a pile of muck for a spring top-dressing to his meadow, before winter breaks up.

The "Quid pro Quo" of Farming.

IT is a dictate of common honesty in the commercial world, that a man must give those with whom he deals, an equivalent for their money. The merchant who fails to do this is justly set down as a rogue. The dealer gains his livelihood by what he receives in return for his time and trouble in handling goods for the convenience of his customers. Moreover, a merchant cannot carry on business at all unless he fills up his depleted shelves from time to time with fresh stocks of goods.

Honest and successful farming must be carried on very much in the same way. You cannot take wealth out of the earth without making a fair return for value received. The attempt to do so is downright dishonesty, and will as certainly recoil on the head of him who takes this course as will the fraud of the merchant who receives his customers' money and gives them no equivalent. The key to all unsuccessful farming is to be found in this fraudulent dealing with the soil. You can't cheat mother earth in the long run. However forbearing she may be, the time will come when she will refuse to transact business with those who systematically wrong her. The idea of being able to get good crops from land that is unmanured, or only treated occasionally to homœpathic doses of manure, is almost laughably absurd. Yet how widely it prevails. How many are surprised at their "ill-luck" as farmers, when this is the true explanation of it. The truth is we *must farm better*, or it will not pay to farm at all. The first flush of fertility characteristic of a new country is over. In the great majority of cases, restitution must be made to the defrauded soil to bring it up to its primitive condition. But under a right system of husbandry, the original state of the soil ought to be surpassed. Instead of this, complaints of deterioration come from all quarters of this continent. Large tracts of once productive western lands are beginning to run down. The product per acre in Ohio is less than it was forty years ago, and large numbers of farmers want to sell out and move farther west that they may find a more fertile soil. That was no exaggerated case mentioned in our columns recently of an Illinois subscriber to the *Country Gentleman* who used his manure and compost *to fill up holes in the lots and streets!* It is positively wicked to wear out the magnificent farms that have yielded up their wealth to robbers of the soil. Change of location will make things no better. It is change of conduct that is needed. Stay where you are, gentlemen, and BE HONEST. Give the "*quid pro quo.*" Imitate the wise old farmer who "*fed* his land *before* it was *hungry*, *rested* it *before* it was *weary*, and *weeded* it *before* it was foul," and like him you will not fail to have good crops.

"No man is born into the world whose work
Is not born with him; there is always work
And tools to work withal, for those who will."

Steam Ploughing in New Zealand.

We received the following letter from Mr. H. Redwood, giving an account of the progress he is making with his steam plough at his farm in the Wairau. The account will be gratifying to all our readers who take an interest in the success of what is really an important colonial enterprise :—

Wairau, July 19, 1864.

We are again very busy ploughing up another 150 acres of new land. We find, after the rains which we have had, that the plough takes less steam by 20 lbs. to the inch, and we are getting on much faster. We have ploughed eight acres to-day in 9½ hours, quite seven to eight inches deep, and for the quality of the work, as compared with horses, it is infinitely superior. I have two four-horse teams ploughing the same land, and the land ploughed by steam is more shaken and crushed, and by that means will be more easily prepared for a crop It appears to be the chief aim of ordinary plough makers to so arrange the plough that it shall leave the furrow-slice in as neat and pretty a shape as possible, and by so doing the plough, no doubt, takes less power to pull it, but, to prepare the land properly for the seed, it takes much more harrowing, &c I consider there is at least 10s. per acre difference in the breaking up between the two plans.

I never saw any ploughing so good as what we are now doing with the steam plough. I am perfectly delighted with it. The way every part of the machine stands the ordeal is surprising, for, by the end of this month, we shall have ploughed 500 acres, and 400 of that will be *new* land, without any flax or roots having been grubbed out of it, and this is a very fair test of how the thing is going to stand. Our rope appears very little the worse; it certainly is a wonderful production; it is not thicker than a common wax candle, and there is constantly the strain of thirty or forty horse-power on it. It has never broken yet, nor shown any sign of distress.

Where the land is suitable for the steam plough—and it can work almost anywhere, except on stony ground, and there of course, the first time over, you would break a good deal—there is nothing like it for getting on with the work. Then, again, with a steam plough you can do your work at the proper time; for in summer, by a little extra pay for overtime to the men, you can get any quantity of work done, as the labour attending it is of the lightest description, if I except the steersman on the plough, who requires to be a strong man; but even his work is comparitively easy, except at the ends of the furrows, where he must handle the plough quickly, as a great economy of time is effected by turning quickly, and keeping the plough running. We can now turn, on good level land, in twenty seconds.

I am quite certain that, before many years, steam ploughs will become general. Any large farmer who does not appreciate steam ploughs, has a great lesson to learn. But it takes a long time to wear away prejudice. It is a puzzle to imagine what some men are made of. We have farmers here, living within one mile of us, who have never been to have a look at the plough, although we have been at work for the last three months.

I find a cord of wood will plough eight acres—I mean breaking up, or the ploughing of the land for the first time. Of course the subsequent ploughings will require something less. It is difficult to imagine that any very great improvement can be made in these ploughs, and I believe it is the opinion of the principal makers that steam ploughs must stand or fall by what is before the public The engine probably might be lightened by substituting steel for iron; but if it was much lighter, it would not bear the lateral strain that is on it when the plough is approaching it. My engine weighs about fourteen tons, and, when the ground has been slippery, I have seen it pulled sideways a foot, that will convey to you some idea of the strain the parts will bear, and the power we have at our disposal for the cultivation of the wilderness. August 2.

P.S.—Since I commenced this letter, on the 19th of last month, I have ploughed seventy-five acres of new land, without breaking sixpence worth *Nelson Examiner.*

Hop Culture in England.

We make the following extract from a prize essay, by John P. Smith, of Worcester, which has just been published in the English Agricultural journals It will be read with interest by our hop-growers

A southeastern aspect affords, in my opinion, the best situation for a hop garden, and if it be well protected from the west winds that prevail during the autumn, so much the better, as great mischief is often done by wind. Due care must be taken to adapt the planting to the peculiarities of the soil. The Golding hop will be found to succeed best on dry friable soil, with a gravelly or rocky subsoil, such as we find in the hilly districts of Middle and East Kent, whilst Mathon White, and Grapes, prefer a stronger soil, approaching to clay; the former variety flourishes on the deep land in the vale of the Teme, and the latter in the Weald of Kent and Sussex, which is mostly strong clay soil. Another variety, Cooper's White, a good sort, but delicate, is best suited for strong loam.

We will now assume that a suitable field—one that has been thoroughly drained—has been selected, and the preference given to an old piece of turf. In that case I would recommend that the land be trenched two spits deep, the top spit being kept uppermost, with the turf downwards. When the digging is finished, the surface should be harrowed, and rolled down as fine and level as possible, ready for setting out. The planter must next determine on the arrangement of the rows, whether on the angle or on the square, and the distance from plant to plant. The usual method in Worcestershire and Herefordshire is to lay out the rows 7 or 8 feet apart, and set the plants 2½ to 3 feet distant in the rows. If your land be good, and likely to be highly farmed, a uniform distance of 7 feet square may be recommended. Good cultivation will ensure a large quantity of bine, and a sufficient quantity of sun to bring the fruit to perfection, whilst at this distance you have more room to cultivate without injuring the bines.

If this plan is adopted, you must prepare 889 small sticks, a foot to 18 inches long, for every acre, that being the number of hills which an acre will take at 7 feet square First square your field, and then commence in the centre, working right and left; you will thus be more likely to be correct than if you begin on one side.

Your field being truly set out, you may prepare for planting, if you plant bedded or yearling sets (which are far preferable to cuttings), a man should take a spade, and remove the soil from two sides of the stick, the opening being 2 inches wide at the top, and 4 to 5 inches at the bottom, which should be deep enough to let the roots lie straight. Two strong bedded roots are sufficient for a hill; but if not strong, three may be better Care should be taken to bring the head of each root as close to the stick as possible; some good fine soil should then be put to the roots, and made firm with the foot For a plantation of 20 acres with suitable casts and cooling rooms to dry and cool the crop in one month, for a first-class growth, the following varieties are recommended :—5 acres of Cooper's White, or 3 Cooper's and 2 Jones', 6 acres Mathon's; 6 or 7 acres of Goldings, and 2 or 3 grapes but this distribution of sorts must, in a measure, be governed by the quality of the land, that variety being most largely planted which is best suited to the soil The crop ought to be secured in three weeks or certainly not more than a month, and it is most important to have an early sort, such as Cooper's White or Jones', to commence with; then will follow your Mathon's, then the Goldings, and lastly the grape, a hardy sort, which will hang well for the last picking Jones' are serviceable to use up old poles The writer has seen a ton an acre on 7-feet poles If, as is mostly the case in Sussex, one variety only be planted, you must begin to pick before your hops are ripe, or have a considerable proportion blown before you can finish

If the planter should determine on a piece of tillage, I recommend him to plough 10 inches, and subsoil as deep as he can. The ploughing completed, he will proceed the same as if it had been a meadow, with this exception that after the sticks are truly set, he should dig holes two feet in diameter and two feet deep, placing the top or best soil on one side, and the bottom soil on the other side of the hole obliquely, so that the heaps may not interfere with replacing the sticks when the holes are refilled. Good dung, or rather a rich compost, should be wheeled on, and a fork or shovelful mixed with good soil from the surface This being finished, you must re-adjust your sticks, and when your soil has had time to settle, you may proceed to plant in the manner before described. On no account bury your manure Should the weather be favourable, and your roots get a start, they will require two poles to each hill, six to seven feet long, and if the season be good a crop of two or three cwt. an acre, may be grown. If cuttings are planted you lose a year.

A New Method of Steeping Flax.

Dr. Hodges read the following report at the meeting of the Chemico Agricultural Society of Ulster, Ireland, August 5th, which as promised at a former meeting, Mr. Friedlaender had forwarded to him :—

There are three most important points to be observed by the flax cultivator: 1st, the selection and proper cultivation of the soil intended for the reception of the seed; 2nd, the steeping and bleaching; and 3rd, the scutching.

1. Cultivation.—About the first point I shall say little, as it is my opinion that we can only give hints to the farmer in his selection of the proper soil, and in his treatment of it before sowing. Nearly everything depends upon his own intelligence. I may, however, mention that I myself have found the best preparation for the crop is to plough twice in autumn—the second time across the first, and then to plough again in spring to the depth of three inches or thereabouts. I am sorry, however, to be obliged to confess that I have never seen flax land prepared in a more careless manner than it is here in Ireland; and although the flax plant is one for which the soil requires the most careful preparation, the Irish farmer seems to imagine that he can raise a good crop on land which has received very little cultivation, previous to the sowing of the seed. The consequence is, that the flax sometimes looks very well when in the field, but when it comes into the scutcher's hands is found to be inferior, both in quality and yield, to flax grown on land carefully managed.

2. Steeping.—Of late years many different plans for the steeping of flax have been proposed and tried; none, however, have met with success. Schenck's and Leadbetter's, as well as others, failed, simply because they were not suitable for general adoption. Since, then, those methods of steeping which compensate for the absence of soft water have been unsuccessful, it is obvious that the flax cultivator whose land is situate in a district in which soft water is either altogether absent, or at least very scarce, must, owing to his inability to steep his raw material properly, either bring to market a very inferior article, or hit upon some plan of steeping which shall enable him to produce flax good enough to compete with that from districts where the water is soft, and well adapted for steeping. Such was exactly my situation. I have been for some time steeping flax in a district in Silesia where there is scarcely anything but spring water. I was consequently forced, as it were, to devise some plan to remedy the evil. After a good many trials, I am glad to say that I was successful; and since there must be many farmers in Ireland who are at present situated as I was, I shall be most happy to offer my experience for their benefit. The following is a short account of the method I have adopted :—The pools I used in steeping were 36 feet long, 15 feet broad, and from 3 to 4 feet deep. At about 10 inches from the bottom of each of them a false bottom, constructed of laths, was placed, and at the same level a pipe was fitted, by means of which the pool could be drained of all the water except the ten inches below that point. The flax to be steeped, which was tied in bundles, was placed root downward upon the false bottom, and kept in the vertical position by the pressure of the adjacent beets. The pool being packed as tightly as could be managed by the hand, and containing about three tons of raw material, was first weighed, and then filled up with water, which was allowed to remain for 24 hours, when it was drained off by means of the pipe, and the flax covered lightly with straw. In a short time fermentation commences, and the pool must be carefully watched till it is finished, which is generally in two or three days. At the expiration of this time the pool is re-filled with water, and the flax thus cleaned of all its gum. In a short time after this has been done it is taken out of the pool and spread upon the ground, where it is allowed to remain the same length of time that it has been in the pool. This process I have found very advantageous, as it enables me to produce either warp or weft flax according to demand, the difference in strength being proportionate to the length of time passed in the pool

3. Scutching. Although very much depends upon the proper *steeping* of flax, yet even more depends upon its proper *scutching;* for, no matter how well the flax be steeped, if it be badly scutched, it decreases very much in value, and the yield is also very much diminished. The great desideratum, then, is a machine which will scutch both well and cheaply. Such a one is, I think, to be found in Freidlaender's "Double Scutching Machine." This machine possesses very many advantages; it cleans the flax more easily and quickly than any other machine; and,

owing to its being capable of being adapted to any quality of flax, the yield is much greater when it is used.

In the "Blue Book" laid before Parliament, Dec. 31st, 1863, this scutching machine was referred to as follows:—"It consists of—first, a small beetling or bruising machine of five or six hammers; secondly, a double scutching machine; thirdly, a machine for separating the chips from the very short fibre, which has hitherto been made into nail-bagging, of which yarns may be spun into from 10 to 14 leas. These machines appear to me to do their work admirably, and were so reported of to me by those who thoroughly understand them."

Domestic Poudrette.

Night soil properly prepared is universally allowed to be one of the most efficacious manures for either garden or field culture. But, unfortunately, a large part of it is allowed to be wasted in the country as well as in the cities. The liquid portion is as valuable as the solid, and every farmer, and every man who has a garden should have some simple arrangement by which it may be saved in such form as that it may be usefully appropriated. Families of five or six persons may make, annually, a cord at least of the very best kind of manure, and in such form that it may be used without offending the senses. The poudrettes in the market are made by mixing night soil with dried peat, animal and vegetable charcoal, and plaster or copperas, in sufficient quantities to absorb the moisture and destroy the odour. We wish to suggest a simple arrangement by which each family can make this mixture for themselves, at a trifling expense. Let there be a cistern made of brick and cement, six or eight feet long, four feet deep, and four feet wide. Upon this let the necessary building be placed. Let there be a door fitted to one end of the cistern, say two feet square. This should be fitted into a wooden frame set in the brick work when the cistern is made. The door may be secured in place by a hasp and staple, on two of its sides. Then deposit near the building three or four horse loads of good peat. If this can be covered to keep it dry, it will be all the better. If peat cannot be readily obtained, take apple tree trimmings, brush, dried weeds, saw-dust, tanbark or almost any vegetable matters and make them into a compact heap, and cover the whole with sods, hassocks and good loam, leaving an opening on one side at the bottom. Thus you have a coal pit. Then set it on fire at the opening, and let it burn slowly, until the whole is completely charred. Then mix it all well together, beating up the sods, if there are any, and use this instead of pea . Where brush and sods are handy, a heap containing three or four loads may be prepared in about the time that it would take to dig and haul as much peat. When all is ready, throw into the cistern enough to cover the bottom six or eight inches deep, then spread it evenly with a long handled hoe, or an iron toothed rake and close the door. Once in four weeks in the warm season, and once in about two months in the winter, throw in a layer two or three inches deep of prepared soil, levelling it as at first. About once a month throw in a pailful of ground plaster. If you have not this on hand, put half a pound of copperas into a pailful of water, and sprinkle it over the surface by means of a watering pot. At the end of a year you may have a cord of the very best manure for corn, trees or garden culture worth seven or eight dollars. In removing it from the cistern, a scoop such as the collectors of night soil use, will be found convenient. This may be readily made of a stout pail, or white lead keg attached to a pole six feet long. The manure should be taken out and laid in a heap, and well worked over with a rake before being used. If it is too wet, add dry peat or good garden loam sufficient to make it dry. If it is offensive, sprinkle it with copperas water, while working it over. The cistern will last many years, and for two days' labour in the year, you may have seven or eight dollars' worth of poudrette, as good at least as the average article in the market.—*N. E. Farmer.*

About Sorghum as a Crop.—Luther Brown, of Hickory Corners, Mich., in the *Western Rural*, asserts that the ground that will produce one bushel shelled Indian corn, will produce four gallons sorghum molasses; and any ground that will produce a good crop of corn, will produce a good crop of cane. And he thinks a ton of cane, grown upon upland, will produce more syrup than the same amount grown upon rich alluvial bottom land. He knows, he says, from experience that sorghum planted beside Indian corn two or three years will so degenerate as to render the seed unfit for use.—*Rural New Yorker.*

The Breeder and Grazier.

Seasonal Hints on the Care of Stock.

The most pinching time for cattle has scarcely yet arrived, the last portion of winter and early spring are usually the most difficult periods to the farmer for adequately providing for the wants of his live stock. It is quite common to see animals in pretty good condition up to February, after which an inadequate supply of nutritious food most seriously affects their appearance, and often long before they can be turned to pasture in our late springs, they become greatly debilitated, and hence the characteristics of mere living skeletons. In this way it is midsummer, and sometimes even later, before they acquire as good a condition as that which they had previous to their going into winter quarters It is no wonder then that the wintering of live stock in this climate, as is too commonly practised, should be attended by such meagre and unprofitable results. The amount of stock to be wintered, should always be in proportion to the amount and quality of food which the farmer can command; always assuming that a certain loss must be sustained in keeping animals below what is usually understood by the terms, "*thrifty condition.*" It is true that very much depends on the breed and quality of the animals; such as are naturally inferior, can never be wintered profitably, and they should be disposed of in some way or other, before our long and rigorous season commences. A due regard to these matters, which every practical man readily understands, would render this important branch of our rural economy much more profitable than it generally is.

The produce of hay, straw, and roots last year was, in most localities, particularly small; and there is too much reason to fear that live stock of all descriptions are already feeling the consequences. It is now too late to augment the produce of the year that is past, but something may yet be done, in many instances, towards making the most of what remains, and otherwise mitigating the evil. For instance, it is found by experience that *mixed* food is economical and keeps an animal in better condition than the same weight of any one of the articles of which it is composed. Hence the practice of cutting into small lengths, hay and straw, and mixing them with chaff and other offal, is a great saving. The same materials, boiled or steamed, with turnips, carrots, &c., with the addition of a little flax seed, form a most nutritious and economical compound In this way cattle may be brought ripe for the butcher during the winter months. We don't mean to say by this, that at the present rates for beef, that cattle can be profitably winter fattened in Canada; our object being simply to suggest ways by which the available store of food can be made to produce the maximum amount of nutrition. Oil-cake, that is the refuse that remains after the oil has been pressed from flax seed, constitutes a most valuable food for cattle and sheep it not only abundantly supplies the nitrogenous elements, but it acts medicinally on the stomach and intestines, and thereby promotes the healthy action of the animal functions. It is fortunate that this useful substance is now produced in this section of the Province: oil-mills being now in full operation in Toronto and Woodstock. The cake that we have seen from the former place is of the best quality, and sold at the rate of $30 a ton. This is only about twice the price of ordinary hay, to which it proves a most valuable auxiliary. Three or four pounds of oil-cake a day, given to a cow or ox, has a most beneficial influence in improving the general tone of the system, and, besides, contributing directly the most nutritious ingredients, it is found economical in connection with hay, roots, and all other ordinary cattle food. It is particularly beneficial to calves and young stock; its effects in producing mellowness of the skin, or what is termed "good handling," are obvious even to the casual observer. We would certainly entreat our readers who possess good stock, to feed a little oil-cake, or flax seed, which is the same thing in another shape, in connection with turnips, carrots and other roots. As spring approaches such mixed food is truly invaluable, after the long period through which live stock have had to subsist upon dry and comparatively innutritious substances.

One or two other conditions must be mentioned, as exercising great influence on the thrift of stock and their economical management: protection or *warmth*, and *cleanliness*. It is now, when neglected, too late to improve farm buildings, for the present season; but where necessary, a little observation and ingenuity can execute temporary arrangements to prevent, or, at least, mitigate draughts, and generally promote the warmth and comfort of animals. This too will tend to economise food, as it is well known that comfortably housed stock do better on less food, than when exposed to cold and damp. A comparatively small amount of provender, when consisting of different substances, can be made to sustain animals in a thriving state, provided the physical conditions now adverted to be carefully observed. Warmth, cleanliness, regularity in feeding, and a sufficient supply of good water, will enable the farmer, with a moderate amount of food, to get his stock through our longest and severest winters with satisfaction and success.

Short-horn Intelligence.

The following extract from an article in a recent number of *Bell's Weekly Messenger* will be read with interest, especially by our Short-horn breeders. We had the pleasure, four years ago, of seeing the splendid herds of Col Towneley and Mr. Eastwood, of Barnly, Lancashire, and certainly no representation, either by pen or pencil could give an adequate idea to a stranger of the advanced type of breeding,—the early maturity, feeding qualities, and perfect symmetry of their best animals. The prices which some of them have obtained may be regarded as almost fabulous.

"The highest priced animal at the Towneley sale, Royal Butterfly's Pageant, has brought Mr. Eastwood, of Thorney Holme, a roan bull calf by Second Duke of Wharfdale (19,649). The dam cost 590 guineas, and Mr. Eastwood has had her nine months. Add a proper interest on £619 10s. to that sum, and the cost of the heifer's keep for three-quarters of a year, and some estimate may, perhaps, be formed, or conjectured, of the money value of the 'little stranger.' Royal Butterfly's Pageant, by Royal Butterfly (16,862), belongs to the Barmpton Rose family through both parents. Her mother, Pageant, by Count Glo'ster (12,650), of the 'Chaff' tribe, is grand-daughter of Duke of Glo'ster through sire and dam.

'The paragraph immediately above was ready for the printer when a letter reached us from Mr. Eastwood, announcing the death of Royal Butterfly's Pageant. With no feigned regret do we record this sad calamity. It is a heavy loss to Mr. Eastwood in more than a mere money way, and is a loss to the country as well. We hold that short-horn breeding can never assume the character which is due to it until short-horn breeders regard superior short-horns, wherever bred and whatever their blood, as contributing, not simply to the personal pleasure or personal profit of their owners, but also to the prosperity and credit of the nation. The power of one really well descended animal upon the future prospects of its species, and, accordingly, upon the commercial relations of agriculture, is greater than superficial thinkers suppose; and it is the continual sense of this power that stimulates, more than a sordid hope of gain, the energies of the better stamp of breeders, and imparts a moral dignity to their labours. Mr. Eastwood informs us that Royal Butterfly's Pageant went on apparently well for several days after calving, when inflammation of the mouth of the womb ensued, and she ultimately dropped down dead. The loss of the mother enhances the value of her offspring. He is an excellent calf, and, if his life be spared beyond the term of his dam's, is destined, in a herd like Mr. Eastwood's, to exercise a most impressive influence. Under such a course of generous but judicious "education" as Thorney Holme supplies, the fine qualities of his ancestors may be expected to be

amply developed; and we sincerely hope they will. Besides the double cross of Duke of Gloster through his dam, the calf inherits no fewer than three repetitions of that cross through his sire 2nd Duke of Wharfdale. Mr. Eastwood, it will be remembered, bought at the Townley sale, in addition to Royal Butterfly's Pageant, Barmpton Butterfly by Royal Butterfly for 350 guineas; Double Butterfly by the same bull for 300 guineas; and Duke of the Butterflies thirty-three days old, by Duke of Wharfdale (19,618) for 160 guineas. Three of his purchases were of the Barmpton Rose tribe. Double Butterfly belongs to the Killerby family of Madaline by Marcus; but the finishing crosses, the splendid brothers Master Butterfly and Royal Butterfly, Barmpton Rose bulls, impart Mr. Eastwood's favourite blood with peculiar emphasis."

We add another extract from the *Messenger* in reference to M. Thury's plan for producing the sexes at will:

"Mr. Bruere says that he tried the Thury plan, wanting females, and, except in one instance, males came. There was, however, another case in which twins of opposite sexes were produced. We fancy that people will return to the old way of thinking, and, putting Professor Thury on one side conclude that some animals are prone to bring forth or engender males, and others females; or that an eminent living physiologist may conjecture rightly when he suggests that the several ova are already of one or the other sex, and that the fœtus comes *necessarily* according to the sex of the ovum producing it. It is conceivable that means might be adopted by which sex should be, not *determined*, but *ensured:* some means of eliciting the female or the male ovum, and drawing it, in preference to one of the opposite sex, forth from its tomb of dormant life; but the secret does not seem to have been discovered by M. Thury."

Flax Seed and Flax Bolls as Food for Stock.

We some time ago stated that the *Irish Farmers' Gazette* strongly advised its readers to use the above articles for feeding purposes. Our able contemporary continues to give "line upon line and precept upon precept," in reference to this matter. We quote part of a recent article which well deserves perusal:

We have sometimes had occasion to advise a man to give a "bit of cake" to some unthriving beast, but our advice has been answered with a shrug of the shoulders, and an "oh! oil cake is all very well for big men, but poor farmers cannot afford such things;" while that very man had but a short time previously left forty or fifty pounds worth of flax seed in the steep hold where he had watered his flax crop. Now, a man who really understands the value of flax seed or flax bolls would as soon think of selling the coat off his back as dispose of those articles, if he has cattle and sheep to eat them, unless he has a decided overplus after satisfying his own requirements. Even the chaff of the bolls is of value, as may be easily ascertained by putting it in a box fitted with a close lid, and pouring boiling water over the chaff, allowing it to remain covered up for ten or twelve hours. Put a little salt among it, and if given even in this state to cows, it will be found to have the effect of increasing their yield of milk. This fact—the value of the chaff of flax bolls—was pointed out many years ago by our old friend, Mr Niven, of Chrome Hill, near Lisburn and our own experience has corroborated his opinion. Do not, therefore, allow even the chaff off flax bolls to be thrown away, for depend upon it, if this is done, much really good feeding material is thrown away. Of course, if it is mixed with boiled turnips and other materials such as are frequently given to milch cows, so much the better; but even the chaff itself ought not to be despised as a thing without value. Flax bolls when put through the mill, should not be divested of the chaff, and mill seeds or oat husks should be run through along with it, as such prevent the stones from being clogged, and by absorbing the oil, become valuable as feeding materials.

A mixture of crushed linseed ground corn and cut straw was prepared by Mr Marshall Yorkshire, in the following manner:

"The crushed linseed is boiled in water—1lb. of linseed to 1½ gallon of water—for two or three hours. The ground corn and chopped straw are mixed together first, and the boiled linseed is poured over them and mixed with them, on a floor with a shovel; the heap allowed to stand one or two hours, and given while yet warm; for if allowed to stand a few hours the mass ferments and quickly turns sour. Hence the necessity for the strictest cleanliness in all the vessels and implements made use of."

The quantity given daily to fatting heifers, weighing 6 cwt., was 2 lbs. of crushed linseed, 5 lbs. of ground corn, 10 lbs of chopped straw, and about 80 or 90 lbs yellow bullock turnips, with a little long straw in the racks at night. The cattle were fed four times daily, alternately with the food prepared as above and the raw turnips.

Mr Warnes who experimented largely with linseed as cattle food, directs that the linseed "be first reduced to a fine meal, one pound and a half of which, stirred with 12 lbs of water while it is boiling, with 4½ pounds of barley, bean, or pea-meal, and given to a bullock of between 40 and 50 stone, every day, will, in addition to Swedish turnips, be quite sufficient, or, perhaps, more than he would be inclined to eat. Linseed meal may also be boiled and mixed with boiled turnips, mangels, &c., and given with advantage to fattening bullocks, and it may be also mixed with pulped turnips, in the proportion of one or two pounds per head, according to the size of the beasts, and the purpose for which they are intended. In fact, a man with plenty of flax bolls in his possession can do almost anything with stock, and we would advise all who have a supply of that article, and beasts so eat it, to think twice ere they send it in its natural state to market. Let them send it on four legs, and get all the benefit possible out of it for their own advantage, in which we may include a very decided improvement in the quality of their farm-yard dung; abundance and good quality of which is still the mainstay of farming, notwithstanding all that is said, or can be said, in favour of "artificials."

Swine as Stock.

Few domesticated animals are more universally found than swine; and so it is of their flesh when the animal is fattened; it is used in some way in almost all families, if not in all, when but half fattened it is often slaughtered, and found better than that of any other farm animal's flesh in a similar condition. It is a maxim that animals should be well fed from their birth upwards, and of none is this more emphatically true than of swine. The "swill-pail breed," as it is called, goes to confirm this maxim. But it is not true, as affirmed by some, that any breed is a good breed, provided it be well fed, for there is a difference, and, therefore a choice in breeds of hogs, as of other animals of the farm.

Swine multiply rapidly; two litters in a year, of eight or ten pigs each, may be ordinarily raised from a sow, *and even more, but two are enough.* Sixteen pigs annually from a sow, kept as a breeder, are said to be better than twenty four. Where the number is large the pigs are generally puny things, for they are not sufficiently fed from the sow to grow well. There may be exceptions to this rule, but generally it will be found true. During the suckling season the sow demands feed that is suitable to making milk; whey, milk, and even water when these are not to be had, —thickened with meal, may be used for this purpose. On weaning the pigs, dry, heating feed should be used for the sow. The pigs, when weaned, should be fed with cream, milk, or whey, with a little meal stirred in. They will soon, however, be able to "rough it," as the phrase goes, with store hogs, of which they become a part.

It is generally acknowledged that swine produce the most flesh meat for the feed consumed, with the least quantity of bone, of all the farm animals, and also that they feed on more that would otherwise be entirely worthless, than other farm stock. It has been said that any family may keep one hog or more, with but little feed in addition to the waste or garbage of the household and this is one reason why the hog is so generally found. There is hardly any green thing that swine will not feed upon, thrive and grow. In the store condition, raw feed is generally given; cooked feed in the fattening season is said to make flesh faster than uncooked, though it is claimed by some that the meat is not so good. The Western pork is mostly made of hogs fed on uncooked feed, and the flesh, as maintained by some, is firmer, and the pork sweeter to the relish than that fed on cooked feed. This is a subject worthy of consideration by farmers.

While cattle and sheep are only kept to any extent on cultivated farms, the hog, on the contrary, is domiciled near almost every dwelling for reasons already stated. There is no meat that so small a piece will prepare so large an amount of vegetables for family use, as pork; hence, another reason for the universality of swine. On dairy farms, hogs are generally kept as consumers of whey and sour milk. These liquids, with a little meal, produce a large amount of meat for families and for the market, and this too from much that would otherwise be thrown away as waste. This serves to enhance the value of swine as farm stock. A poor man that has a small garden, and keeps a cow, can keep a pig or two, and thus produce meat for his family from what would other wise be thrown away, almost sufficient for their subsistence, so far as animal food is concerned. A part is used fresh, with the offals, part is salted, a part is cured as bacon, and part is made into sausages, and besides, the lard is used as an important article in cooking a great variety of things for the table. For the labouring population, who learn to live economically from necessity, no other stock animal is so important as the hog. It is emphatically a home production, converting what would otherwise be lost into what saves money for other family uses. It would be difficult to see how the poor could live as well as they now do, but for the pig. There are those who denounce this animal and the use of its flesh for dietetic purposes; yet most of them consume swine's flesh or lard in some form. It will be a long time before dietetic reformers, so called, will succeed in expelling swine from among farm animals, or their flesh from the table. In its nutritious qualities pork is ranked with beef as 21 to 26; to mutton as 24 to 29; and to chicken as 24 to 28. Sucking pigs at the age of three or four weeks, are deemed luscious food by some, but it is rather indigestible; therefore, not well adapted to the stomach. Of breeds there are many: they are quite various, concerning which breeders and feeders differ widely in choice. Between the Suffolk and the Yorkshire, or Chester County, the difference is wide—*some preferring the one and* some the other, while others still prefer grades derived from crossing the larger breeds with the smaller to either. It is easy for all to be suited in this respect in these days of improvement. Those who prefer Chesters or Yorkshires to Suffolks or Berkshires can be suited, as those can who prefer grades, as some do, obtained by crosses of these different breeds.—*Mass. Plowman.*

☞ A hog was recently sold in Atchison, Kansas, which weighed 1,122 pounds net. It brought ten cents per pound, making $112.20.

☞ An honest farmer thus writes to the chairman of an English agricultural society:—"Gentleman, *please put me down on your list of cattle for a bull.*"

☞ A noted racer, "Blair Athole," has lately been sold in England for 7,500 guineas, or about $37,000—which is "by far the largest sum," says Bell's Life, "given in modern times for a race-horse."

A Judge of Pork.—"No man was better calculated to prejudge pork than my husband was," says Mrs. Partington; "he knew what *good hogs were, he did,* for he had been brought up with 'em from his childhood.

Monster Hog.—Mr. Thomas F. Tibbits, of Little River Mills, Victoria County, N. B., killed a hog recently, aged two years, which weighed seventeen hundred and eleven pounds. We have seen nothing recorded to equal this.

A Heavily Stocked Farm.—At a late meeting of the East Lothian Agricultural Club it was stated that one of its members then present, Mr. Hope, of Fenton Barns, England, was keeping, in 1863 upon a farm of 653 imperial acres, only 98 of which were in turnips, 1,200 sheep, 90 cattle and one hundred pigs.

Large Hogs.—Within the past few days our farmers have been bringing into the market great quantities of well-fatted pork, for which high prices have been readily paid. Mr. John Jenner, of the Township of Raleigh brought in one hog which alone weighed 664 lbs., and brought in cash $14. Mr. Robert Lowe, of the Kent Mills, being the purchaser. The hog was bred by Mr. Pardro, of Raleigh, and fed by Mr. Jenner. More recently Mr. Peter Grey, of Harwich, brought a hog to market which weighed 657 lbs., for which he was offered $41.61. Kent forever.—*Chatham Planet.*

Price of Fat Stock in England.—Sir A. de Roths-child's annual sale was held on the 7th ult. at Aston-Clinton, Bucks, and was attended by Messrs. Slater, Cowell, Shopland, and other metropolitan butchers, also a large number of butchers from surrounding towns and districts. The Highland Scots, 3-year olds and 4 year olds, averaging £29 each, Short Horn oxen and steers, 2½ year olds to 4-year olds, ditto heifers and cows, 3-year olds and upwards, £37 13s. 6d. a piece. The sheep and pigs excited much competition. Two-shear Oxford Downs averaged 71s.; ditto Sussex Downs, 57s. Berkshire and cross-breed pigs realized 10s. to 11s. per score of 20 lbs. Some choice specimens of cross-breed pigs (small white and Berkshire) made 12s. per score. Total proceeds of sale, over £2,500.

Some Hog.—Mr. Editor,—I wish you as well as the public to know that we can raise some big hogs down this way. Mr. Elisha Slipp killed a hog, twenty months and seven days old, which weighed, *eight hundred and sixteen pounds.*—*J. S. V., in Colonial Farmer. Hampstead, Dec.* 26, 1864.

Aged Pony.—Lord Nelson, a favourite pony, the property of Mr. Palin, of Stapleford Hall, Cheshire, was found dead on Saturday morning last. He had attained to the almost unprecedented age of 43. A few days before his death he could not be caught when turned into the fields, and few fences could stop him The day before his death he seemed quite well and was grazing as usual Some straw had been placed in the corner of the field to prepare for thatching, upon which he laid himself down and died, apparently without a struggle. He was perfectly sound in wind and limb to the last, and had not a windgall about him.—*Manchester Courier.*

Siberian Ponies.- The ponies are always in prime condition for work. Little or no attention is paid to them in the stable or out of it, but they have always as much corn as they can eat, and they are notoriously good feeders. They are capable of a great amount of continuous hard work. On an average every one of them travels two stages a day, both ways, for they always return to their own station. That is equal to about forty miles with a loaded carriage, and the same distance back, with an empty one, on the same day. When the roads are tolerable they go at a good speed. We have travelled eighteen miles at a stretch within an hour and a half. The roads seldom admit of this rate of travelling, however, being generally, saving the bridges and the original cutting through the woods, left pretty much to nature. —*The Siberian Overland Route from Pekin to Petersburgh. By Alexander Mickie.*

What Hogs to Winter.—A. Hinsdale, of Ohio, in an article in the *Ohio Farmer*, gives the following very sensible advice: Get a good breed of medium-sized hogs that will fatten at any age, such as will weigh from 300 to 400 pounds when matured—if you have no cheaper feed than corn. Keep over winter none but breeding stock. Be sure and keep enough of that, for if you have too many pigs you can always do something with them in the spring. Have your pigs come about the first of April. Keep no more than you can keep well growing. Be sure and have good pasture for them. Make all the pork you can from cheaper feed than corn—which must be the base of fattening.

I presume that when corn is over fifty cents per bushel, it will pay well to grind and cook it; but I have not tried it fairly Fatten well, and kill about Christmas, and they will ordinarily weigh about 200 pounds of as nice pork as was ever put into a barrel. I think that when corn is fifty cents per bushel, to make pork raising a good business it should bring $4 per hundred, and for every ten cents advance on corn, pork should advance $1.—*Rural American.*

Linseed and Straw,—In the too probable scarcity of food for stock masters during the coming winter and spring, it may be of great public utility that I make known a recipe once given me by a grazier, and which, when I kept two or three cows in a stable, I put to full and satisfactory proof. By the help of either of this or of the waste from the kitchen, mixed with a small quantity of bran and wheat straw, I was saved the necessity during twelve years of cow keeping of buying a single truss of hay. And during one winter, when hay was selling a 6*l.* a ton and when it cost the farmers and milkmen 12*s.* a week for each cow, together with straw at 30*s.*, cost me only 9*s* a week; and they were in better condition than any in the place, and gave as much milk as any. Let a peck of whole linseed be steeped for 48 hours in 54 gallons of cold water, and let this be occasionally stirred, and at the end of that time the water will be thickened, my informant said, to the consistency of arrowroot. I must say, however, that his arrowroot must have been rather thin. Still, so much of the oily and glutinous matter escapes into the water, that if you wish to warm it, boiling, because of the froth raised, is out of the question. I cannot, however, see any need of boiling or even simmering it. My opinion is that if those 54 gallons thus saturated be mixed with a quarter of a ton of straw, or even half a ton, it will make it equal to the best hay. My informant stated that he and the man who taught him had sometimes fattened a bullock when put up in pretty good condition, with no other food than this. Can it be that the nutritious and fattening particles are extracted in so fine a form that the system of the animal immediately takes them up, and thus derives from them full and immediate benefit; whereas a vast portion of the oil-cake and coarse barley meal passes through the animal in an undigested form?—*R. in Ag. Gazette.*

Rural Architecture.

Barns.

Barns often become open and out of order, and decayed, by simple neglect. If the boards become loose they are allowed to remain so until the winds rattle them off. They twist and curl up at the edges, and no pains are taken to replace them. The open cracks thus left allow the winds to sweep through to the discomfort and consequent want of thrift in the domestic animals which they are intended to shelter. Barns, something like the one represented in the annexed figure, may be occasionally seen in various parts of the country, and have become so simply by the want of little attentions. The underpinning was hurriedly built or allowed to get out of order, and the sills consequently settled down and became decayed, and the whole building was distorted. Heaps of manure were allowed to accumulate around the bottom, and thus accelerated the decay. When a

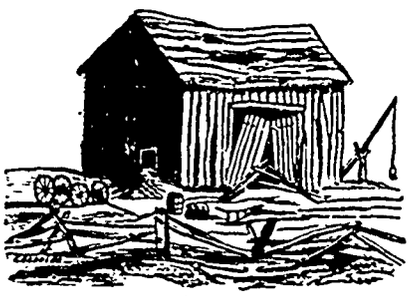


Fig. 1.

shingle was loosened, the rain passed in and rotted whole patches of roof around it. The distortion of the frame threw the doors off their hinges or caused them to sag and drag on the ground, soon reducing them to the appearance shown in fig. 1. This continued neglect is the only reason why this barn does not look so well as the one shown in fig. 2, which has been carefully attended to, and kept in good order.

Some years ago we came into possession of a place on which a barn stood considerably resembling the one shown in the first figure, having been built over twenty years. The roof showed decided weakness in the back, and hung down in the middle, besides leaking. The vertical siding had in many places gaped open an inch wide, and part of the sills were rotton by contact with earth and manure. We were advised

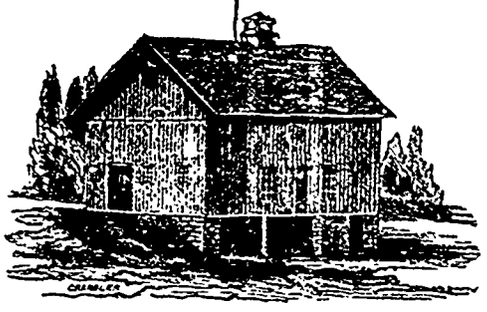


Fig 2

to throw this barn aside and build a new one, but concluded to repair it. It was raised a few feet from the ground by means of screws, new sills were inserted where necessary, and an underpinning seven feet high placed beneath them, thus giving a fine winter shelter or stabling for cattle. The old shingles were torn off, the rafters replaced in position, the timbers screwed straight, and the siding all round made perfectly tight by nailing on battens an inch thick and three inches wide, slit for this purpose The cost of all these repairs was about one third the amount required for a new barn. The underpinning, the barn being over fifty feet long, cost a little less than a hundred dollars—the sand being found on the premises, while the stones were drawn from the adjacent fields, to their decided improvement. The battens did not cost more than one-fourth the expense of ordinary siding, while they gave the whole a neat appearance, and with the siding were stiffer than boards alone. The whole exterior then being washed with a mixture of waterlime, sand and salt, coloured lightly with brown ochre, has nearly the appearance of a new structure, and is but little inferior in appearance to the barn shown in the second figure.—*Country Gentleman.*

☞ A Farm, with its buildings, should be a finished section of the landscape of which it forms a part, or an attractive point within it. It should be complete in itself—not dependent upon accessories to support it.

The Dairy.

Milk and Dairy Arrangements.

In our last number we condensed the first portion of a very valuable paper on the composition and adulteration of milk, from the pen of Dr. Voelcker, in the *Quarterly Journal of Science;* and we now proceed to give the essence of the remainder, relating chiefly to the circumstances *affecting the quality and quantity of milk*, and the arrangements of the dairy.

The period of the milking at which the sample is selected must be taken into account, in order to estimate properly its quality. It is well known that the milk which is first drawn from the udder is poor and thin, yielding little cream, compared with what follows; and that the last drawn—the "strippings"—is exceedingly rich in oily or buttery qualities. This fact is in perfect accordance with the belief founded on experience, and refined chemical experiments have demonstrated it beyond the shadow of a doubt. Hence, one of the most important rules of good milking is to empty the udder *thoroughly* at each operation.

This superior richness of the last-drawn milk has an important bearing upon a question that has for some time engaged the attention of dairymen on the other side of the Atlantic as well as on this. "The new American cow-milking machine fails to strip the udder, according to the united testimony of all who have tried it. Such a fundamental defect must militate against its general introduction into England, and has led to its disuse in the United States, as I am informed by the Secretary of one of the most influential State Agricultural Societies."

Distance from the time of calving must be taken into consideration. The first milk is thicker and yellower than ordinary milk, coagulates by heating, and contains an unusually large quantity of casein or curd. In the course of a week or ten days from calving, the milk assumes its ordinary appearance, and if the animal have good dairy qualities, and be kept on succulent food, the supply will be copious for many months, gradually diminishing, however, after a certain period, which is unequal in different cows, till the animal runs dry.

Season of the year and food.—In the spring and early part of summer milk is abundant, and of good flavor As the season advances the supply is diminished, but becomes richer in butter. The same quantity of milk which, in August, scarcely yielded 3 per cent. of pure butter and 3 per cent. of curd, was found, in November, to produce 4½ per cent. of butter and 3½ per cent. of curd. "A series of observations, made for the purpose of ascertaining the variations in the quality of the milk on the same farm throughout the year, convinced me that the supply of food was chiefly concerned, the richness or poverty of the diet being in all cases represented by the quality of the milk yielded." M. Struckman, of Wartburg, in Germany, in 1855, published some feeding experiments, very carefully made, of which the following is an analysis:—

Four good and four bad cows were selected, and the diet included brewers' grains, mangolds, oat straw, and rape cake, "Most milk was produced by

6½ lbs. of rape cake, 36 lbs. of mangolds, and 25 lbs. of oat straw daily to each animal." A reduction of 9-10ths lb. of rape cake led to a decrease of 6·55 litres per cow daily; thus, 1 lb. of rape cake represents an average of 1·75 lb. milk. A diminution of 6 lbs. of grains was followed by a reduction of 6·72 litres of milk; thus, 1 lb. of grains appears to have produced ¼ lb. of milk. When 18 lbs. of brewers' grains were replaced by 4½ lbs. of rape cake, the yield of milk was nearly the same; accordingly, 1 lb. of rape cake was equal to 4 lbs. of grains, in its power of producing milk. Rape cake produced milk richer in butter; grains, however, produced butter of more delicate flavor. The superior cows were found throughout the experiments to be more influenced by changes of food than the inferior; a fact which the breeder and dairymar would do well to remember.

Morning and evening milk.—Popular opinion ascribes to the morning's milk a superiority in quality, but more accurate observations show that the quality of milk depends greatly on the quantity and richness of the food supplied the animals some hours before milking. If the food during the day has been plentiful and good, and the evening's food innutritious and scanty, the evening milk is of superior quality to that drawn on the following morning. Out of thirty-two samples of morning and evening milk, the author found the morning's produce to be richer in four cases and poorer in eight cases; whilst in four instances there was no perceptible difference.

The breed and size of the animal must be taken into account in estimating its dairy qualifications. As a general rule, it may be safely assumed that cows which show a decided aptitude to fatten should not be selected for pure dairying purposes. Hence, many Short-horns are well known to be poor milkers, sometimes hardly producing sufficient milk to bring up their own calves. This remark, however, requires limitation, as there are families of the pure Durhams that, in addition to early maturity and aptness to fatten, are really good dairy stock, a fact well known to the London milkmen. Such animals, when they become dry, realize a handsome sum from the butcher, for whose purpose they are readily and cheaply prepared.

Small breeds, or small individuals of large breeds, usually give a better quality of milk, from the same food, than large ones. The larger animals, giving a better return in quantity, and furnishing more meat for the butcher, are, however, more profitable. The Alderney, the small Kerry cow, and miniature Breton, produce extremely rich milk in quantity, proportioned to their size and the amount of food consumed. In dairy districts the Ayrshires are deservedly esteemed, for they seem to possess, more completely than other breeds, the power of converting the elements of food into cheese and butter; but they are proverbially slow fatteners, and therefore inferior for the shambles. It is too well known that the age, health, and constitution of animals influence materially the quantity and quality of milk, to need further illustration.

Dairy Arrangements.—A dry and airy situation should be found, and as far as possible a uniform temperature throughout the year secured, a condition very difficult to obtain in a Canadian climate. A northern aspect is, perhaps, the most desirable, but dryness and effective ventilation are the most important requisites. An underground dairy is too frequently damp, and seldom admits of sufficient currents of air. A roof made of straw (thatched) is the best non-conducting substance, but shingles, well laid in mortar, will be found more available in this country, as a thatched roof would be peculiarly exposed to fire. Thick walls, made of brick or stone, or a hollow, wooden wall, filled in with sawdust, which would be drier, are required for a good dairy-room. An equable heat being necessary in winter, it is best supplied by hot water pipes, as in gardeners' hot-houses. In this climate, however, such pipes would be liable to burst from the effects of frost, and a sort of challenge heater stove would be found more applicable. Too much heat favors decomposition, and too little is unfavorable to the rapid operation of the cream. A temperature not higher than 65° nor lower than 60° Fahr. is most conducive to the rising of the milk globules. On no account should the temperature be allowed to fall below 55°, and a uniform degree of 60 should be maintained as far as is possible, under all circumstances.

Benches of slate or stone are superior to wooden ones; if the latter are used they should be painted, that the spilled milk may be the more readily removed. Milk is apt to remain in porous wood and generate an active and deleterious ferment. For the same reason, milk pails made of bright tin are decidedly better than wooden ones. Milk pans should be constructed of glass, tinned iron, or well-glazed earthenware; all porous materials, for the above reason, are objectionable. Zinc pans are said to throw up more cream than any other material; but zinc is readily oxidized, and, like brass and tinned copper, however unobjectionable when kept clean, it may, in the hands of careless dairymaids, furnish enough poison to injure the health of the consumer. Glass is decidedly the best material, but, from its peculiar liability to break, is more expensive than tin. Deep pans are objectionable, as the quicker the cream can made to rise the sweeter it will be when used for churning and according to Sennart's experiments, the greater also will be the yield of butter Shallow vessels are better than deep pans for another reason. If the milk is drawn from the cow into a shallow tinned iron pan, the milk is soon reduced from 90° to 60°, and then in a good dairy, may be kept from thirty-six to forty-eight hours, at a season when, in deeper vessels, it would soon turn sour.

Cleanliness.—In no department of human industry is cleanliness more emphatically a virtue than in everything connected with the dairy. Too much attention cannot be bestowed upon the room itself, as well as upon the pails, pans, and other utensils.

"The injudicious and wasteful employment of water must be deprecated. However convenient a good supply undoubtedly is, it must not be forgotten that a damp floor and moist atmosphere are to the last degree injurious. Whatever water is used should be scalding hot, and its evaporation assisted by a current of air. All the utensils should be washed without delay, instead of being set aside until wanted. The dairymaid should not show her zeal for keeping the dairy clean by sprinkling the water about. Above all, she should prevent men or women entering her domain with dirty shoes, or in any way bringing dirt into the dairy."

There is, perhaps, no department of Canadian farming that requires a greater change than the management of dairy products. Our butter and cheese might readily, by using the proper means, be as much improved in quality as increased in quantity; and he earnestly recommends the whole question to the serious consideration of enterprising individuals, and for discussion and practical treatment by the members of Agricultural Societies.

Condensed Reports of American Cheese Factories for 1864.

Holmesville Factory, Norwich, Chenango Co.—Average number of cows, 400; amount of cured cheese, 114,216 pounds; average weight of each cheese when sold, 90 pounds; average price got for cheese, 20.62c. per pound; 9.9 pounds of milk required for one pound of cured cheese.

Miller's Factory, Constableville.—Average number of cows, 530, amount of green cheese, 193,696 pounds; cured, 183,111; average weight 122 pounds; average price per pound, 22.77 cents; pounds of milk to one of green cheese, 8.97; to one of cured, 9.54.

Collins' Factory, Erie Co.—Average number of cows, 851, amount of cured cheese, 219,608 pounds; average weight, 108 pounds; pounds of milk to one of cured cheese, 9.85: average price per pound. 20.73 cents.

Hawleyton Factory, Broome Co.—Average number of cows, 265; amount of green cheese, 73,804 pounds; cured, 68,660 pounds; average weight, 97¼ pounds; pounds of milk to one of green cheese, 8.7; average price per pound, 21.8 cents.

Coal Creek Factory, Herkimer Co.—Average number of cows, 475; amount of cured cheese, 176,000 pounds; average weight 103¼ pounds; pounds of milk to one of cured cheese, 10; average price per pound, 18.8 cents.

Stevens' Lowville Factory, Lewis Co.—Average number of cows, 750, amount of green cheese, 217,690 pounds, cured, 207,121; average weight 147.19 pounds; pounds of milk to one of green cheese, 9.66; to one of cured, 10.16: average price per pound, 21.6 cents.

Charleston Factory, Montgomery Co.—Average number of cows, 335; amount of cured cheese, 98,101 pounds; average weight, 96.36 pounds; pounds of milk to one of cured cheese, 9.84, average price per pound, 22.25 cents.

Nelson Factory, Madison Co.—Average number of cows, 575; amount of cured cheese, 199,884 pounds; average weight, 101.5; pounds of milk to one of cured cheese, 9.78; average price per pound, 19.69 cents, and 154 cheese unsold.

West Schuyler Factory, Herkimer Co.—Average number of cows, 550; amount of cured cheese, 196,916 pounds; average weight, 120 pounds; pounds of milk to one of cured cheese, 971; average price per pound, 21.9 cents

Springfield Centre Factory, Otsego Co.—Average number of cows, 300; amount of green cheese, 145,143 pounds; cured, 137,886 pounds; average weight, 97 pounds; pounds of milk to one of green cheese 9.97; average price per pound, 21.29 cents.

Mile Strip Factory, Madison Co.—Average number of cows, 360; amount of cured cheese, 122,105 pounds; average weight, 104 pounds; pounds of milk to one of cured cheese, 9.85; average price per pound, 21.14 cents.

Smith's West Exeter Factory, Otsego Co.—Average number of cows, 500; amount of cured cheese, 172,894 pounds; average weight, 105 pounds; pounds of milk to one of cured cheese, 10.07, average price per pound, 21.75 cents.

Ellison's Brookfield Factory, Madison Co.—Average number of cows, 200; amount of cured cheese, 64,999 pounds; average weight, 100 pounds; pounds of milk to one of cured cheese, 8.31; average price per pound, 24¼ cents.

Bennett's Orwell Factory, Oswego Co.—Average number of cows, 250; amount of cured cheese, 72,557 pounds; average weight, 104 pounds; pounds of milk to one of cured cheese, 10; average price per pound, 21.7.

Bunyan's North Litchfield Factory, Herkimer Co.—Average number of cows, 375; amount of cured cheese, 127,275 pounds; average weight, 94 pounds; pounds of milk to one of cured cheese, 9.9; average price per pound, 21.7.

Adams' Deansville Factory, Oneida Co.—Average number of cows, 275; amount of green cheese, 89,426 pounds, cured, 83,094; average weight, 99 pounds; pounds of milk to one of green cheese, 9.76; to one of cured, 10.38; average price per pound, 21.33.

Deerfield and Larcy Factory, Oneida Co.—Number of cows, 1,052; amount of cured cheese, 295,115 pounds; average weight, 155 pounds; pounds of milk to one of cured cheese, 10.26; average price, 20.7.

Stanley's Adams Factory, Jefferson Co.—Average number of cows, 400; amount of cured cheese, 134,050 pounds; average weight, 158 pounds; pounds of milk to one of cured cheese, 9.9; average price per pound, 18.8.

Whittemore's Scriba Factory, Oswego Co.—Average number of cows, 400; amount of cured cheese, 100,744 pounds; average weight, 97 pounds; pounds of milk to one of cured cheese, 9.35; average price per pound 20 cents.

East Berkshire Factory, Franklin Co.—Number of cows, 500; amount of cured cheese, 101,539 pounds; pounds of milk to one of cheese, 10; average price per pound, 21 cents

Oneida Lake Factory, Madison Co.—Number of cows, 270; amount of cured cheese, 55,422 pounds; pounds of milk to one of cured cheese, 10.3; average price per pound 21 42 cents.

Ingraham and Hustis' Adams Factory, Jefferson Co.—Average number of cows, 600; amount of cured cheese, 142,518 pounds; pounds of milk to one of cured cheese, 9.95 pounds; average price per pound, 23.09 cents.

Gilbert's Mills Factory, Oswego Co.—Average number of cows, 350; amount of cheese, 110,465 pounds; pounds of milk to one of cheese, 10.1; average price per pound, 18.97 cents.

McLean Factory, Tompkins Co.—Number of cows, 937; amount of cured cheese, 302,084 pounds; pounds of milk to one of cheese, 9.6; average price per pound, 22.5 cents.

Wright's Whitestown Factory, Oneida Co.—Number of cows, 600; amount of cured cheese, 204,025; pounds of milk to one of cured cheese, 10.05; average price per pound, 22.7 cents, so far as sold.

Some of the reports are not included in the above abstracts, because lacking some of the desired statistics.

Butter from one Cow.—"Caroline," who has only one cow, relates in the *New England Farmer*, how she makes butter from the milk:—"I have a nice, clean, cemented cellar, easily ventilated, 'into which no intruding mouse dare peep,' and on this cool cellar bottom I place four pans for night's milk and three pans for morning's. I skim the cream off before the milk changes [the length of time depends upon the temperature, &c.], and put it into a stone jar, which, in my opinion, is far preferable to any kind of metal, and throw into the cream a handful of salt and stir frequently. Once a week I put the cream collected into a crank [thermometer] churn and churn about one-half or three-fourths of an hour. When the butter is gathering I drop into it the yolk of a new laid egg The yolk being composed of albumen and a yellow oil, essentially the same elements as the butter, they readily unite, and the quality and appearance of the butter is very much improved. I do not weigh my salt—perhaps it is a good practice to do so. I work over the butter twice, and lump it up for the table."

Sheep Husbandry.

How to Cure Sheep-Killing Dogs.

Some time ago the *Country Gentleman* recommended the following as a sure remedy for the disease known as *sheep-killing* in dogs:—

"Take of beefsteak sixteen ounces; strychnine four scruples. Divide the beefsteak, or "tit bit," into sixteen pieces; take a small penknife and make a small incision into each one of them; into the orifice thus made, insert one-sixteenth of the above quantity of strychnine, (which will amount to five grains), drop a few of these medicated "tit bits" on the outside of the sheep pen as near the tracks of the "bow wow" as possible. A dog with five grains of strychnine in his stomach was never known to meddle with mutton, or ever again disturb the slumbers of any one by virtue of dog melody."

In a recent number of the same paper, a correspondent expresses surprise at the appearance of such a recommendation in so influential a paper, and goes on to say:—

"The result in this town a few mornings after was five dead dogs in one neighbourhood, one of them a farmer's. Several weeks after this an article appeared over the signature of S. Edwards Todd, advocating the same thing; the result of this was seven dead dogs one morning, early in the next week, and if Mr. Todd had lived in this vicinity, I should not have been surprised to have heard soon after that he had found some morning a flock of dead sheep or other favourite stock in his enclosure, as many were the curses that I heard heaped upon him, and by those who were not sufferers. Would it not be well for those who contemplate acting on this advice, to stop and consider some of the consequences that *might* happen to such a supremely selfish sneak in human form? The crime in this State is a state's prison offence; it is true that positive evidence of the crime is sometimes very hard to be obtained, yet circumstantial evidence is generally very easily obtained by a diligent person, and for these two reasons retaliation is easy."

The writer of the above indignant effusion, has evidently more sympathy with dog-owners than with sheep-owners. On the other side, where sheep of certain breeds are commanding very high prices, the risk of loss from dogs is a serious affair. A dog-law according damages is but a very partial protection, since a man worth nothing may own a still more worthless dog, and but little satisfaction could be got out of either, though the destruction of a valuable animal were proved very clearly. It is *prima facie* evidence against a dog that he is caught smelling round a sheep-fold, and if *Constable Strychnine* arrests him there, and knocks him senseless, the verdict of public opinion ought to be, "*Served him right.*" To threaten retaliation in such a case is as mean as it is wicked.

Chief Points of a Pure Leicester Ram.

His head is fine and smooth and clean,
No muff on cheek, no top-knot seen;
His neck is strong, and shows he's good
In constitution, as in blood.
His breast is heavy, deep and wide,
And shoulders square on either side.
His back is mellow, broad and strong,
Not disproportionately long.
His ribs are round as barrels be,
And flanks are full—as you may see.
His shoulder top is broad and level,
And leaves no room for fault or cavil
His ribs and shoulders straight must join,
And broad and square must be his loin.
His fat is felt on rib and rump,
And both his buttocks round and plump.
His belly's straight, by no means bare,
But wool is seen in plenty there.
His legs are medium and straight,
And firm and steady is his gait.
His air is stately, free and brave,
Not crouching, cowering like a slave.
He can all competition dare,
And with his rivals well compare.

Jas. Wightman, in *Hastings Chronicle* (slightly altered.)

Tyrendinaga, Dec., 1864.

Sheep Balance Sheet.

We extract the following from the *Rural New Yorker*, as an example of the profitableness of sheep-keeping:—

Fulton, Rock Co., Wis., November 28th, '64.

Henry S. Randall, LL.D.—*Dear Sir:* Below I send you my sheep account for three years. It includes all money paid out for them, except for the single article of salt. I have no way of coming at the cost of that item, as I have never kept it separate, but use it in common in the family and for cattle. The sheep, except the four sheep and lambs first mentioned, were bought of John Clark, Whitewater, Wis., were from his flock of grades, and served since I have had them by a full-blood ram.

Respectfully yours, D. F. S.

Sheep Account, beginning August, 1861.

				Dr.
'61.	Aug.	To cash for four sheep and lambs		$8 60
	Oct.	" " 20 ewes and 1 ram		72 80
'62.	June.	" " wool-box, twine and shearing		3 58
	Oct.	" " 39 ewes, 10 lambs, 1 ram		172 00
'63.	June.	" " twine, paint and shearing		7 96
'64.	"	" " " "		13 10
				$277 24
				Cr.
'62.	June.	By cash for 106 lbs. wool, at 45c		$47 70
'63.	Jan.	" " 2 pelts		1 62
	Oct.	" " 12 old crones		32 00
	"	" " 2 lambs, at $5		10 00
	"	" 371½ lbs. wool, at 65½c		243 33
	Dec.	" " use of ram		10 00
	"	" " ram sold		15 00
'64.	Feb.	" " 6 pelts		8 60
	June.	" " 566 lbs. wool, at 75c		424 50
	Sept.	" " 12 crones, at $3		36 00
	Oct.	" " 1 yearling ram		10 00
	Nov.	" " 10 ewes (1 and 2 years) second choice, at $10		100 00
				$938 65

Branding Lambs During Frosty Weather.—A correspondent writes:—I employed my shepherd to brand some lambs upon the side of the cheek; it happened to be frost and turned into rain, the result is, I have lost three lambs, swelling about the head, the whole body completely mortified, as was to be seen in skinning.—*North British Agriculturist.*

Do Full-blood Merino Ewes ever have Horns?—"Young Beginner" is informed that full-blood Merino ewes do occasionally have horns—though not as frequently in this country as formerly, because the majority of American breeders have sought to breed them out of their flocks. In many early flocks of unquestionable pedigree, both Spanish and Saxon, they were not unusual.—*Rural New Yorker.*

Annual Produce of a Flock.—M. M., of Charlotte, Monroe county, N. Y., writes us: "As it is the fashion of every one to brag, I want to do a little at it myself. I wintered 49 ewes. From them I raised 71 lambs which I sold for $244.25. They yielded 222 pounds of wool, which I sold for a dollar a pound—making for lambs and wool $466.25, or $9.51 for each ewe."—*Utica Herald.*

Good Sheep.—David Humphrey, of Spring Creek, Cass county, Ind., writes us that he bought a pair of Spanish Merino sheep last Fall that were discarded from the flocks of Geo. Campbell and Mr. Hammond. The buck sheared when one year old 13 lbs. of clean washed wool, and the ewe 11 lbs. Mr. H. is so well pleased with them that he wishes to buy some more, and he requests any readers of the *Genesee Farmer* who have Spanish Merino sheep that will shear from 13 to 20 lbs. of wool to write him at what price they will let him have some of them.—*Genesee Farmer.*

Broom Corn Seed for Sheep.—J. M. Gaskell, of Delavan, Walworth Co., Wis., writes his experience as follows:—"Some fifteen years ago, while residing in Livingston county, N. Y., and engaged in the cultivation of broom-corn, I sold large quantities of seed to various persons for sheep feed, they at that time considering it not only a cheaper but a better feed for sheep than Indian corn. Whether they still adhere to that belief or not I am not able to say; but my own opinion is that broom-corn seed mixed with corn, say one-third corn to two-thirds broom-corn seed, makes a good and wholesome feed. I would not feed it unmixed with other grain, especially to breeding ewes. Cattle and horses do well on it mixed as above stated."—*Rural New Yorker.*

Veterinary Department.

Neurotomy for Inveterate Navicular Disease.

Neurotomy, as the operation is now understood, may be defined to be the division of a nervous cord, and the excision of a portion of it, with the view of removing pain through the destruction of feeling. The nerves usually operated on in cases of navicular disease, are the plantar nerves, or metacarpal nerves. In performing the operation it is necessary to throw the horse and secure him well with hobbles or ropes. The leg to be operated on should be released from the hobbles, and secured in as straight a position as convenient, then make an incision through the skin, just over the nerve, taking care not to wound any of the large blood-vessels. The operation may be performed either below the fetlock or right upon the joint. After cutting through the skin with a pair of forceps, find out the nerve, and pass underneath it a tenaculum or hook, and raise it so that it can be easily divided, and be sure to make the division as high up as the wound in the skin will permit, as by so doing a part of the nerve below can be excised without causing the animal any pain. After the division of the nerve, bring the edges of the wound in the skin together by means of sutures. In most cases it is necessary to excise a part of both the internal and external nerves. After the operation the parts should be kept bathed with warm water several times a day, and bandages applied. In about two or three weeks after the operation, the wound will be healed up, and the animal ready for work.

The operation of neurotomy, or nerving, or unnerving as it is generally called, was first performed in cases of foot lameness, by Moorcroft, and Sewell, of London, about the year 1820. When brought under the notice of the public, as a cure for many cases of obstinate lameness of a certain description, all other remedies having failed, persons having lame horses, eager to have them restored to soundness, flocked around veterinary surgeons to have them cured by unnerving; and the result was that many horses were thus operated on (at the urgent request of their owners) which were not at all fit subjects for the operation, and in many cases it turned out a lamentable failure. But in cases where attention can be given to the feet and legs, and where an animal is not over wrought, we find that neurotomy judiciously practised, has proved of very great service in many cases of navicular disease.

The success of neurotomy is best shown by cases, and we, therefore, beg to relate two cases as recorded by the late Mr. Percivall, in his admirable work on the diseases of horses.

Case 1, October 1, 1819.—A bay gelding belonging to the Reg. of 12th Lancers fell suddenly lame of the near fore leg, nothing was discovered to account for the lameness either in the leg or foot, he was placed under treatment, but all to no purpose. On the 10th of January following, it was determined to try the effect of neurotomy. The horse arose after the operation and trotted sound. In a month he was in the ranks, and he remained in the ranks upwards of eight years afterwards, during which time he continued quite sound, although he was sometimes put to very considerable exertion. In 1828 he was "cast and sold," not, however, on account of lameness, but for old age, and even then he fetched £20.

Case 2.—A beautiful chesnut horse, six years old, though he possessed "good circular hoofs," became lame in both fore feet; he was treated and turned out to pasture, but came up six months afterwards, worse than when he went out. He was afterwards bought for £12, and the operation was performed on both legs, below the fetlock joints. The horse was rendered by it immediately quite sound. This horse was afterwards hunted two years with the Shropshire hounds, and whenever they had a long run he was always in the front. His owner was offered 200 guineas for the horse as he was considered one of the most brilliant leapers ever put to a fence.

Within the past two years we have operated on several horses in the City of Toronto and surrounding districts with the utmost success. On the 6th of May last, we determined to operate on a gelding, aged twelve years, which had been incurably lame

In both fore feet from disease of the navicular joint for five or six years. He had often been under treatment during the time he was lame, but never appeared to be benefitted by any of the remedies adopted After the operation, when released from the hobbles, he walked quite sound with the off fore leg, but was exceedingly lame in the near one, (the operation being performed on both fore legs,) having sprained the fetlock joint in rising. Fomentations were applied, and in four days afterwards we had the satisfaction of seeing our patient walk perfectly sound. Three weeks afterwards he was put to work, and on the 15th of June following, he was entered and trotted in a public race over the Toronto Race-course, and went one mile to harness in 2 minutes and 48 seconds. Since that time he has been working steadily, showing no sign of lameness.

Hydrophobia.

Various remedies for hydrophobia have been published; but the disease is generally believed to be incurable. The following remedy, however, is evidently of much importance, being vouched for by a gentleman who has given it a thorough trial. We take it from the *Field*; and should any of our readers have the misfortune to have an opportunity of testing it, we shall be glad to learn the results:—

A CURE FOR HYDROPHOBIA.

"Sir,—About a fortnight since I saw in your paper an inquiry for a preventive or cure for hydrophobia in dogs. For a length of time I have been anxious to inform the public through your columns of a prescription, for the efficacy of which in preventing this dreadful malady in the canine species I can vouch my experience, but have hitherto been reluctant to do so from a sort of understanding that I should not do so without the permission of the person who gave it to me. I am most happy to say that to-day I have received that permission, and hasten to publish in your columns what I have proved to be a complete antidote to that most dreadful and subtle poison, the virus from the bite of a mad dog when inflicted on one of his own species. How far it may succeed with the human species it will be for those skilled in medicine to determine, and now for my narrative.

"Many years back this part of the country had in each succeeding summer a number of mad dogs running through it, and, indeed, during the winter months also; by some means this dreadful scourge got into my father's kennel of foxhounds, and day after day the poor creatures died either in dumb or raging madness. We had already lost ten couples of our best hounds when I heard that a few miles from us lived an old Welsh practitioner, who professed to have a cure, and this I determined to try rather than lose or have to destroy the rest of our pack. I did so. I did not lose one hound more, and, what is more, a bitch called Agony, whose jaw had already dropped in dumb madness, got quite well and hunted for years afterwards. One more instance, though perhaps not so striking, of its efficacy. Some years afterwards I had nine or ten couples of hounds which I had every reason to suppose had been bitten by a mad dog: I followed the same plan, and did not lose one.

"Thank God, we have not had a case of dog madness in this county to my knowledge for years, but other localities may not be so fortunate, and I have very great pleasure in publishing the description of what is a certain and effectual antidote, and which also proved, in the only case I tried it, a 'cure.'

"E. L. Pryse (M.P. for Cardigan).

"Peithyll, Nov. 20.

"Prescription.—Dose for each dog: Turpeth mineral, 10 grains, to be given for three mornings running, between slices of bread and butter. *Drench.*—Ground liverwort, a handful, garlic, 1 drachm; rue, 1 drachm. To be boiled for an hour in half a pint of water, then strained, and add Venice treacle, 2 drachms. This to be given in milk or whey. It is better to keep the dog without food for the night previous. Cold bathing is a good thing during the treatment."

☞An old farmer gives the following remedy to kill lice on cattle and horses.—Use the liquid made from boiling the potatoes with the skins on, by washing the animal thoroughly. The operation once performed will destroy these vermin, and leave the animals in good condition. Farmers should make a trial of this.

Note by Ed. C. F.—Probably the efficacy of the above operation lies quite as much, if not more in the thorough washing as in the potato juice

The American Reciprocity Treaty.

To the Editor of The Canada Farmer:

Sir,—In vol 1, p. 41 of The Canada Farmer, you expressed some fears lest the abrogation of the American Reciprocity Treaty, then threatened, would have a very serious effect upon the farming interests of Canada, and that it would require all the wit and energy of our public men to meet the emergency. In the same article you also shewed, from statistics carefully compiled, that, in consequence of that Treaty, Canada paid to the United States an annual cash balance of *twelve millions of dollars.*

Will you be kind enough to shew how that Treaty enables us to pay this balance of twelve millions per annum? for unless it improves our condition so much as to enable us to meet this payment, we would be better off without it. To be of any benefit to us it ought to improve our finances something handsome beyond the twelve millions a year. I have been taught that a trade which left a balance to be paid in cash was so much against the country that had to meet this cash balance.

As a commentary upon this subject, allow me to call your attention to your remarks on page 57, in relation to the U. S. War Order, forbidding the exportation of hogs from the United States to Canada. You say that the effect of that order is to cut off three fourths of the supplies depended on by the large houses in Canada that cure and pack pork for the English market, so that now our farmers may expect an *increased demand, a higher price,* and *a steady market* for hogs. This, then, is the effect of a repeal of the Reciprocity Treaty, so far as it relates to hogs. The effect of a repeal, I say—for you say it is the *English* market that we supply, so that although the American market is still open to us, it is of no benefit to us, because it is the trade to England that creates the demand.

May there not be many other items of Canadian rural industry that would be equally benefitted by a repeal of the Reciprocity Treaty? Would we not be thereby saved the payment of that annual tribute of twelve millions of dollars to the United States? A full and candid explanation of the working of this Treaty will much oblige one whose self-interest may blind him to its real benefits.

A FRUIT GROWER.

Ans.—Our correspondent has hit upon an apparent, but unreal contradiction in the above letter. It is true that the abrogation of the Reciprocity Treaty would be detrimental to the farming interest in this country, and it is equally true that the United States gets a yearly balance of $12,000,000. By a more careful reference to our observations on the Reciprocity Treaty in the article alluded to (vol. I., p. 41) it will be seen that the amount named is stated to be paid "by bills on London," and it is for produce sent through Canada to Britain, not for produce consumed in Canada. Our merchants have their commission profits, and our railroad men their freight fees on this produce, but it is paid for with British and not Canadian money. The actual balance of trade, as between Canada and the United States, it would be difficult correctly to ascertain, but there is evidence enough to show that, on the whole, it is so mutually advantageous that it would be suicidal policy for either party to break it up.

In regard to the War Order respecting hogs, there can be no doubt that, temporarily, it works to our advantage But, from the fact that there is not in the country the supply of hogs required in the packing trade, there is danger of diverting the capital employed in it to the United States. As to fruit, we import a large quantity that might undoubtedly be raised in this country. Were the present source of supply stopped, inconvenience and loss would be suffered for a time, though in the end it would doubtless tend to give an impetus to fruit culture among us But while in some such specialities as the fruit trade, the abrogation of the treaty might inflict no loss, it must be remembered that there are other branches of trade: such as that in lumber, cattle, grain, butter, poultry, &c., in reference to which no compensating results could be hoped for

Hand-Loom Weaving.

A correspondent having sought information on the above subject, we insert the following from the January number of the *Journal of the Board of Arts and Manufactures for U. C.*

"A gentleman resident in this city, who has long taken a deep interest in matters of public benefit is anxious to know the price of hand-looms for weaving plain woollen or linen fabrics, and where such looms can be obtained. He is of the opinion, and rightly so, that a large measure of the distress prevalent amongst portions of the working population of this country, is owing to the absence of any regular means of employment during the winter months; and that if an inexpensive loom of simple construction, suitable for the manufacture of common woollen cloths and flannels, or linen bagging, towelling, bed-ticking, &c., could be introduced amongst them, their winter days would be spent in productive labour, and themselves, their families, and the state, would be equally benefitted.

"We remember the *good old times* we had in our native village, in a rural district in England, when the old-fashioned *bombazines* were worn by the ladies, and every man, woman, and youth, not engaged in other employment, was working at the hand-loom at their own fireside.

"With a view to furnishing the gentleman referred to the information he seeks, we have waded through encyclopædias, dictionaries of art and manufactures, and treatises on weaving, without meeting with success. The subject is an important one, and if any of our readers are sufficiently acquainted with it to furnish the information sought, we shall feel obliged by their doing so. We notice that in April of the year 1859, Mr. Joseph Brickley, of S. Dorchester, patented a self-acting hand-loom, which was at the time highly spoken of. In the year 1862, there were exhibited at the Provincial Exhibition held in Toronto, a hand-power loom by Mr. Thomas Welsh, of Brantford; which was awarded an extra prize; and a double box loom by Mr. James Davidson, of Cobourg, to which was awarded an extra prize and a diploma. These machines were in operation, and we believe gave satisfaction to the judges and to the public.

"We beg to suggest the formation of a joint-stock company, as the only sure means of introducing domestic weaving amongst the working classes. The company should obtain and furnish to the operatives all necessary information, purchase looms and let them out to hire to trustworthy individuals, purchase yarn and other necessary material and furnish to the weavers at the lowest possible price, and assist them in finding a market for their goods when ready. Here is an opportunity for gentlemen of pecuniary means and philanthropic feelings, which we hope to see taken advantage of ere another year shall pass away."

How to get rid of Rats.

To the Editor of The Canada Farmer:

Sir,—Seeing in The Farmer several receipts for getting rid of rats, I here give you mine: Some time ago I was very much annoyed by rats, they eat my grain, killed my chickens and ducks, and eat my hen's eggs, all through indolence in letting them have too much rubbish to harbour and breed in. So I set to work and removed the rubbish from around and in my barns. I took out what are termed mow poles, that were laid a few inches above the ground. The space under these poles soon fills with short hay and straw, making a nice place for rats. It also spoils a deal of hay every year by the dampness coming up from the earth. The poles and rubbish I took from my barns amounted to a great many waggon loads. The best I sawed up and made my summer's wood from, the remainder I burnt in a pile. Instead of poles I put sleepers in even with the top of the sills, (not resting on them, but resting on separate blocks from the sills,) and laid a tight floor over the whole barn. I also cut out what is termed the breast beam. This gives me a large floor, very convenient for housing farm implements, when not used with grain. The breast beam in a barn I consider a nuisance. All my stables had plank floors in; I also took them out, and instead of plank put gravel. I also put up a granary on posts, with tin pans upside down on top of the posts, this makes it mouse and rat proof. Now sir, I will tell you how the above plan pays me. First, by the barns being floored all over, I have no hay or grain spoiled by dampness, and no harbour for rats Second, by my stable floors being gravel,

the cattle are warmer, therefore saving feed; the horses feet are better, and do not need shoeing quite so often, and there is no harbour for the rats under the floor Third, the granary pays me ten or twelve bushels of grain yearly, to say nothing of the dirt from the rats being avoided. Fourth, in having chickens and ducks and eggs. Fifth, the last but not the least, is the looks of it, all being clean around my barns. A FARMER.

Southwold, January 18, 1865.

CHANCE WHEAT.—We have received from "J. P. C.," Co. of Stormont, a few grains of wheat grown from a stray ear accidentally discovered in a patch of oats. It is certainly a very good sample of spring wheat. Our correspondent describes it as having ripened early, and so far been proof against insect depredations. We advise him to give it yet a more careful and thorough testing to see if it developes qualities of established excellence.

FLAX MILL WANTED.—The President of the Township of Ops Agricultural Society, J. H. Hopkins, writes:—"If you know any one desirous of erecting a flax mill, I think he would find Lindsay a desirable locality. He could come before spring and make arrangements with farmers in the County of Victoria, and be ready to receive their produce in the fall. Lindsay is the centre of a very fine agricultural district, and a good deal of the soil I think favorable to flax."

A GOOD VETERINARY SURGEON.—"A Subscriber" writes from Belleville:—"Would you please to state in the next issue of THE CANADA FARMER if there is in Toronto a good veterinary surgeon, and if so, state his address?"

ANS.—Yes. Andrew Smith, Veterinary Surgeon to the Board of Agriculture, and Veterinary Editor of THE CANADA FARMER.

TILE MACHINE WANTED.—'A Subscriber' writes: "As your paper has such a large circulation throughout the Province, and as I am about to commence tile-making next summer, I would like to get some information either from you or some of your readers—what machine is the best, and who is the maker, the full particulars, and the price?"

ANS.—W. Lindsay, Newcastle, C. W., makes a good tile machine—price, $130.

THE SIDNEY FLAX CROP.—"E. M." sends the following particulars respecting his unprofitable flax crop:—"The land was never broken up until last year; the sod was then turned over and thoroughly harrowed. It was ploughed a second time last spring, and well pulverized, and remained mellow during the summer. I do not know how much land was sown to flax, but it was, of course, quite a small plot. It was sown early in June, and proved to be as good a crop as most plots that came under my observation. Oats sown beside the flax at the same date grew stronger than the average in this vicinity In my own case the crop did not pay for pulling, and the experience of others, as far as I can learn, is not very dissimilar."

APPLE TREE HEDGES.—"An Old Farmer" writes from Knowlton, C. E., as follows.—"In your second Jan. No. of THE CANADA FARMER, your correspondent, 'A Farmer,' says:—'There has not been one plant found yet, that he knows of, worthy of general cultivation.' I merely suggest, through your paper, a new plant for the purpose of being tried for a fence. A Mr. Locke, in the *N. Y. Tribune* says: 'The best live fence I have ever seen, was an apple tree hedge; I saw it at six years old. The farmer informed me when it was about two feet high he began to shear it, to make it grow thicker; and at the time I saw it, it would stop cattle, or a dog if he cared to come out with a whole skin.'

"In this latitude, seeds of the Siberian crab apple would make a hedge completely hardy The best way of preparing the seeds, is to freeze them in a mass so as not to let them dry, wash them out and plant the 1st of May, without drying any more than to mix sand with them to make them separate. Or plant in the fall if you choose. I think it would be an improvement on the common apple, on account of its being hardy and affording sorts from natural crosses that would be worth cultivating. I have a variety we call the Scarlet crab, that is inclined to grow thorny, and is evidently a hybrid though perfectly acclimated and hardy. I think it would make a good fence, and the fruit is good too, being of a fine flavour, a little acid though free from crabbedness. It is large enough to pare quarter, and core for preserves, which grafted on a good native apple that is hardy and thorny enough for a fence, and the seeds of that graft planted for a hedge, I think would succeed admirably I am willing to furnish cuttings for several to try the experiment, provided the postage is paid."

HOW THE CANADA FARMER CAME TO BE ORDERED.—"S. M.," of Camden East, sends a dollar for the current year's FARMER to be addressed to a certain party, and adds:—"The above named person is my grandson, whose mother is my only daughter, and whose father died nearly two years ago. He, with another brother, carries on the farm of their late father; I make it my home with them, and while I was in the Post Office some time in July last, THE CANADA FARMER of June 15th, 1864, was handed to me as a gift, which I took home with me, but it got laid aside till a few days ago, when it was found, and has been carefully perused by my two grandsons, and this day the dollar was handed to me, with the request that I would send it to you for THE FARMER for 1865. With this request I most cheerfully comply. I shall feel much pleasure, as I have opportunity, of urging others to subscribe, as I am fully persuaded THE FARMER, if its advice and the excellent practical information it contains, be fully carried out, will be of great service."

NOTE BY ED. C. F.—We send our correspondent a few specimen numbers to circulate among his neighbours, and would respectfully suggest that many friends of THE CANADA FARMER might extend its circulation by putting a copy now and then into the hands of their friends. We shall at all times be glad to send specimen numbers on application.

The Canada Farmer.

TORONTO, UPPER CANADA, FEB. 15, 1865.

Renting Farms.

FROM a variety of causes, proprietors of land even in this comparatively new country, are led to rent their farms. Circumstances do not permit the owner to work his land himself, and partly from a natural attachment to the old homestead, and partly from a not incorrect idea that a good farm is one of the best dependences for old age or a rainy day, he is unwilling to sell, and therefore offers to let his estate.

Now it is undeniable, that the relation of landlord and tenant in reference to farms, is most unsatisfactory in Canada. Seldom indeed is either party contented with his bargain. Alienations and quarrels innumerable, have grown out of transactions of this sort. And no wonder, for in the first place, nothing is more common than indefinite verbal agreements, the proprietor letting his farm for a certain consideration, and the tenant promising to "do about right." In other cases, though there may be an agreement in in black and white, it is too general, and for want of specific terms being stated, misunderstandings and dissatisfactions arise. It is not so in other and older countries. In Britain, lands are let from generation to generation, to the mutual satisfaction and advantage of all concerned. Nor is there any good reason why the same thing cannot be done in this country.

The great evil is the utter want of a right system of rental. One man lets his farm for a term of years at so much a year to some ignorant clod-hopper who knows nothing whatever of good farming, who never thinks of applying manure, rotating crops, or taking means to keep the land in proper heart. The result is that at the end of the term, both land and owner are a great deal poorer than they were at the beginning of it. If the proprietor had allowed his land to lie idle, he would have been better off than to have had anything to do with such a tenant. Another party lets his farm on a somewhat different principle. He stipulates for a certain share of the produce, his portion being determined by what he supplies in addition to the land. On this plan, the temptation is to get as large a yield with as little outlay as possible, during the short period that the tenant is in occupancy. It is not to his interest to expend money or labour in manuring the soil, and indeed there is no practical recognition of the necessity of that on either side. In this case there is the question of shares to be settled, and a "vexed question" it often is. A third rents his farm with the proviso that the tenant shall sell no hay, straw or forage of any kind off the premises, but shall keep stock enough to consume all that is raised. But, unless the manure thus made be properly looked after, economized, thoroughly worked, and judiciously applied to the soil, this system also will impoverish a farm. It will not do to *assume* that if the forage crops are consumed on the farm, the land will be well dunged. The manure may be sadly wasted, and besides, the temptation is very strong to raise too many white crops in order to have grain to sell.

That intelligent agriculturist, S. E. TODD, in a recent number of the *Country Gentleman*, mentions an example of farm renting which is in some respects novel. It is the case of Mr. Townsend, of Skaneateles, N. Y. This gentleman has his arable land tilled by a man who lives in a tenant house on the farm. The man finds his own team and implements, furnishes half the seed, performs all the labour, and delivers the grain (Mr. Todd does not say what proportion of it), ready for market. No forage crops are allowed to be sold. Mr. Townsend keeps a few cattle, sheep, horses, and swine, which are entirely under his own control, and from which the tenant gets no profit. The manure they make is all applied to the soil, it being part of the contract that the man hauls and spreads it on the land. He is also under obligation to haul and spread any manure the proprietor may see fit to buy. Mr. Townsend reserves the right to say where and to what crops the manure shall be applied. The tenant happily knows the virtue and value of dung, and therefore performs this part of the bargain with the utmost cheerfulness.

We hardly think any system of renting on shares is adapted to the state of things in Canada. In some rare instances, in which landlord and tenant are of congenial views, the plan may work, but the spirit of our people is apt to rebel against the constant supervision of a proprietor, and most tenant farmers prefer to know definitely what rent they have to pay. What we want is a few simple, just, well-understood conditions and rules by which the renting of farms may be regulated. Though the profits of it are from various causes very fluctuating, yet agriculture is in many of its aspects a fixed, or exact science. Loose, negligent, slipshod habits have brought farming into disrepute, and created a general impression that it is not an employment that pays. But rightly conducted, it will pay either a proprietor or tenant farmer. Land can easily be tested by a certain standard of productive capacity. It should rent according to that standard. Stipulations as to rotation of crops, manufacture and application of manure, frequency and quality of ploughing, seeding, weeding, &c., should be made. The tenant should be liable to be mulcted in damages for non-compliance with these conditions. He should give security for the due performance of his contract. Cases of failure should be summarily and impartially dealt with. It is very desirable that longer terms of rental should be given. The shortness of the time for which farms are generally let, greatly militates against the satisfactoriness of these transactions. Costly improvements cannot be made on a lease of two or three years. We are satisfied that by properly qualified parties giving this matter the attention it deserves, an equitable system of farm leases may be established, and we are por-

suaded that the result would be, not only better relations between landlord and tenant, but improved farming, in consequence of more accurate and widely diffused knowledge of the principles on which alone it can be profitably carried on. We may hereafter have something to say about the lease forms used in Britain, which though in some respects unsuitable to this country, may nevertheless prove suggestive and useful, in the same way that models and studies do to the artist.

Pigs in the Streets of Cities.

Thoreau the pig has been facetiously described as a gentleman, since he has nothing to do but eat, drink, and sleep, we see no good reason why he should have the freedom of the city Granted that he may do some good as a scavenger, it is questionable if his leavings are not quite as bad as his takings Roused out of his mud bath by a mischievous boy or quarrelsome cur, and put to speed, he is in a nice plight to rush past his fellow gentry who may be promenading on the side-walk' We were inclined to think that only in Canadian cities Monsieur Sus was permitted to roam unmolested, but from one of the letters of Mr. Augustus Sala, it appears the same liberty is allowed him in New York. That gentleman says.

"In the eastern districts of the city the pig still goes to and fro, unmolested and unconfined Does he sleep in the cellars at night, I wonder" Did he come over with the Irish emigrants in the steerage of the packet-ship. He is a very ugly pig a cross between the Irish 'greyhound' and the Yankee 'rooter —a pig that might probably wear a goatee, and chew pig-tail, and liquor up He is the same pig, or that pig's great-grandson, that Mr Dickens saw when he was here, only a pig that has fallen on evil days a pig that has been exiled from decent society, a pig that has gone to the dogs. He shambles about in a disconsolate manner, trailing a stalk of Indian corn in his gash of a mouth. The street children have twisted his tail to the last bristle of the stump long ago. He looks as though a little Kumball's Ambolini, or a dash of Van Buskirk's Sozodont, or a nip of Drake's Plantation Bitters would freshen him up.

He is a most woe-be-gone pig, dissolute in mien, uncertain in gait, shameless in manners, not fit to live, and to the most sanguine, offering but a remote prospect of making tolerable pork when he dies. He lost an eye in a Dead Rabbit riot, and left his ear in a 'difficulty' down at Mackerelville. His father was a professed gambler, and his brother is in States Prison for bounty-jumping. So he wanders about, and grunts and picks up things that don't belong to him, till he is run over by a fire-engine, or straying too near a factory, is caught up and made into glue, or sausage, or blacking brushes."

Manufacture of Rosin and Turpentine.

The *Journal of the Board of Arts and Manufactures* for January, acknowledges the receipt of samples of rosin and turpentine manufactured by Mr. Peter Irish, of Brighton, County of Northumberland. It also contains a statement from Mr Irish of the process by which he procures the raw article, which is as follows:

"He says he obtains it from the white (not the Norway) pine, by cutting notches or boxes, about two feet from the ground, with long *bitted* axes —a good axe-man cutting about 300 boxes per day These boxes are made *dishing*, so as to hold from a gill to a half pint each, and should be cut between the twentieth of May, and the end of June. During the hot weather it will be necessary to gather the sap from these boxes at least once a week In a tree one foot in diameter he cuts one box, two feet in diameter two boxes, and so on —this he says will injure the trees but little, as the boxes he cut in some forty years ago are now completely grown over"

During the past year Mr Irish paid $10 per barrel for the raw article, and we believe will be prepared to purchase, during the coming season, any quantity that may offer, or will distill it on shares with any parties who may furnish it The price obtained by him for rosin during the past year averaged 8 cents per lb and spirits of turpentine $1 75 per gallon

As we suggested some time since, there is a good market for these articles at our own doors, and those possessing facilities for doing so, should see and supply it

New Publications.

Report of Michigan State Board of Agriculture. —We have received from Sanford Howard, Esq., Secretary of the Michigan State Board of Agriculture, his Third Annual Report for 1864. It is a well got up pamphlet of 128 pages. More than half of it is taken up with replies to a series of questions addressed to leading agriculturists in the State, by Mr. Howard on his entry upon the duties of the Secretariat in June last. Twenty-three pages are then occupied with remarks on the foregoing returns, after which we have a copious account of the State Agricultural College, an institution which came into being as the result of the Congressional land grant, passed in 1862, and giving each loyal State a portion of the public domain, for teaching the science and practice of agriculture. Michigan has gone into this matter with great spirit, and has already an effective college in operation, whose revenue last year was $14,551 79, and its expenditure $13,798 59. Out-door and in-door instruction are combined, there being a farm and garden attached to the institution. Already interesting experiments have been tried, and others are in progress or in contemplation. An appendix to this report is to appear shortly, comprising essays on various subjects, and proceedings of agricultural societies.

The Illustrated Annual Register of Rural Affairs.—We have received from the publishers, a copy of this work for 1865, and find it as usual full of useful information. First we have an article on Country Homes, with eight illustrations, embracing the elevation and floor plans, and forming complete working drawings for the buildings represented. Next we have a Monthly Calendar of Work for the Nursery, Orchard, and Fruit Garden, which takes up 22 pages, and is copiously illustrated Fifteen pages are then devoted to the Principles and Practice of Farming. Then we have articles on The Turkey; A Sheep Barn; Bee Management; Farming and Rural Economy, Household Management; Rural and Domestic Economy; Orchard Management, and various other important matters. One hundred and twenty-four pages are crowded with useful reading, and wood-cuts to the number of 130. This is the eleventh year of this Annual, and having taken it year by year since its commencement we can speak with confidence as to its great merit. We prize the back numbers as a *vade mecum* of rural affairs It is a marvel of cheapness; the war price being only 30 cents, five cents in advance of its usual cost. We advise all our readers to get it It will come post-free for 30 cents American money remitted to the publishers. Luther Tucker & Son, Albany, N. Y., or for 40 cents Canadian money, sent to the *Witness* bookstore, Montreal.

The Rural Annual and Horticultural Directory. Such is the title of a neat little work of 120 pages, issued every year from the office of the *Genesee Farmer*, Rochester, N. Y The volume for 1865 is just out. It contains a large amount of information for the farmer, fruit grower, and every one interested in the cultivation of the soil. Among the principal topics discussed are The Pear Tree Blight, Raising Clover Seed; Charring Old Sods; New Method of Training Pear Trees; Pruning; Chickory as a Substitute for Coffee; The Golden Age of Fruit Culture, Poultry as Egg-Producers, Experiments in feeding hogs with Different Foods, Fattening Cattle in Winter; Grafting Old Orchards, Artificial Manures, with many other articles of interest. The price of the *Rural Annual* is only twenty five cents. It will be sent prepaid by mail on receipt of price. Address Joseph Harris, Publisher *Genesee Farmer*, Rochester, N. Y.

Vick's Illustrated Catalogue for 1865 We ought to have bestowed an earlier notice on this valuable publication. It is not only an advertisement of the flower and vegetable seeds for sale by James Vick of Rochester, N Y, but forms a most useful guide to the flower garden It contains full directions for sowing seed, transplanting, and after culture. The hints given by an experienced horticulturist are of great value, and cannot fail to be very helpful to beginners. This catalogue consists of 70 pages, and is beautifully illustrated with some thirty engravings, and two coloured plates. These last are very fine representations of Henderson's Perfection Sweet William, and the Japan Lily. Mr. Vick sends this publication free to all his customers, and any one can have a copy by remitting 10 cents American money

Giant Farmer's Mill.—We have had an opportunity of inspecting this mill. It is intended for chopping coarse feed, and from the samples of ground peas, oats, &c., shown us, we should say it is capable of doing excellent work. The mill, together with samples of its work, may be seen at the Agricultural Warehouse, corner of Yonge and Queen streets, in this city.

Stratford Flax Mill.—We have been shown some very good specimens of scutched flax from the mill newly put in operation at Stratford by Mr. Imlach. Part of it was dew-rotted and part water-rotted: the latter being much the best and most marketable article. This mill is one of the fruits of the interest created by Mr. Walker during his lecturing tour last winter.

Agricultural Intelligence.

Township of Ops Agricultural Report.

We have received a copy of the above report clipped from the *Canadian Post*. It is a model document in every respect, and if our space permitted, we should be glad to copy it entire. As it is we make lengthy extracts, and in doing so, commend the Society for having had the report inserted in the local paper.

"Owing to the long-continued drouth, in the months of July and August, the yield of Wheat has been very much below the average within the limits of our Society, particularly in the Spring varieties, and for which the generality of the soil of Ops is better adapted than for Fall wheat; the quality is also inferior owing in the first place to want of sufficient moisture in the soil which stunted both the growth of the straw as well as the berry, and in the second place, in consequence of being overtaken with a long continuance of wet weather while in the course of harvesting, and which caused a large portion to sprout in spite of all the exertions and skill of the farmer to save it.

"The variety of Spring wheat known as 'Scotch' or 'Fyfe,' has been found most suitable to the flat lands composed of strong clay loam of which is the largest portion of the soil of Ops; but this variety does not now produce anything like the crops it did when first introduced; it is found to be degenerating every year, and farmers are wishing for some other variety suited to this kind of soil but that would yield more bushels to the acre; its freedom from *rust* and the *lateness of the season* at which it can be sown have been strong inducements for continuing its culture.

"Many farmers are disposed to attribute its deterioration to climatic influences and which may possibly have something to do with it, yet we are inclined to believe that other causes also have operated to bring about this diminution in the yield so inferior to what it was ten or twelve years ago when it was by no means uncommon to get 35 and even 40 bushels to the acre, while now 20 is considered about the maximum; we cannot but think that the practice, which has been very general, of sowing it upon the same land year after year is a very erroneous one; for, by this system the best of soils must become exhausted of those ingredients necessary for giving vigour to its growth and for the full development of the grain. On the few farms in the township which contain portions suitable for Fall wheat the crop was a fair average and of excellent quality, being secured in the best possible condition, the samples being hard and dry yet not quite so plump as usual.

"Although the great deficiency in the crops of the past season may be mainly attributable to the unfavourable weather, we are fully persuaded that the lack of a regular system of *rotation* of crops and thorough tillage are prevalent causes of the many failures in farming operations in this section of the country.

"The injury inflicted on the wheat crop by the midge, the *unfavourable atmospherical influences* which seem to have affected this cereal, together with *imperfect tillage* of the land for its seed-bed, in conjunction with the *reduced prices* during the three last years have jointly contributed towards the farmer's embarrassments, and we are compelled to declare that farming during the period mentioned has scarcely been a remunerative occupation, yet we continue to hope for more favourable seasons, more favourable markets, as also the introduction of a more thorough system of farming. It is not to be denied that a large number of our fellow-farmers are experiencing serj

ous pecuniary difficulties and will not find it possible to meet their engagements this winter owing particularly to the great deficiency in their farm productions of all kinds of the past season with the exception of Barley.

"Our experience during the last ten years has led us to the conclusion that farmers here have depended too much on the wheat crop instead of turning their attention to other productions. We are convinced that DAIRY farming should receive much more attention than has hitherto been bestowed upon it; and we are also satisfied that FLAX could be grown to advantage, and possibly HEMP, as there are large portions of our soil well adapted to the growth of both, we understand that several farmers contemplate sowing flax next spring, and we are led to hope that the next annual report of this society will show that its culture has been attended with satisfactory results. We are also encouraged to hope that the science of Agriculture in general will ere long be promoted by the steps now taking by the Bureau of Agriculture for more fully developing the agricultural resources of the country, and for encouraging and fostering the farming interest, for when we see the government fully alive to the necessity of advancing so important a branch of national wealth we the legitimate instruments are excited to increased exertions in our calling

"We beg further to state that we are strongly impressed with the idea, that most beneficial results towards promoting progress in agricultural pursuits in this Province would be effected through the establishment of MODEL or SCHOOL-FARMS in each County, and more particularly in some of the newer settled Counties in the interior. We beg to say that we think through the joint means and efforts of the Agricultural Societies and the County Councils, together with a portion of aid from the Government, a farm of from 60 to 100 acres might be purchased for such purpose in the vicinity of each County Town and the land once purchased, the farm with proper management could be made self-sustaining without much further serious outlay than that of the purchase money."

Officers of Agricultural Societies for 1865.

(*Continued from page* 43.)

ALBION—Wm. Rogers, President, R. L. Bolton, Secretary; Jos. F. Warbrick, Treasurer.

BEVERLEY—Wm. Henderson, President; William Drone, Vice-President; John Armstrong, Secretary and Treasurer.

BROCK.—John Allan, President, Edward Switzer, Vice-President,; Geo. Brabason, Secretary; Andrew Hill, Treasurer.

BLENHEIM.—John Hall, President, James Tennant, Vice-President; Geo. F. Williamson, Secretary.

BEAUHARNOIS.—Jean Bte Scott, President; John Symons, Vice-President.

CALEDON—Alex. McLachlan, President; David Kirkwood, Secretary; Isaac Harris, Treasurer.

CARLETON COUNTY—D Kennedy, President, J. G. Street, 1st Vice-President; T. Davison, 2nd Vice-President; A. S. Woodburn, Secretary and Treasurer.

CHATHAM (Township)—S. M. Knapp, President; Wm. McCubbin, Vice-President; R. C. Struthers, Secretary and Treasurer.

CHINGUACOUSY—John Snell, President; Robt. Quinn, Secretary and Treasurer.

CHATEAUGUAY.—Thos. Gebbie, President; John McDougall, Vice-President; A. McEachern, Secretary and Treasurer.

CARRICK.—Alex. McLaren, President, James Parcell, Vice-President; Peter M. Shannon, Secretary and Treasurer.

CAVAN.—Richard Thexton, President, Thomas McCamus, Vice-President; J W Sootheran, Secretary and Treasurer.

DORCHESTER.—John Clunas, President, Wm. Orris, Vice-President; M. Fullarton, Secretary and Treasurer.

DUNDAS.—Dr. Sherman; President, David Rae, 1st Vice-President; Jos. Hyndman, 2nd Vice-President; A. G. Macdonald, Secretary and Treasurer.

DURHAM (EAST).—Samuel Dickinson, President; John Foote, 1st Vice-President; Wm. H. Sowden, 2nd Vice-President; D. McLeod, Secretary

DURHAM (DISTRICT). J M. Browning, President; S. H. Schuyler, Vice-President, A. McEachern, Secretary and Treasurer,

ELGIN (WEST).—George Henry, sr., President; L. W. McIntyre, 1st Vice-President; F. Randall, 2nd Vice-President; W. H. Stinson, Secretary and Treasurer.

ELIZABETHTOWN.—W B Langrick, President, R. Arnold, 1st Vice-President; John McMullen, 2nd Vice-President; H. C. Jones, Secretary; C. Fletcher, Treasurer.

ESSEX (COUNTY)—Chas. Cornwall, of Colchester, President; Luke Montreuil, of Sandwich East, 1st Vice-President; J. G. Buchanan, of Colchester, 2nd Vice-President; Henry Botsford, of Amherstburg, Secretary; James Noble, of Windsor, Treasurer.

FLAMBORO' WEST—Jeremiah Lyons, President; John Ira Flatt, Vice-President; Charles Durant, Secretary and Treasurer.

HARWICH (BRANCH)—David Wilson, President; Wm. Clarke, Vice-President; W. R. Fellows, Secretary; W. McGregor, Treasurer.

HALDIMAND.—John Fisher, President; B. Jackson, Vice-President; Josias Gillard, Secretary and Treasurer.

HALTON (COUNTY).—Joshua Norris, President; Thos. Bowes, 1st Vice-President; Robert Miller, 2nd Vice-President; W. C. Beaty, Secretary and Treasurer.

HURON (COUNTY).—Robt. Gibbens, (re-elected) President; A. M. Ross, 1st Vice-President; Wm. Young, 2nd Vice-President; G. M. Trueman, Secretary; Andrew Donogh, Treasurer.

LANARK (NORTH RIDING).—John Baird, President; L Naismith, 1st Vice-President; Robert Young, 2nd Vice-President; David Campbell, Secretary and Treasurer.

LINCOLN (COUNTY)—Eli Gregory, Louth, President; Dennis Nixon, Grimsby, 1st Vice-President; Wm. May, St. Catharines, 2nd Vice-President; J. H. Bessey, Grantham, Secretary; James Lawrie, Grantham, Treasurer.

MARA AND RAMA.—J. McPherson, President; Geo. Thomson, Vice-President; Hector Law, Secretary; Mr. Dudenhoffer, Treasurer.

MIDDLESEX (WEST) Richard Moyle, Metcalfe, President; Malcolm McArthur, Lobo, 1st Vice-President; Geo. Buttery, Adelaide, 2nd Vice-President; James Keefer, Secretary and Treasurer.

NORFOLK (COUNTY)—W. McMichael, President; D. W Freeman, Secretary; Henry Groff, Treasurer.

NORTHUMBERLAND (EAST RIDING) Robert Hawkey, of Seymour, President; William Aldger, of Cramahe, 1st Vice-President; Charles Jones, of Percy, 2nd Vice-President; John Eyre, of Brighton, Treasurer; R. P. Hurlburt, of Percy, Secretary.

OXFORD (SOUTH RIDING).—Wm. Peers, President; James Williams 1st Vice-President; Henry S. Losee, 2nd Vice-President; James Scarff, Secretary and Treasurer.

PETERBOROUGH (COUNTY)—John Walton, President; Jos Walton, 1st Vice-President; I. Gorbutt, 2nd Vice-President; J. Carnegie, Secretary and Treasurer.

PEEL (COUNTY)—R. A Hartly, President; Emerson Taylor, 1st Vice-President; Wm. Johnston, 2nd Vice-President; John Lynch, Secretary and Treasurer

PERTH (COUNTY).—Sheriff Moderwell, President; John Ballantyne, 1st Vice-President; James Crerar, 2nd Vice-President; Stewart Campbell, Secretary and Treasurer.

PICKERING.—James McCreight, President; Wm. Major, Vice-President; John Phillips, Secretary-Treasurer.

RALEIGH (BRANCH) Henry Manning, President; John Milne, Vice-President; John Jenner, Secretary; Stephen White, Treasurer.

SCOTT—Thomas Irving, President; W. Smith, junr., Vice-President; A. Turner, Secretary-Treasurer.

SHEFFORD (COUNTY)—S. N. Blackwood, President; Andrew Kay, Vice-President; Geo. H. Allen, Secretary-Treasurer.

SIDNEY.—John Chisholm, President; John Huffman, Vice-President; C. A. Jordison, Secretary; T. D. Farley, Treasurer.

SOUTHWOLD—Levi Fowler, President, John McColl, Secretary.

TORONTO (TOWNSHIP).—Geo. Blain, President; Emerson Taylor, Vice-President; Thomas D. King, Secretary-Treasurer; Dr Aikens, Messrs. Wm. Cook, Wm. Duck, Joseph Gardner, Wm. Fisher, Joshua Pollard, Wm. Harris, Samuel Pearson, and Wm. Wilson, Directors.

UXBRIDGE.—John Feasby, President; R. McFarland, Vice-President; J. J. Gould, Secretary-Treasurer.

WALSINGHAM (TOWNSHIP)—H. J. Kilmaster, President; P. C. Mordon, Vice-President; S. P. Mabee, Secretary and Treasurer.

WATERLOO (NORTH)—H. W. Peterson, of Woolwich, President; George Randall, of Waterloo, 1st Vice-President; Moses Springer, Secretary and Treasurer.

WINCHESTER—David Rae, President; C. J. Fox, Vice-President; Wm. Broder, Secretary and Treasurer.

WENTWORTH (SOUTH).—Alexander Young, President; John Renton, 1st Vice-President; Levi Lewis, 2nd Vice-President; Wm. A. Cooley, Sec.-Treasurer.

WENTWORTH (NORTH)—Thos Stock, President; John Smith, Rosehill, 1st Vice-President; Wm Henderson, 2nd Vice-President; John Weir, jun, Secretary-Treasurer.

YORK (NORTH).—T L. Hencock, President; J Ironsides, 1st Vice-President; R. Powell, 2nd Vice-President; E. Jackson, Secretary-Treasurer.

EXTRACTS FROM A LETTER FROM LANARK.—Our County Society held its annual meeting at Perth, on the 21st January. A considerable number of our best farmers were present, and manifested much interest in the proceedings. A full report of the proceedings for 1864 was laid before the meeting. The business of this society is now conducted on a careful and systematic plan. The last fall exhibition of articles, suited for in-door inspection, was held in the new Town Hall, and the admission fees paid the expenses, and will in future become a source of income, as the public are becoming more interested in these annual exhibitions of the farming and mechanical resources and enterprise of the locality.

Government Bounty and Branch Societies.—This subject came up for discussion, as it appeared from the annual reports sent in by the Branch Societies, that a number of irregularities existed, and that there was the appearance of efforts to obtain an undue share of the Government bounty. In some instances it seemed as if the premiums awarded were allowed to remain, to be returned as the annual subscription. A few years ago, our County Society became very feeble. The Government grant was not received, and the Branch Societies nearly all died out. An effort was made to revive and invigorate the County Society. The annual subscription was doubled, frequent meetings, not of the directors alone, but of all the members, who were invited to take part in all the discussions, were held, the press was furnished with reports of these meetings, and now all is vigor and activity again. The county subscriptions are paid in cheerfully and voluntarily, and in time, as none are received after the 1st of May. The Government grant is received and carefully distributed. A strong Branch Society, embracing Drummond, Bathurst, Burgess, and Elmsby North, with an excellent premium list, and an annual subscription of $5 from each member, has sprung up, sustaining and backing up the County Society. Branch Societies exist at Smith's Falls, Montague, and Beckwith, and the amount of real subscriptions are very encouraging. A desire exists to start other Branch Societies, but as the course would tend to render them but small and feeble local clubs, it is rather to be deprecated. It has become necessary to require more strict returns, and to insist on real *bona fide* annual subscriptions from members. We augur, therefore, that in a few years, we shall have two or three only, but vigorous working Associations in South Lanark. The result must be beneficial in promoting the cause of agriculture, and in introducing better stock, in which we are behind our neighbours in the West.

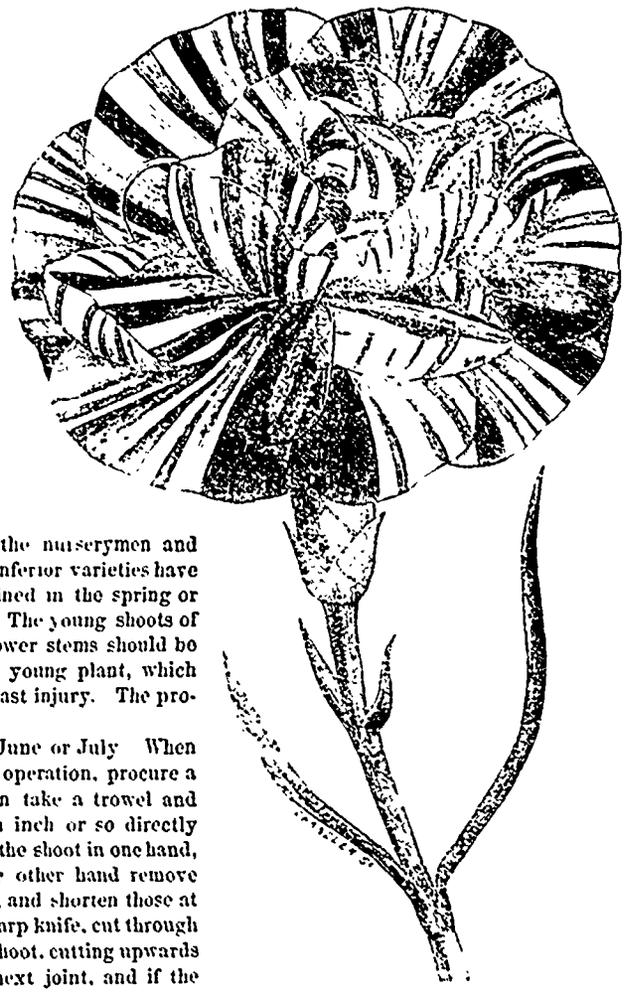
The Provincial Association and Board of Agriculture.—The circulars referred to in THE CANADA FARMER, came before us for discussion, and we will be charged with joining in the "Raid" (as you humorously called it) on the Board, as our Society went for Mr. Cowan's amendment, to divide the Province into 12 agricultural districts, each to elect a member of the Board. We favour an infusion of new blood, and some of it from central Canada. We cannot help feeling that the Board is too much of a Western Institution, that as at present managed, it naturally extends its efforts in that direction, and that four-fifths of the benefits derivable from the Provincial Association, as now worked, go to the West. The exhibitions are more successful and pay best in the West, it is true, but this is not the only thing to be considered. We suggest a large Provincial Exhibition once only in three years, giving the other two years to a somewhat smaller effort, commensurate with the means of the Association. We could then have alternately an Eastern Exhibition at Ottawa, Perth, or Kingston, and a Western one at Brantford, Guelph, Stratford, Goderich, or other suitable localities, holding the *great* one at one of the larger centres, every third year. In time this would regulate itself, and all the exhibitions would become great ones. We wish to see more agricultural enterprize infused into central Canada, and throughout the Ottawa Valley. This is a fitting subject for a letter by itself, and can be only briefly noticed here.

THE CANADA FARMER has proved a favourite, and as you are aware, our members are nearly all subscribers again. We would like more letters from *practical* farmers, in their own style, and over their own *names*. There is interest in variety, and THE FARMER will be quite readable if *strong* and *sensible*, without being too *fine*. W. O. BUELL.

COUNTY OF CHATEAUGUAY AGRICULTURAL SOCIETY'S WINTER SHOW.—The Society's Winter Show was held at the village of St. Martine, on Thursday the 12th of January. On account of the very bad state of the roads, which were next to impassable, the turn-out of people was not so numerous as on former occasions, nevertheless the number of entries was much more numerous

Horticultural Department.

Carnations and Picotees.



"How can I obtain Picotees and Carnations, such as were common, very common, in my younger days, in Europe—flowers almost or quite as beautiful as the rose, and even more desirable, I think, for their fragrance?" Such is the inquiry now before us There is nothing but the rose that can lay any claim to equality with the Carnation As suggested in most parts of Europe they are quite common, and we must admit that our climate is not the best for this flower. Old plants will suffer more or less by our severe winters, but young plants either grown from seed, or from layers will be found perfectly hardy In answer to the question how plants are to be obtained, we reply, some very good varieties may be obtained of the nurserymen and florists, though we must say that very inferior varieties have often been sold. These can be obtained in the spring or fall and will flower the first summer. The young shoots of the plant which do not throw up flower stems should be layered, and each one will produce a young plant, which will endure the winter without the least injury. The process of layering is as follows :—

The proper season for layering is June or July When the time arrives for performing the operation, procure a quantity of small hooked pegs; then take a trowel and remove the earth to the depth of an inch or so directly under the shoot to be layered. Take the shoot in one hand, and with the finger and thumb of the other hand remove the leaves from the body of the shoot, and shorten those at the top an inch or so. With a thin, sharp knife, cut through the strongest joint on the body of the shoot, cutting upwards until within a short distance of the next joint, and if the joints are close it may be necessary to cut through more than one. The slit may be from one to two inches in length. Then press the centre of the shoot down to the earth, being at the same time careful to keep the slit open and the top in an upright position: take one of the pegs and secure it in this situation. A little clean sand placed around the cut, will aid in the formation of roots. In September or October the shoots thus layered will be rooted sufficiently to separate from the parent plant, when they may be cut away and removed to winter quarters. Another way to procure plants, is by purchasing and planting seed; get the best you can obtain. The seeds may be sown in a hot-bed or cold-frame early in the spring, and transplanted the latter part of May or early in June- as soon as the plants are large enough to bear removal They transplant quite readily and unless the weather is hot and dry shading or watering will not be necessary But, watch them and do all that is necessary to give them a good start.

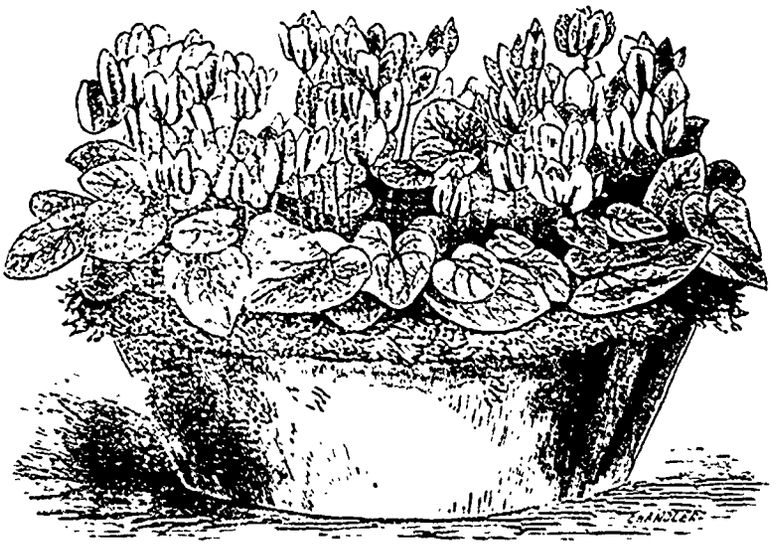
If you have no hot-bed or frame, prepare a nice mellow bed in the garden, early in the spring, and sow the seed. In about a month you will have young plants. If they come up thin, so as to allow plenty of room for each plant to grow, you can let them remain in the seed bed, keeping the soil well cultivated until September, when they should be removed to the beds where you design to have them flower the next season If they come up thick in the seed bed you can remove them in the spring to the flowering bed, or prick them out in another bed four or five inches apart, until September.

Nothing is needed for winter protection—a very few leaves scattered over the bed will do no harm, but too much is worse than nothing as it keeps the plants too damp. Where it is particularly desirable to keep an old plant over the winter, draw the earth well up around it and cover any long straggling branches the same as for layering. In this manner they will generally pass safe through the winter. If the best seed is obtained, and you have twenty-five plants, perhaps one-third will be single and worthless, another third semi-double, or with some other defects, but these will be very good for cutting. Of the remaining third perhaps two or three you will consider delightful specimens, and be willing to name them after your nearest friend. The others will be such as all your friends will praise, though they may not meet your ideas of a good flower.

As soon as the first flowers appear, pull up all that are single and other poor ones. Save the second class until they have nearly done blooming, as they make a fine show in the garden, and are very fragrant and therefore desirable for bouquets. But as soon as the flowers begin to fail pull them up also. Then layer three or four of the best and you will obtain the best flowers only the next season. Pursue this course a few years and a collection of very desirable seedlings will be secured.

We give an engraving of a good Carnation; it is named Emperor and obtained a prize at one of the leading shows. If any of our readers succeed in growing such a splendid flower from seed they will be exceedingly fortunate; but what has been done may be again. We know of few things more interesting and even exciting than watching the flowering of a bed of seedling Carnations.—*Rural N. Y.*

Cyclamen Culture.



We recommend seedlings of *Cyclamen persicum* to be allowed to grow as long as they will without receiving any extra stimulant in the shape of more heat. Give them water so long as they continue to grow, keeping them on the shelf of your greenhouse, but when new leaves cease coming from the crown, the plants assuming a stand-still aspect, turn the pots on their sides to make sure of their not being watered. Keep in the full sun until all the leaves are off, when they may be placed close together on a shelf in a cool part of the greenhouse. We do not advocate shaking them out of the soil and storing the bulbs in sand, certain as we are that it has a tendency to weaken the bulbs. We should not be surprised if the seedlings continued to grow on through the winter until the beginning of May next year, when you must gradually withhold water and have the bulbs thoroughly ripe by the beginning of June, the pots then to be set aside in a cool place without water until the end of August. At that time pot the plants singly, choosing pots about twice the diameter of the bulbs. Drain well: at least one-third of the pot should be filled with broken pots or sifted ashes, covered with a thin layer of sphagnum moss or cocoa-nut fibre. Use a compost formed of equal parts of turfy sandy loam and leaf mould, with a sprinkling of silver sand. The bottom of the bulb should do little more than rest on the soil, and not be buried beneath it; but the crown of the bulb ought to be level with the rim of the pot, its bottom just within the soil, which leaves room for watering.—Water sparingly until the growth commences, and as it increases give more water. Place in a light and airy situation, for if kept in a close, damp, or dark place, they will never flower.

In after-seasons, when the plants die down, turn them into the open border of the garden, allowing them to remain until the nights begin to be chilly, towards the end of September, when leaves very often are appearing and flowers rising. Pot forthwith, place on a shelf in the greenhouse, and you will have *Cyclamen persicum* in bloom all winter. Yours, however, may be the evergreen variety, by no means so rare as represented, and if so, you will pot in August of each year, and have flowers all the year round, but if evergreen they need a rest, and that is done by giving less water from June until September, you then have their beauty when outdoor flowers are scarce.—*Cottage Gardener.*

Trees with variegated foliage make a very beautiful appearance in a piece of shrubbery or on the open lawn. We have several very desirable plants of this description more or less known to horticulturists in this country, such as the Golden spotted-leaved Ash, of which there are two good varieties: the variegated-leaved Horse-chestnut and the golden-leaved Maple Many beautiful variegated trees much prized in Great Britain and on the continent of Europe, cannot be grown here because of the severity of our winters. We give herewith, however, a beautiful engraving of the Variegated Maple, (*Acer Negundo*, fol. var.) which we are inclined to think would be a valuable acquisition to the ornamental gardens in this country. It belongs to the species known as the Ash-leaved Maple. As this family of trees is capable of enduring the most intense cold, no fear need be entertained on this score. We do not know if this Maple has been introduced among the nurserymen on this continent, but it is highly recommended in European catalogues, and from the enlarged specimens of foliage on either side of the engraving, it can plainly be seen that it is a very beautiful tree. We may add that our engraving was copied from a photographic picture of a tree in a German garden.

THE VARIEGATED MAPLE.

Rockwork.

A good imitation of natural rocks is one of the most difficult operations which fall to the lot of the landscape gardener to execute; and hence very few passable specimens are to be met with, although there are few places where what is called rockwork is not to be found. Not only is the disposal of the material in these badly arranged, but the materials themselves are of the most incongruous and unnatural character—fragments of sculpture, shells, petrifactions, vitrified bricks, clinkers, architectural remains, &c., are huddled together in delightful confusion. One of the best specimens of rockwork we have seen is that constructed at Chatsworth as a screen for separating the dressed grounds from the great conservatory. It represents a piece of Alpine scenery, and seems as if the whole mass of rocks had been hurdled down from above by some volcanic eruption, and left in its present very natural condition, very similar to what we so often see at the base of hills in most Alpine countries. One great advantage Sir Joseph Paxton had was material natural to the spot, and these he very wisely availed himself of; and now that the softening effects of time have clothed it with natural vegetation, it would take a pretty good geologist to detect the imitation of nature. The other instance is of a very different character—namely, the panoramic rockwork at Hoole House, near Chester, where the object was to show Alpine scenery of great magnificence, as it were, by model. The design is taken from a model of mountains of Savoy, with the Valley of the Chamouni and the "Mer de Glace" forming the highest pinnicle of it. The latter is constructed of grey limestone, quartz, and spar; and the spaces, which in ordinary rockwork are filled with plants, are in this case filled with broken fragments of white marble, to look like snow, and the spar is intended to represent the glacier. The highest part of this mimic rockwork is thirty-four feet above the level of the lawn. The place being only a villa residence, this rockery was intended to act both as affording shelter and privacy—the latter a matter of no small importance where the grounds are so situated as to be overlooked by one's neighbours. It also forms an effective screen both during summer and winter, better than any other means that under the circumstances could have been adopted.

There are two leading objects to be kept in view in the construction of artificial rockwork. One is an imitation of the surface, broken and disturbed, and intermingled with Alpine vegetation; the other an imitation of the natural stratification of some particular section of rock geologically arranged. The rockwork which most usually occurs in park scenery (we do not here refer to it as entering into combination with other objects in flower gardens) is by the sides of the approach where cuttings have to be made through rocky strata. Than this nothing is more simply accomplished, as all that is required is to bare the natural rock so as to bring into view pieces of its most perfect formation, to cover the spaces between with turf or creeping plants, and with a few stunted bushes of birch, or such other tree as is indigenous to the spot. Care must be taken that no tool-marks be left visible on the rock, and that all traces of art be obliterated, leaving the whole as if it had been a natural opening through which the road has been taken. Lay bare prominent pieces of natural rock here and there in dingles and banks near which walks or drives pass, so as to bring them into contrast with the vegetation that surrounds them, and plant with creeping plants bare and harsh lines that may have been formed by quarrying, landslips, &c. Artificial rockwork may be sometimes employed to hide objects not wished to be seen, and where the space is not sufficiently broad as to admit of this being effected by planting. By the edges of artificial lakes, and especially at their terminations, a few large boulders, scattered about as if they had been there since the glacier period, will be effective, and in a more combined form huge blocks of stone piled upon one another in the most careless manner may often greatly help in hiding the termination. Bold crags on the face of a hill that may have become hidden by plantations, by being brought prominently into view, will relieve the monotonous appearance of a large mass of wood. To such points the eye of taste will return with the same feeling of pleasure that it does on looking at a painting where water is represented, or in a natural scene where it actually exists. The same degree of emotion is not excited when looking at a bald naked scar of barren soil, or even the *débris* which results from the disintegration of rocks and accumulates at their bottom.

One of the best artificial rockworks in England is that which is constructed at the Colosseum, Regent's Park, London, composed of immense blocks of Portland stone, many of them rich in fossil remains, and very naturally arranged, and slightly clothed with vegetation. Some good specimens occur in the grounds of Terregals, in Dumfriesshire, composed of useless stones, and covered with cement of a reddish colour, similar to the red sandstone of the locality. Now that the whole is softened down by the growth of lichens and discoloured by the action of the weather, the appearance is exceedingly natural, and such fantastic forms are produced as we see in the water-worn rocks at Crichup Linn, in the same county.—*Scottish Farmer.*

Best Soil for Grapes.—In the opinion of the Ohio Pomological Society, a strong, clayey soil, or one of loamy clay with a limestone or slaty clay subsoil, will produce grapes of better quality and heavier in must than any variety of sand or alluvial deposits. It was also agreed that in all cases under-drainage is necessary to success in grape growing.

Poultry Yard.

The Profit and Unprofitableness of Fowls.

One of the most profitable and yet the most neglected stock kept by the New England farmer is his stock of barn-yard fowls, which neglect renders them the least remunerative; yet there are many exceptions to this statement, as many farmers are now learning that the right breed of fowls, properly managed, is as important to their interest as any stock they may keep. The success of the poulterer depends entirely upon his care in first selecting the right breed, and afterwards taking proper care of them. My most successful experience has been with the pure Brahma fowls, which breed with us is considered far superior in laying qualities, and for the market, to any we have ever known I keep them but one year; that is, when my pullets commence laying in July or August, the old fowls are sold to the butcher, at which age our market dealers prefer them to younger fowls. My motive is to produce more eggs in the winter season from my young fowls than from the older ones. My sitting season is generally during the months of March and April. The young chickens are fed upon bran and boiled potatoes until one month old, afterwards with cracked corn, allowing them entire liberty. As soon as the young roosters can be distinguished from the pullets they are separated, and fed differently, the roosters are fattened, while the pullets are fed to produce growth and maturity The food for the pullets may be corn, pork-scraps, and barley, for the roosters, scalded corn-meal - enclose them, being careful to furnish fresh water and grass, or green herbage I generally set from 10 to 15 hens at once, as they all hatch at the same time. Two or three hens take charge of them in one coop, making the care much less than broods of different ages

The coop for laying fowls should be light, dry, and well ventilated. It is not necessary that the Brahma fowls be kept warm in winter; they are very hardy, "and I find that they succeed better without artificial heat than with it," with particular care that the coop is free from draughts, being tight with ventilation at the top

In rearing chickens last season I discovered a method which I consider of much importance. When the chicks are about 12 hours old, a drop of kerosene oil is applied to the top of their heads, and under each wing, which immediately destroys any insect which may have come from the hen, and before they are troubled again they will be of sufficient size to take care of themselves by scratching in the soil or dust of the coop.

As a market fowl I think the Brahmas excel all others, their flesh is yellow, tender and juicy, even when one and two years old. I have experimented with nearly, if not all, the different known varieties, and find none to compare with the pure Brahma breed for every quality that constitutes a perfect profitable farm fowl.—John S. Ives, *in Country Gentleman Salem, Mass*

☞ Why is a cow's tail like a swan's bosom? Because it grows down.

☞ To make hens lay prepetually, hit them on the head with a big club. Other modes have been recommended, but this is the only one found to prove effectual.

☞ One day, at a farm-house, a wag saw an old gobbler trying to eat the strings of some night-caps that lay on the grass to bleach "That," said he, "is what I call an attempt to introduce cotton into turkey."

Eggs in Winter.—A successful manager of fowls tells in the *Country Gentleman* how he gets eggs, in winter, from his fowls. He keeps feed and *clean* water within their reach constantly, also shells or bones pounded, or old mortar, grass, cabbage, or other vegetables, of which they are fond, boiled potatoes, turnips, or the peelings of them, and scraps from the table daily The potatoes and turnips boiled with coarse Indian meal, or corn and oats ground together, and fed cold or partially so, *never hot*; scrap meat that comes from the tallow chandler's or pork butcher's in cakes, is good; make a hole, basin like, into a cake, and fill it with water, which affords them drink and softens the scrap so as to make it palatable to them. When they have picked it to pieces, soak or boil the refuse with meal, and feed it the same as potatoes, &c. The fowls have warm, clean, airy quarters. The letter closes as follows. "Remember that hens are only *machines* for making eggs, and like the mill for making flour, if the grain is not put into the hopper the flour will not come out. As the grain is to the hopper, so is the feed, water, vegetables, lime, pounded shells, bones, &c., to the hens."

The Apiary.

Wintering Bees in the Open Air.

Mr. O. Sprague, of Fulton, Whiteside County, Illinois, has devised a plan which with some modifications promises to effect as great an improvement in wintering bees, as the moveable comb frames have wrought in handling and managing them. He has tested it for three years, first with nine, then with sixty-four and last winter with seventy five stocks, without losing one where the bees had sufficient honey, although from the extreme cold of last winter many bee keepers in this vicinity lost nearly all their colonies.

Having noticed that *dry corn-cobs* were admirable absorbents of moisture, and non-conductors of heat, it occurred to him to remove in the fall the honey board and use cobs in its place These can be easily cut to suitable lengths with a sharp hatchet, so that two rows laid crosswise will exactly cover the tops of the frames, by alternately placing the rows butt to butt, and point to point A few nails in the front or rear ledge of the hive, or tacks in the tops of the frames for the outer cobs of each row to rest against, will keep them in place when the cover of the hive is raised

Mr Sprague has a machine by which he cuts thirty or forty cobs per minute, and in one day he can cut and adjust enough for fifty stocks. If stored in a dry place they are almost as durable as cork, to which in warmth and dryness they bear a close resemblance.

Mr Sprague says that the bees easily pass from comb to comb under the warm hollows made by the cobs, where they lie against each other; thus requiring no other winter passage. In the coldest weather his bees are warm and dry, adhering closely to the lower sides of the cobs, and they come out of winter quarters in prime condition, very few having died in the hives The frost which often collects in the upper cover of the hive, cannot when melted, wet the colony, as the cobs will absorb and retain all the dampness which can possibly arise from "the breath of the bees." Before using the cobs, his colonies when wintered on their summer stands were often in the spring both weak and sickly. By removing the honey board he sometimes saw large drops of water on the tops of the frames, even when all its holes had been left open for the escape of dampness, and in some instances the bees were so drenched that a sudden change to a severe temperature would have frozen them into a solid mass if left in the open air.

Mr. Sprague further claims that the cobs enable him without any drawback in wintering his bees, to use a *low or shallow hive*, which shape he is satisfied after much experience, yields more surplus honey in marketable form than can be obtained from taller hives.

Since Mr Sprague communicated his plan to me, I have placed a layer of cobs on the *bottom board*, also suspending the frames on cobs fastened to the rabbets; and have lined the *sides* with cobs held in an upright position by fine annealed iron wire, fastened to the heads of nails driven into the sides of the hive.

I think that these sides and bottom linings are a great improvement, and that the saving of honey will more than pay for their additional cost. Many however, will prefer Mr. Sprague's plan, as it requires less labour, and may be used when the lateness of the season does not permit a more thorough lining of the hive.

If any stocks are likely to need feeding, I would advise shortening two or more of the central cobs of each row, so as to leave a space for a piece of old comb or a shallow feeder, which when covered with cobs and old woollen garments, will allow the bees to be safely fed in the coldest weather. In the Spring, a little food to stimulate breeding may be sprinkled on the cobs, or water, when the weather is too chilly to allow the bees to venture abroad.

In many parts of Europe where corn-cobs cannot be obtained, *winter* lining for moveable comb hives may be made of straw *Permanent* linings of straw are objectionable, because they afford in summer an excellent harbour for the larvæ of the bee-moth, and occupy so much room that the size and cost of the hive must be considerably increased There is no need of any *summer* lining to prevent the combs of moveable frame hives from being melted by the heat, as with proper ventilation, such hives may be safely exposed if necessary to the full heat of our hottest suns.

There can be no question that corn-cobs are preferable to straw either as temporary or permanent linings for bee hives, and the lovers of the busy bee in this country will appreciate the services of Mr Sprague, in suggesting and successfully experimenting with a material so cheap, so lasting and so universally accessible.—*Langstroth.*

The Household.

"The Twa-handed Wheel."

To the Editor of The Canada Farmer:

Sir, The winters of Canada demand plenty of clothing, both for back and bed; but at the present moment there are thousands who are sorely pinched for both for the supply of cotton and flax goods, or cotton and flax cloths has fallen so far short of the demand, that their price is fairnen and trash to the bargain Now, there is no way by which these wants can be so quickly and cheaply supplied, as by starting the little flax wheel all over Canada. I know that there are difficulties in the way of doing this; for there is nothing more difficult than to root out a *habit* of long standing. Mankind have been so accustomed to the use of cotton for the last sixty or seventy years, that they still look back with a lingering hope, that when the war is over, cotton will come down to its former price. How far this may be true, we, at present, do not know. But there is one great fact which we know to a certainty, and that is, that the war has created a most enormous debt, and that in all likelihood a heavy tax will be laid on cotton to help to meet it. Again, with the end of the war will come the *end* of one man *selling* another man like a horse. Now all these things will not have a tendency to cheapen cotton—but the very reverse. So the sooner the young lasses of Canada begin to rattle away at the *twa-handed wheel*, the better both for back and bed, and bags to hold their father's wheat in, for the bags they buy are nothing but trash. It is of no use waiting any longer for cotton, for well the Americans know that they will get their own price for cotton, for it will be a long time before the supply outruns the demand. Great Britain must have cotton. She cannot grow enough of the staff of life for her great population, and far less can she grow flax as a substitute for cotton; but Canadians have great reason to be thankful to the All Bountiful Giver—for they can do both.

It is not a little cotton that Great Britain and the United States alone require for their own use. More than thirty years ago, Great Britain imported no less than 272,448,909 pounds of cotton, and the United States manufactured 35,000,000 pounds into 140,000,000 yards of cloth. Now, these two countries consume about ten yards of what they manufacture for every one they export. I mention these facts as showing the little dependence when can be placed on the supply of cotton or flax goods at a reasonable rate. At the present time the Canadian farmer sells cheap and buys dear He would do better to grow less wheat and make more cloth. He has the wool already and he can get the flax whenever he likes to get it. Bye the bye, sir, where was all the boasted cotton of the United States a century ago? It was nowhere. And yet our forefathers in the motherland, got along pretty well with flax and wool, and I am sure that the men were as stout then as they are now, and a lass at the "twa-handed wheel" would compare favourably any day with a factory girl.

There is an expression which is very often made use of now-a-days, and that is that the "school-master's abroad." Now there is a certain kind of schoolmistress that I would like to see abroad also. We have schools now-a-days for teaching almost everything—schools to learn to dance and sing, and schools to learn men to drink till their heels flee over their heads, and schools to learn men to shoot one-another; but we have no schools to learn to spin. Now there would be as much common sense in having a spinning-school as all these schools put together; therefore, in order to start the "twa-handed wheel," I would propose, in the first place, that every Municipal Council of every Township call a public meeting to consider the propriety of starting the little flax wheel, and getting hackles to dress the flax into lint and tow. In the second place, I would propose that as the young women of Canada know nothing about spinning at the flax-wheel, and as there is still a small remnant of good old ladies who were wont to work at the "twa-handed wheel," let some of them be engaged to open spinning-schools. And if there is any Township that has not a scutching mill; if a capitalist cannot be got to start one, let the farmers form themselves into a company and erect one.

JAMES BUIK.

Nicholl, January 18, 1865.

Lard for Summer use.—To preserve lard for summer use, mother says, try the leaf lard "*separately*, throwing in a small handful of salt while "trying." Put in a tin or stone jar and keep in a cool dry place. In this way mother's keeps pure as long as it lasts; and she is sure it will keep a year.—*Rural N.Y.*

AN UNPATENTED BOOT-GREASER—The foot of a rabbit. Try it.—*Genesee Farmer.*

SURE CURE FOR CHILBLAINS.—Dissolve Epsom or Glauber salts in as little water as possible, apply it to the parts affected, night and morning, until it affects a cure, which will be in only two or three days.

SNOW BALL PUDDING.—Pare and core large mellow apples, and inclose them in cloths spread over with boiled rice, and boil one hour. Dip them in cold water before turning them out. They may be eaten with syrup, sugar or sweetened milk.

TRIPE—HOW TO PREPARE IT.—Tripe is the large stomach of the beef taken fresh, washed thoroughly, soaked in milk of lime, made by slaking quick-lime to a creamy consistence. After soaking a few hours, or over night, it is scraped, when all the inner dark-coloured skin is removed. It is then washed thoroughly, and boiled until quite tender, in which condition it is marketed, or it is packed with salt and spices, or simply salted. We should be glad to hear from any of our readers who practice other methods.—*American Agriculturist.*

CHAPPED HANDS POISONED BY TALLOW.—A few days since, a young lady in this town, having chapped hands, applied tallow, from a common tallow candle, and to her surprise and alarm, in a few hours after, her hands commenced to swell, and in a short time they were swollen to such an extent that medical assistance was sought. The swelling, after a few days, left the young lady's hands, but the poison having entered her blood, the swelling recommenced in her feet, and she is still under medical treatment.—*Sherbrooke Freeman.*

MILK GRAVY.—The principal food of numerous families in the United States, consists of fried pork, pork fat, bread, and potatoes. Fried pork, in particular, mounts the table. Three-fourths of those who use the fat fried out of the pork for gravy, could easily furnish milk and cream, and form a dish much more luxurious, without any additional expense.

Add cream to your milk, if you have it, and make your gravy, firstly, take out your pork from the frypan, as soon as well done through, and all the fat except about two or three tablespoonfuls. Wet up a large spoonful of flour with cold water. Stir this into the fat while hot, and in a few seconds add your milk, two cupfuls or more, and stir the whole together; let it boil about five minutes with the pork in it, or not. This makes a healthy and palatable gravy. Clear pork grease is bad for the system when used in daily food. It tends to scrofula.—S. W. J. in *Country Gentleman.*

HOW TO SAVE FUEL.—Have double windows. Make an entire sash and put it on the outside—it must be made to fit tight. This should be done especially to West and North windows. The difference is greater than those are aware of who have never tried it. We have tried it thoroughly ourselves for years; and we would almost as soon think of dispensing with a stove as with our double windows. It saves from a quarter to a third of wood, and makes the room so much more comfortable that it seems like another room. One window should be put on hinges, to open and close for ventilation. We find this a great advantage. Go to the trouble, go to the expense, and have your windows made—and our word for it, you will thank us for a most useful and comfortable suggestion. Double windows will also prevent ice from forming on them. The lights will always be clear. When summer comes, take the windows out, and put them away till winter comes again.

CHEAP DINNERS.—It ought to be the study of every one, especially those who earn but small wages, to lay out their money in the best way. A little money well spent will do more towards the comfort of a family than is commonly supposed. Among the working classes large numbers live from hand to mouth, buying things just as they want them, without thinking of providing for to-morrow. Now, if instead of buying a great quantity of greens or potatoes, or the usual allowance of beer or cheese, a shilling only were laid out in meat by the mother of the family, this would buy two-and-a-half pounds of the cheaper parts of beef or mutton. If this meat be cut up into small pieces, and put into about two quarts of water, and left to warm slowly by the fire until it boils, it will make a most excellent and nourishing soup. This may be thickened with oatmeal, rice or hard-toasted bread, or poured over and eaten with potatoes. The meat with a little of the soup, may be warmed up with other vegetables for dinner the next day; and sometimes a shilling's worth of meat, if well prepared, may be made to serve for two dinners. Salt or pepper may be used according to taste.

Miscellaneous.

How to get rid of a Rock.

URIAH ABELL was a Connecticut farmer, and in his time a pretty good one. His farm, like a great many other Connecticut farms, was full of stones, and he delighted to clear them out of the way of the plough. He built a great many rods of substantial stone wall, but he could not use up all the stone. He had cleared one field of all but one great boulder, about the size of a large haycock. He wanted to get rid of that. He would have "blown it to flinders," as he had a good many others, but it was within two rods of the "best room windows," which might go "to flinders" at the same time. So he attempted to haul it out of its bed one day. After tiring his own and his neighbour's oxen, and breaking several chains, Uriah grew wrathy, and declared that "he would give $5 to any one that would put that pesky rock out of his sight."

"Wa'al neow, I don't mind taking the job if you'll find a spade and throw in some dinner, and a mug of cider along in the afternoon."

This proposition was made by a stranger who had just then come up. He was a fair specimen of a working Yankee, and Uriah dropped the broken chain and turned square round to look him full in the face.

"Yes I'll give it and the dinner and cider too, but I won't pull my oxen again at that stone, no how."

"Don't want you should. I'm to put that stone out of sight, make all smooth about here, so you can plough right along. That's what I m to do ain't it."

"Yes, that is all I want. I don't care how you do it, but if you fail I don't pay anything, do you understand? Very well, then come into dinner."

That done, and a large cud of tobacco adjusted, the Yankee threw off his coat and took up the spade. He gave a look at the stone to see which way it would tip easiest, and then commenced digging a hole on the lower side, large and deep enough to bury the boulder quite out of sight. In three hours he got out and took a careful measurement, and then dug a little upon one side. Then he went to the wood pile and got a stout stick of wood, which he planted firmly with one end in the bottom of his hole and the other bracing against the rock. Then he began undermining, and worked till he saw the dirt began to give, and found that the rock was resting on his brace.

"Now" says he "I think I will take that mug of cider."

Uriah, who had been watching him, ordered out the cider with a right good will. He even offered to add "some doughnuts and cheese."

While the Yankee was wiping away the perspiration and drinking his cider, Uriah brought his oxen around and hitched a chain to the wooden prop.

"I did say I wouldn't pull my oxen again, and I don't mean too, cause it only needs a smart jerk."

Jerk it was, and down went the boulder and with it a shovel full of dirt, and another and another, in quick succession, until all was smooth and level, and long before night the Yankee was ready to resume his journey.

"There, said Uriah, as he handed him the five dollars, "there is the best spent five dollars that I ever paid for work on my farm. Won't you take another drink of cider. You are entirely welcome. I have learned something of you."

Perhaps some persons who read this may learn something—learn how to get rid of some of the boulders that encumber the surface and which are often blasted and broken up and hauled away, "just to get rid of them," at a much greater expense than it would require to bury them where they lie, entirely out of sight.—*N. Y. Tribune.*

FARMERS' CLUBS.—These bodies are capable of doing much to stimulate the intelligent direction of the farmer's labours. The Secretary of one in Massachusetts has issued a little printed card, which is so much a model of its kind for general imitation, that we copy it below at length:—

Subjects for Discussion in the Haverhill Farmers' Club

Dec 26,.	*Poultry.*—Breeds, Management, and Profits.
Jan 9, 1865,	"Is mixed Farming the best for our farmers?"
Jan. 23, .	*Grapes.*—Best Kinds and Culture.
Feb 6,	*Orchards.*—(Apple and Pear)—Best management of
Feb 20.	"How should the Essex County Farmer procure
Mar 6,. .	*Farming Implements.* [Dairy Cows?"
Mar 20,. .	Most profitable Fruit to raise for this Market.
April 3,....	"Can we raise our Pork at a Profit?"
April 17,	*Manure.*—Comparative Value, Preparation and Ap-
May 1,	*Preparation of the Soil.* [plication.
May 15,.....	Best method of laying down Grass Land.
May 29, ..	"What Trees shall we plant?"

C. T. CHASE, *Sec'y.*

☞ IT is stated that the culture of cotton in the north-western provinces of India has increased fifty per cent. during the past year.

Cheap Way to Keep Ice.

THE best and cheapest plan for preserving ice consists in covering the bottom of the box, or ice-house, with a layer of sawdust to the depth of six inches or so, level and well packed. Upon that commence storing the ice—leaving a space of ten to fifteen inches between the outer layers and the sides of the enclosures—whether box or regular building. Pack this space with sawdust as the successive layers of ice are added, one upon the other. When the requisite amount of ice is in, add a light covering of sawdust and the thing is done. When the ice is needed for use, commence by taking it from the top, as deposited, in layers. As the ice is removed, the sawdust will drop down from the sides and gradually accumulate up the top of the heap—giving additional protection to the whole mass from heat and air as the warmth of the season advances. If there is any cheaper or better way for packing ice with any tolerable degree of security, we would like to know it. The philosophy of the advantages gained by dispensing with inner walls, aside from the economy of the thing, is plain to any one at all conversant with the laws of heat and cold.

We regard a cellar—that is, such a one as will preserve roots and vegetables from the effects of frost, less favourable for keeping ice than a place above ground. The temperature is too high at the time it should be put up to make a good job. To keep well, ice should be packed in frosty, freezing weather—the colder the better—and fully exposed during the process. All the crevices between the several layers and the blocks should be clinked up with snow, and water poured upon that, and the work done in freezing weather, thus cementing the whole mass into one body. This is very essential in packing small quantities—such as would suffice for the wants of one or two families. In packing large quantities for commercial purposes, so much care would not be practicable or necessary.

It is the easiest thing in the whole routine of farm life to have a supply of ice all through the summer season. Of its luxury we need not speak. Any and every farmer's family may enjoy it without any outlay save a little labour at the right time. And yet, how few families there are in our whole community of farmers, who ever make provision for or see a pound of ice from spring to fall! The use of ice in dairy business in summer is absolutely indispensable to success. If more ice were used we should not see so much miserable butter in our Western markets.—*Iowa Homestead.*

☞ An inventor of a hay press in Maine has experimented with his machines in pressing pine shavings for kindlings. They make very neat packages, and can be sawed into blocks like timber. About a hundred bushels of shavings can be put in the space of an ordinary hogshead, and when once pressed, the spring is all taken from them.

EQUALITY.—Some one was praising our public schools to Charles Landseer, and said, "All our best men were public school men. Look at our poet's There's Byron: He was a Harrow boy." "Yes," interrupted Charles, "There's Burns: He was a plough-boy."

☞ 'Josh,' said Bill, 'does the sun ever rise in the west?'

'Never,' said Josh.

'Never?' repeated the other.

'Never!' said Josh.

'You don't say so, Josh? Well you won't catch me emigrating to the West, if it's always night there. I've a cousin, a carpenter, out there, who is always boasting how pleasant it is in that quarter; but it must be all moonshine.

DUST FLOATING IN THE AIR.—M. Pouchet finds that the dust floating in the air contains the *detritus* of the mineral constituents of the globe, atoms of animals and plants, and the finest deoris of all the materials we make use of. But one item he especially points out, viz: wheat starch, which is invariably found in dust, whether old or recent. Surprised at the quantity of it present among the aerial corpuscles, M. Pouchet investigated the dust of all ages and of every locality; and everywhere he found this wheat starch present. "I have found the starch," he says, "in the most inaccessible corners of old Gothic churches mixed with dust, blackened by six or eight centuries of existence; I have found it in the palaces and cans of the Thebiad, where it may have dated from the time of the Pharaohs; I have found it in the tympanic cavity of the ear of a mummified dog, which I had found in a subterranean temple of Upper Egypt. In all countries, in a word, where wheat forms the staple food, starch always penetrates into the dust and is met with in greater or less quantities.—*Medical Times.*

Markets.

Toronto Markets.

"CANADA FARMER" Office, Feb. 11, 1865.

The market is better supplied with grain and flour to-day than it has been for several days past, there is, however, very little activity. Advices from Europe do not inspire dealers with much hope of very high prices in the Spring. The block on the Grand Trunk Railway has caused a stagnation in the grain and flour markets, it being impossible to get cars to ship produce to Montreal except by two or three cars a day.

Flour—Not much offering; No. 1 superfine at $3 80 to $3 85 per bbl, extra, $4 25, superior extra, $4 50 to $4 60, fancy, $4.
Fall Wheat scarce but higher, with a good demand, selling at 90c to 94c per bushel.
Spring Wheat more active at 75c to 86c per bushel.
Barley better at 60c to 73c per bushel.
Oats at 38c to 42c per bushel.
Rye 60c per bushel.
Peas in good demand at 60c to 66c per bushel.
Hay—Market well supplied at $15 per ton.
Straw in good supply at $11 per ton.
PROVISIONS—*Butter*—Fresh, wholesale, per lb., 14c to 17c; retail, per lb., 18c to 23c; in tubs, wholesale, per lb., 15c to 17c.
Eggs—Wholesale, per dozen, 14c to 15c, retail, per dozen, 19c to 25c.
Hams—Wholesale, per lb., 9c to 11c; retail, per lb., 10c to 12½c.
Flitch Bacon—Wholesale, per lb., 8c to 9c; retail, per lb, 11c.
Cheese—Wholesale, per lb., 10½c to 11½c; retail, per lb., 13c to 15c.
Lard—Wholesale, 11c to 12c per lb; retail, 12½ to 15c.
Beef in good supply at $2 50 to $3 per 100 lbs.; second quality plenty, at $3 50 to $4 00; 6c to 8c per lb., retail; $5 00 per cwt., wholesale; 8c to 10c per lb., retail.
Calves $3 to $5 each.
Sheep, by the car load, $4 to $5.
Lambs, by the car load, $2 50; very good bring $3 50
Pork $6 30 to $6 80 per 100 lbs.
Hides (green) lower, per 100 lbs., $3 50 to $4 40, dry hides, 6c to 8c per lb, cured and tanned, 4½c to 5c.
Tallow 6½c to 7½c per lb.
Wool, 36c.
Calfskins (green) 10c per lb.; dry, 16c to 18c.
Sheepskins (green) $1 75 to $2 00 each; dry, 16c to 18c.
Lambskins 87c to $1 50 each.
Coal, Lehigh $10, Scranton $8, Bituminous $7 50 to $8.
Wood $4 50 to $5 per cord.
Salt $1 50 to $2 per bbl.
Water Lime $1 50 per bbl.
Potatoes in better supply at 35c to 45c per bushel retail.
Apples, $1 50 to $2 00 per bbl.
Ducks 35c each.
Chickens, 25c to 40c per pair.
Turkeys, 75c to $1 each.
Geese, 30c to 60c each.
Oil Cake, $32 per ton, or $1 75 per cwt.

Newmarket Markets, Feb. 10.—*Flour*, $4 to $4 25. *Fall Wheat*, 80c to 87c. *Spring Wheat*, 76c to 78c. *Barley*, 60c to 70c. *Oats*, 40c. *Peas*, 60c to 64c. *Pork*, $7 to $7 25. *Butter*, fresh, 16c. *Butter*, tub, 16c. *Eggs*, per dozen, 12½c.—*Era.*

Hamilton Markets, Feb. 10—*Flour*, Superfine No. 2, $3 30 to $3 60, superfine No. 1, $3 75 to $4; superfine extra, wholesale, $4 50 to $5; do retail per 100 lbs., $2 50 to $2 62. *Fall Wheat*, per bushel, 85c to 92c. *Spring*, 80c to 82c. *Barley*, per bushel, 58. to 60c. *Peas*, 72c to 73c. *Oats*, 45c to 47c. *Clover Seed*, $7 to $7 25. *Beef*, per 100 lbs., $4 to $5. *Butter*, per lb. 14c to 17c; do in firkins, 12½c to 15c. *Pork*, $6 25 to $6 50. *Eggs*, per doz, 17c to 20c. *Tallow* per lb, 5c to 7c. *Green Hides*, $3 50; do calfskins, 7c to 10c. *Sheepskins*, (outside quotations), $1 25 to $1 50.—*Spectator.*

London Markets, Feb. 10.—*Fall Wheat*, per bushel, 83c to 85c. *Spring*, do, 78c to 80c. *Barley*, 65c to 70c. *Oats*, 44c to 46c. *Peas*, 63c to 66c. *Corn*, 60c to 62½c. *Buckwheat*, 40c. *Dressed Hogs*, $6 25 to $6 75. *Butter*, in kegs, 15c to 16c; fresh by the basket, 16c. *Eggs*, 20c, per dozen. *Green Hides*, per 100 lbs, $2 to $3 50; dry, $7. *Green calfskins*, 9c per lb; dry, 14c to 16c. *Skins*, 60 to $1 65. *Wool*, 33c to 40c per lb; matted and unwashed subject to a deduction of one-third of the weight. *Hay*, per ton, $16 to $18. *Straw*, per load, $4 to $5. *Clover Seed*, $7 to $8 per bushel *Timothy*, $2 to $2 75.—*Free Press*

Berlin Markets, Feb 10—*Fall Wheat*, 90c to 95c *Spring Wheat*, 70c to 75c. *Flour*, per 100 lbs., $2 25 to $2 50. *Oats*, 35c to 40c. *Barley*, 70c to 75c. *Rye*, 70c to 75c. *Peas*, 50c to 55c. *Butter*, fresh, 16c to 17c. *Butter*, tub, 13c to 17c. *Eggs*, 13c. *Timothy Seed*, $1 25 to $2 50. *Clover Seed*, $5 50 to $6. *Beef*, per 100 lbs., $4 to $5. *Pork*, per 100 lbs., $5 to $6. *Lard*, 8c to 10c. *Tallow*, 8c to 10c. *Hams*, 10c to 12c.—*Telegraph.*

Owen Sound Markets, Feb. 8.—*Fall Wheat*, 70c. to 75c. *Spring Wheat*, 65c to 68c. *Barley*, 50c to 55c. *Oats*, 30c to 38c. *Peas*, 45c to 50c. *Hay*, per ton, $17 to $19 50. *Butter*, fresh 13c to 15c. Do, tub, 13c to 15c. *Eggs*, per dozen, 12½c. *Pork*, per 100 lbs., $4 to $4 50. *Beef*, $3 to $4. *Straw*, per ton, $10 to $11.—*Advertiser.*

Bowmanville Markets, Feb. 9—*Flour* per 100 pounds, $2 to $2 25. *Fall Wheat*, per bushel, 90c to 92c. *Spring Wheat*, per bushel, 82c to 84c. *Oats*, per bushel, 40c to 45c. *Peas*, per bushel, 60c to 63c. *Barley*, per bushel, 60c to 70c. *Butter*, per lb., 15c to 17c. *Eggs*, per dozen, 10c to 15c. *Pork*, per cwt., $6 to $6 75.—*Statesman.*

Peterboro' Markets, Feb. 9.—*Flour*, per brl, $4 25 to $5. *Fall Wheat*, per bush, 80c to 87c. *Spring Wheat*, per bush, 75c to 80c. *Potatoes*, per bush, 30c to 40c. *Barley*, per bush, 55c to 60c. *Peas*, per bush, 60c to 65c. *Oats*, per bush, 40c to 47½c. *Hay*, per ton, now, $10 to $11. *Hides*, per cwt, $3. *Sheepskins*, 60c to 80c. *Eggs*, per dozen, 12½c to 15c. *Butter*, tub, per lb. 15c. Do, rolls, 16c to 17½c. *Pork*, $4 to $6.—*Review.*

Ingersoll Markets, Feb. 10.—*Fall Wheat*, 80c to 85c. *Spring do*, 80c to 82c. *Oats*, 40c to 42c. *Barley*, 62c to 66c. *Peas*, 60c to 62c. *Hay*, $16 to $17. *Butter*, fresh, 15c to 17c. *Eggs*, 12c. *Beef*, $3 to $3 50. *Pork*, 6c to 6½c.—*Chronicle.*

Belleville Markets, Feb. 9th.—*Fall Wheat*, firm at $1. *Spring*, 90c to 92c. *Barley*, 60c to 65c. *Rye*, 57c to 60c. *Corn*, in good demand, and brings 70c readily. *Oats*, firm at 40c to 42c. *Peas*, bring from 65c to 70c., according to quality. *Buckwheat*, dull at 37½c to 40c.—*Intelligencer*

Kingston Markets, Feb. 8.—FLOUR.—$2 15 to $2 20 per cwt; $4 50 to $6 per bbl. *Beef*, sold at from $5 50 to $6 per cwt. *Pork*, sold at from $6 50 to $7 per cwt. *Apples*, $3 to $3 50 per bbl. *Onions*, $3 50 to $4 50 per bbl. *Hay*, $12 to $15 per ton. *Straw*, $6 to $8 per ton. *Butter*, packed, 17c; fresh, 20c. *Eggs*, 19c to 20c per dozen. *Lard*, 10c to 15c. *Tallow*, 8c to 10c per lb. *Hams*, 10c to 15c per lb. *Shoulders*, 7c to 9c per lb. *Wheat*, 95c. *Barley*, 65c to 66c. *Peas*, 61c to 63c. *Rye*, 62c. *Oats*, 35c to 40c per bu. *Hides* are now bringing from $3 to $3 50 per cwt. *Sheep* and *Lambskins*, from $1 to $1 50. *Timothy Seed* is worth from $2 to $2 50.—*American.*

Montreal Markets, Feb. 9.—*Flour*, per brl of 196 lbs—Superior Extra, $4 80 to $4 90; Extra, $4 65 to $4 75; Fancy, $4 40 to $4 50; city brands of Super, $4 25 to $4 40, nominal, Super from Canada wheat, $4 25 to $4 30. Bag flour, $2 40 per 112 lbs for choice. *Oatmeal*, $4 65 to $5. *Ashes*, per 100 lbs—Market quiet, First Pots, $5 35 to $5 40. Inferiors, $5 62½ to $5 65. Pearls, $5 50. *Butter*, per lb—market very inactive. *Cheese*, per lb—good dairy nominal at about 9c to 10c.

New York Markets, Feb. 10.—*Canadian flour* 10c better, sales at $9 75 to $10 00 for common, $10 10 to $11 75 for good to choice extra. *Rye flour* quiet. *Wheat*—market 1c to 2c better, with fair milling demand, sales, amber winter western, $2 45. *Rye* quiet. *Barley* dull. *Corn*—market firmer at $1 87½ cash, and $1 90 to Government for old mixed. *Oats* dull. *Pork* firm and in fair demand at $36 75 for new mess, $35 for one year old do; $30 to $30 50 for prime. *Beef* quiet and steady.

Advertisements.

THE CANADA FARMER is printed and published on the 1st and 15th of each month, by GEORGE BROWN, Proprietor, at his Office, No. 26 and 28 King Street East, Toronto, U. C. where all communications for the paper must be addressed.

☞ Subscription Price $1 per annum, (POSTAGE FREE,) payable in advance. Bound volumes for 1864 may be had for $1.30. Subscribers may either begin with No. 1, receiving the back Nos. for 1864, or with the first No. for 1865. No subscriptions received for less than a year, and all commence with the first number for the respective years.

CLUBS will be furnished at the following rates:—
TEN COPIES for..... NINE DOLLARS.
TWENTY COPIES for..... SIXTEEN DOLLARS.
FORTY COPIES for..... THIRTY DOLLARS.
ONE HUNDRED COPIES for..... SEVENTY DOLLARS.

To Agricultural Societies ordering more than 125 copies, the FARMER will be sent at SIXTY CENTS.

THE CANADA FARMER presents a first-class medium for Agricultural advertisements. Terms of advertising, 20 cents per line of space occupied—one inch space being equal to 12 lines. No advertisement charged less than $2, being ten lines of space.

Communications on Agricultural subjects are invited, addressed to "*The Editor of the Canada Farmer*," and all orders for the paper are to be sent to GEORGE BROWN,
Proprietor and Publisher.