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VOL. IV. No. 12.

TORONTO, UPPER CANADA, JUNE 15, 1867.

POSTAGE FREE.

### The Field.

#### The Grantham Farm Gate.

THE accompanying illustrations represent a farm gate recently patented by Mr. G. Rykert, of St. Catharines, and of which also a notice appears in the advertising columns of the present number of this journal. We have received from Mr. Rykert a small model of the gate, from which the artist has made the drawings. Judging from the model and the accompanying description, this new invention seems to possess many important advantages, and appears to combine the recommendations of cheapness, facility of construction, convenience, and general efficiency. For the particulars of its construction we refer to the illustrations and the subjoined description. The first illustration represents the chief peculiarity of the gate, i.e., a cast iron grooved wheel, on which one of the middle boards of the gate rolls, and which is also furnished with a pivot on which the gate turns in place of hinges. The following is the maker's account:—

"The gate is opened by pulling out the pin II, above the top or second board of gate at the toe-post—lifting slightly and moving from left to right, half the width of gateway or less—then swinging to the right as an ordinary gate.

Bar A on the toe-post to be fastened by bolts or screws so as to be readily shifted from A to B or C, as the depth of snow in winter may require.

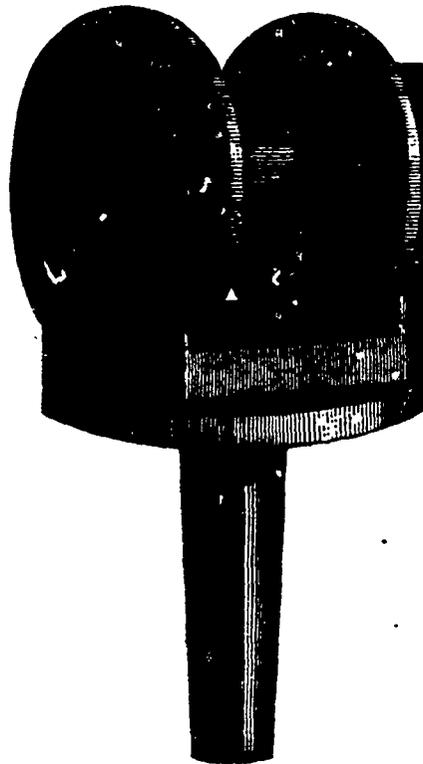
The notch or catch to fasten the gate on the cross-bar A (toe-post) is intended to be made either on the top or second or third board, though the second would be preferable, as it would then be on a level with wheel.

The bearing bar D, on heel-posts, is to be fastened to the posts by bolts and nuts, or by large screws, so as to be readily shifted to A, B or C, or higher as the snow may render necessary. It is to be made of hard wood. By shifting the bars the shovelling of snow is dispensed with.

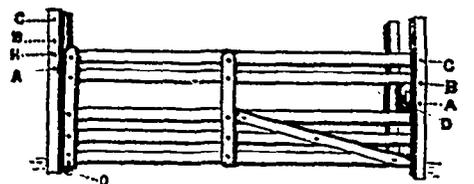
The groove in wheel, K, must be of sufficient depth to prevent the board which rests upon it from flying out when roughly opened, or from splitting. A wheel about 3 inches diameter (cast iron) with solid portion or axis 1 inch in centre for board to roll on, and 6-10 inch where it slides into the clip, would answer—thus only requiring with hard wood cross-bar a space of six or seven inches between the second and third boards. The third is intended to be as close to the bottom of cross-bar as it can be without rubbing, so as to prevent the bar above flying out of the groove in wheel, K.

The clip G, upon which the wheel rests and within which it turns, is to be a cast-iron casting with a slit on the upper part, so that the outer ends of axis

may slide into this. The bottom of clip is intended to fit into a cast-iron socket or washer let into top of



cross-bar D with a rim, level with or slightly below top of bar, and the upper part of the bolt (bottom of



clip G) is to be cast so as to fit this, thus preventing any wear or sagging.



The brace prevents any sagging or twisting of gate, and also helps to balance.

The boards, five, or more, if fancied, are intended to be of pine, inch stuff, (the lighter or heavier will often be needed) of any width parties may prefer. The model shows six inch boards and six inch space in all, but between second and third bar this is greater, owing to the wooden wheel and clip not being strong enough to work thinner, and no other kind at the time it was made being available. The boards are intended to be sufficiently long to pass between toe-posts and be flush with front of them, so as not to be easily displaced. A notch is to be made on first, second or third board, to fasten on bar A, B or C. A pin, II, passes through the one post and into the other, over the notched board, so that it cannot be lifted or forced open by hogs or cattle.

For an extra heavy gate (or light where fancied) a castor wheel, O, can be attached to the top of gate to move and adjust itself, the same as an ordinary castor wheel, to be an iron casting of sufficient thickness to prevent it cutting into ground.

The wheel, clips, socket, washers, &c., can be cast for, say about 30 cents, less than one-half the cost of the hinges in ordinary use. All leverage and consequent sagging of gate, and displacement of posts in spring and fall, is avoided; dragging of toe of gate avoided; no renewing of hinges, bolts, screws, or righting of posts required; no shovelling of snow in winter necessary, and no latches to get out of order. When open the gate is on a balance, without any strain, as the alternate sides of wheel K, when gate is fully opened, are flush with each heel-post, thus each post bears its share of the strain when very roughly opened, hence it cannot easily get disarranged.

By allowing the third board to rest on the cross-bar of the toe-posts, hogs can, when so desired, pass through, while cattle or horses could not.

Its cheapness, ease of construction, lightness, durability, and adaptation for winter use, and particularly in Lower Canada, cannot fail to recommend it to the farming community."

#### Difficulties of Turnip Culture.

MANY persons who are somewhat alive to the importance of growing a supply of roots, are deterred from the attempt to do so because of the labour and trouble incident to such crops. "I would like right well to raise a lot of turnips, but they want such a sight of attention, and hoeing is such nasty, back-breaking work." In this way do many farmers talk when root crops are urged upon their attention.

This common objection to turnip-growing is part truth, part mistake, part dislike of innovation, if not downright sloth. It is part truth, for it must be confessed that more labour is required to grow roots

than to raise grain. The land must be in better till than is absolutely necessary for other crops, and it must be cleaned from weeds, for woe to the unlucky wight who essays to grow turnips where weeds do congregate! He will, indeed find it "nasty" and "back-breaking" business to ply the hoe so as to save his turnip crop. But this objection is partly founded in mistake, and may to a great extent, be obviated by choosing a bit of ground that has been made mellow and clean by previous preparation, and must be exceedingly foul that will not do for turnips the second year after grass. A good fall ploughing and a spring ploughing just before the time for turnip sowing, or two spring ploughings and the thorough use of the cultivator, will usually put suitable land into such a condition that it will not only be friable and mellow, but quite free from weeds and grass. Thorough preparation of the soil is the great preliminary for a comfortable and successful time in raising turnips. Another difficulty arising out of mistake is occasioned by broadcast sowing. We had supposed that this mode of putting in turnips was quite obsolete, but from some cases we have lately met with, we are inclined to think not a few farmers fall into this error. Three considerations ought for ever to condemn broadcast sowing: First, this plant requires a soft, deep seed-bed, such as it is well nigh impossible to provide in the general level of a field, and hence the great utility of throwing up ridges to sow on. Secondly, it is of great advantage to scatter some fertilizer, such as guano, bone dust, superphosphate of lime, &c., in the drills along with the turnip seed. Such a course provides ready stimulus for the young plants, hurries their growth so that they get out of reach of the fly and of weeds, and makes a great difference in the yield to the farmer's advantage. Last, but not least, there is the thinning out. Great must be the patience, meekness, and power of endurance of the man who can calmly and with unruined temper plod through the task of thinning a broadcast turnip field. And let him possess these qualities however eminently, he cannot prevent the task on his time being very great, as compared with what it requires to clean out a field of turnips in drills. With a thin-bladed hoe, eight inches wide, you pass along the rows at a moderate walk, a single quick blow being sufficient to make the required gap when once you get expert at the business. The truth is, that with proper tools to work with, and a good system of culture, turnip-growing is by no means hard work. A double-mould plough to make the ridges, some sort of a seed drill to drop the seed, a proper turnip hoe to thin out the plants, and a scuffler or horse-hoe to stir the soil between the rows, will so lighten the work attendant on this crop, that no reasonable man can find it in his heart to complain of it. The difference between a poor yield caused by a want of the right implements, and a good yield obtained by their use, will often pay the cost of the implements in a single season, and thus furnish their future use as so much clear profit.

Dislike of innovation, if not positive sloth, keeps many farmers from growing turnips. There are not a few who have so poor an opinion of their calling, that they do not expect any real improvements to be introduced in it. Other avocations are constantly being benefited by inventions and by improved and labour-saving methods of management, but farming must be carried on according to the fixed and dull routine of old time ways. "Father and grand father, and great-grand-father made a comfortable living in the old-fashioned method, they never heard of skirving's or Laing's turnips, of guano, bone manure, or superphosphate, and what was good enough for them will do for me!" Thus many reason,—no, not reason, but drivel,—as they slowly rumble on in the old time-worn rut. Perhaps there is no class of people who so tenaciously stick to old ways, and are naturally so averse to innovations as farmers. And it cannot

be denied that some of them yield to sloth in regard to such matters. The highest authority has affirmed, "The slothful man saith, *there is a lion in the way,*" some terrible, insuperable difficulty to be contended against, when there is something to be done, especially if it requires a little extra effort. It cannot be affirmed with any truth that farmers as a class are indolent, but along with steady physical toil, there is often a mental sluggishness which indisposes people to take any special pains in a new direction. It is too much trouble. They cannot be bothered to do this or that, so they jog on as their ancestors did in the days when steam, electricity, turnip-growing and stock-feeding were never thought of. A tendency this way is, perhaps, a besetment of universal humanity, and certainly it is one that calls for exposure, and needs to be resisted. Of all places in the world, a sleepy, droning, sluggish spirit has no business on a Canadian farm, where the short, hurried season demands that everything be done in downright earnest.

### Familiar Talks on Agricultural Principles.

#### CONCLUDING TALK.

THESE conversational articles on field topics have now been continued a year and a half. The subjects it was originally intended to embrace in them are pretty much exhausted, and we propose therefore to close the series. Many important matters on which agricultural principles have a direct bearing, might be treated under the general heading which has been employed,—such for instance as fruit-growing, stock-keeping, dairy operations, household management, but each of these having a separate department in the CANADA FARMER, it was deemed advisable to restrict these "talks" to what properly belonged to "THE FIELD." The series embraces many subjects of the highest practical importance, which it has been our aim to treat in a simple and familiar manner, avoiding as much as possible the use of technical and scientific phrases, and conveying information in the language of common life. We have had from time to time gratifying evidence that these articles were useful, and in consequence valued. Some of them have been honored by transference to the columns of such journals as the *Mark Lane Express*, and *Farmer* (Scottish), the most convincing proof we could desire that they were fitted to accomplish the end for which they were written. As a whole, they form a sort of *vaude mecum* of agricultural knowledge on a variety of themes connected with farm economy, and it is not impossible that they may hereafter, with some additions and modifications, be put into a shape which will render them easier of reference, and less ephemeral than the contents of a periodical are usually considered to be. Of course we have not embodied in these articles the whole theory of agriculture. To do so would require a treatise of much larger dimensions. But we have given first lessons in the science and art of farming, which, if they have excited any interest in the minds of our readers, will of course lead to further study and more extensive research. The elementary principles on which we have dwelt have a great variety of applications, and we earnestly counsel our readers, especially the young farmers who are growing up all over the country, to provide themselves with good books and periodicals by means of which they may become more fully acquainted with those principles and their multitudinous applications. They will thus come to understand their business more thoroughly, be able to give a reason for everything they do, and, farming better, will obtain more remunerative returns for their industry.

Properly speaking, agriculture is as truly a learned profession as any other. It demands for its right prosecution, general intelligence, and knowledge of scientific principles, combined with practical skill. It is, as Professor Dawson well observes at the close of the valuable little work we have repeatedly

quoted in the course of these "talks," "a profession more intimately connected than any other with those great natural processes by which God provides out of the earth food for every living thing, and with all that is beautiful and attractive in the face of external nature,—a profession, therefore, worthy of thought and study, and leading to the love of country and of home, and to the cultivation of those tastes and habits which make home agreeable and happy." The ample resources of the noble country God has given us will never be fully known until our farmers in general come to be thoroughly intelligent and expert cultivators of the soil. We are well persuaded that Canada is, in natural advantages, second to no land beneath the sun, and we often picture to ourselves the state of things that will exist when justice shall be done to the splendid capabilities we possess. Then indeed shall the wilderness and solitary place be glad, and the desert rejoice and blossom as the rose. When the waste places are all inhabited, when the farms are neatly planned and tastefully laid out, when the country houses are built with some regard to architectural beauty and surrounded by lawn, shrubbery, flower and fruit gardens, when the high-ways are skirted with well-kept fences and beautiful shade-trees, and when the yield of our fields is doubled, tripled, aye, quadrupled, as it may and will be under the influence of first class farming, the Dominion of Canada will be a country of which its inhabitants may well be proud. As it is, there is much ground for encouragement, and stimulus to improvement. Let our farmers be contented with their lot, and strive to make the very best they can of it. Let them put away the thought of emigrating to other climes which may be supposed to be more propitious and to have greater natural advantages for profitable farming. Such are at best but uncertain chances, and in the vast majority of cases in which they are tried, result in disappointment, failure and loss. It is better to endure and overcome the ills we have, than fly to others that we know not of. Success in life everywhere is conditioned on the conquest of difficulties. These beset every country, clime, and lot. They are no greater here than elsewhere, indeed they are less formidable here than in many parts of the world. Let the temptation to a change of calling also be firmly resisted. It is not all gold that glitters. Here and there a fortunate speculator or shrewd man of business manages to make money rapidly and easily, but the slow, steady gains of agricultural skill and industry are more sure, and are not liable to the maxim "easy come, easy go." The prosperity of our country must be built on its agriculture, and he who by close thought, extensive reading, and persevering industry, constitutes himself a good farmer, will not fail to do well for himself, and to promote in a very high degree the public welfare.

### Mangel-Wurtzel Culture.

BY A PRACTICAL FARMER.

I HAVE so often written upon this subject as to cause me some uneasiness, if not an apology for again presuming to pen another paper upon it. As years, however, roll on, slight improvements enter into its culture and management, which I desire to touch on. This root-crop has had to battle with the prejudices of British farmers for more than fifty years. It has, I believe, now fairly conquered every opposition to its progress, and its popularity has become universal, and so great, that it is in very many districts pronounced to be the best and most valuable of our root crops. Such being the case, it is highly desirable that every favourable course connected with its profitable growth should be before the public. One of the most prominent and pleasing features connected with its culture is the great improvements which have been achieved in the various stocks or varieties offered for public favour. If long experience of its character, growth, and management, is of worth, I may claim some consideration. I was rather an extensive grower (for the time) of "beet-root" (i.e. mangel wurtzel), about forty-six years ago, having at that time from twelve to fifteen acres under management. At that period we neither knew aught of its correct culture, its proper uses, or the character of the stock or variety sown. All this has gradually opened before us. The original stocks were so bad, so small, "rooty," "stringy," "fangy," and the mismanagement in housing, harvesting, and administering to stock so great, that it grew into disfavour, and for a time a lesser breadth was grown. Subsequently,

but slowly, its real value became developed; choice roots were selected for the propagation of seed; new sorts were raised, and introduced. Originally a bad kind of long "red beet" was all we could get. These in the course of a few years were, by careful selection, crossing, and attention, wonderfully improved; our crops exceeded by from ten to fifteen tons per acre those previously grown, and were produced also with less detriment or drawing of the land, and the roots of far better quality. Soon the red and the yellow globe mangels were brought into notice, followed by the long yellow. These discoveries have caused great advancement in the culture, inasmuch as a variety can now be adapted to almost every soil and climate in the United Kingdom. Indeed, we are now happily situated, and so favourably supplied, that a bad sort is scarcely to be found. Our seedsmen vie with each other in the production of superlative stocks, and the varieties are so good, the roots so fine and heavy, that it is almost immaterial from whom or from whence seed may be procured for sowing. The principal care should be to select a variety to suit the nature of the soil and condition of the land, as to fertility. A rich loamy soil should rather be planted with the best long reds, or long yellows; but capital crops of yellow globes are grown thereon; in fact, such soils are adapted for any good variety. The difficulty is to select a kind to suit a poor soil to advantage. If the soil is thin, but of open texture, I should prefer the yellow globe. I say "yellow," because I have never seen a red variety of equal value with our best yellows; long sorts do not do so well on thin soils. On stiff soils, worked up to a good tilth, any variety will do well; but I think the globes are most suitable, as from their habit of growth they do not send down their roots like the long sorts. I think, however, the long sorts have a slight advantage in their productive qualities. They strike deeper for food, and obtain thereby an increase of weight, but they do not retain their quality like the globes, when kept for spring service. Much is said about the exhaustive character of this crop on the majority of soils. There is common sense in this remark; but if the proper manures are used, and plenty of it, and the crop is fed upon the farm, it becomes mainly a question of cartage as respects the expenses. The return of the manure made by the consumption of this crop in the fold-yard, or it may be in part upon the field where grown, will fully compensate. There cannot be much deterioration of the farm, so long as this crop is fed upon it. Potatoes, on the contrary, are sold off; and yet such is the attention and liberal management bestowed upon this crop, that I venture to assert that, wherever it is extensively grown, the farm has been improved by it. I name this to show that modern ideas of artificial aids can and do in practice overcome all these objections to heavy cropping. It is impossible to continue a course of heavy cropping without adopting such a course. This is one of the "slight improvements" in the culture of mangolds—a further judicious outlay in artificial aids.

The practice now becoming general is—first, the adoption of the ridge system; next, to give a liberal application of fold-yard dung between the ridges; then to follow by a dressing of superphosphate, or guano or blood manure, or other similar manures, or a mixture of two or more of them, which is most approved. This dressing of from three cwt. to four and a half cwt. per acre, to be sown along the ridge upon the fold-yard dung; then ploughed in, and a further dressing of superphosphate, or the like, at the rate of two and a half cwt. per acre, mixed with ashes or decomposed vegetable matter, night-soil, &c., &c., to be drilled in with the seed. In this way surprising crops are produced—almost to exceed belief as an ordinary farm crop in common rotation or course. Another practice is somewhat popular, and is gaining ground. It is to sow about ten cwt. of salt per acre between the ridges upon the fold-yard dung as above. This has likewise been productive of extraordinary crops. Soot is also now added to the salt in many cases, with great success.

The crops I allude to may not be astonishing to market gardeners or amateurs; but when in ordinary farm practice thousands of farmers can produce by applications and such management as I name from thirty-five to fifty tons per acre of these valuable roots, I say it is surprising; and more, it is a more profitable crop than a crop of corn at average prices. It is true tenant farmers must consume the crop on the farm, which materially lessens its value, but consider the weight of food to be eaten, what a large amount of cattle, sheep, &c., &c., can be thus provided for and supported, what beef and mutton is yielded per acre, what excellent fold-yard dung is made. These courses may be considered expensive, and so they are; but what of that? It is but seldom a failure occurs, and failures do occur in all trades and speculations. It is one of the safest of all outlays of capital. It is simply putting more capital into the farmer's business, for which he will upon the

average be abundantly repaid. Mind, it must be judiciously carried out. No pains must be spared to produce the crop, and every care and judgment put in exercise to manage it throughout, so as to make it profitable. One little item in attention to its growth I will name. If the weather is warm and dry, it is good practice to go over the crop ridge by ridge, and apply salt to every sickly plant. I say nothing in this paper relative to its harvesting or consumption. The only thing I wish further to moot is this: I think the whole farming community should endeavour to prevail upon the landlords to permit its sale from the farm, and to induce railway companies to carry this heavy produce upon the same tonnage rates as coals, gravel, stones, &c., &c. This would speedily create a general demand in every populous town, and form a new department in the farmer's business. Cow-keepers, horse-keepers, and pork-feeders, would only be too happy to become purchasers.—*Mark Lane Express.*

### Root Pruning of Indian Corn and Hoed Crops.

SOME of our old farmers, who are bound to stick to their old ways of planting corn, will contend that it is a benefit to corn, sometimes, to run the plough so close to the hills that it will tear out roots enough to choke the plough. Such reasoning is perfectly absurd! Indian corn, or any other annual plant, never needs root pruning; because they never throw out any more roots than will be useful in promoting the growth of the plant. Therefore every root that is torn off or broken by the plough or hoe, cuts off a source of nourishment for the plant.

Suppose, for example, that we cut off or separate the roots on every side of a hill of corn. Will not its growth be retarded? It seems almost folly to ask such a question. Therefore, just in proportion to the number of roots that are broken off from the hill, will the growth of the plant be retarded. If those were not useful, or absolutely essential to the perfect growth of a hill of corn, they would not be there. And if they be cut off or torn off with a plough, the plant must almost stop growing, and must use the material for forming another system of roots, which would have been employed in promoting the growth of the stalk.

Now, when a farmer runs a plough on each side of the rows of Indian corn, close to them, almost every root will be cut off on two sides of the hills, and only a narrow portion of the soil will be left where the hills stand. Then if the plough be run the other way between the rows, the roots will be pruned off on every side of the hills, so that they would appear more like the top of a young tree which had been all browsed off by cattle, than like a hill of corn with long, tender roots.

The argument which the advocates for root pruning Indian corn offer, in favor of the practice, is, "we raised an excellent crop of corn." But nothing is said about the evidence that the crop of corn would not have been much better than it was if it had not been root pruned. Reason and common philosophy both teach us that it is a bad practice to tear off or cut off the roots of annual plants like Indian corn.

Root pruning is never advantageous to any plant or tree, except where it has become old and needs renovating. But there are no circumstances or conditions in which it can be made to appear, that root pruning Indian corn or potatoes is in any way advantageous or beneficial. But the contrary may be easily established.—*Country Gentleman.*

### Sowing Forest Seeds.

THE time is at hand for sowing some kinds of forest seeds, such as the elm, and red and silver leafed maples. According to the *Forest Tree Cultivist* their seeds are ripe in the latitude of New York city from the 1st to the 15th of June.

The elm casts many of its seeds before they are ripe and fit to sow, when thus cast they are of a green color, but when mature they are brown. They are very thin and oval, and much resemble the parsnip seed. The seeds of the maple are well known. They grow in pairs—all varieties—with one long wing projecting from each seed. The seeds of both maple and elm very soon lose their vitality, and should be gathered as soon as ripe and sown immediately, which if done, the little shoots will rise one or two feet the first season, and elm will even exceed that, under favourable circumstances. They will grow in almost any soil, especially the elm, but the most rapidly in moist, rich ground. The red or soft maple is highly esteemed for cultivation. It is not as valuable as sugar maple, but its rapid growth more than compensates for lightness of quality.—*Wisconsin Farmer.*

LAND MEASURE.—Every farmer, at this season of the year more particularly, should have a rod measure—a light, stiff pole—just sixteen and a half feet long, for measuring land. By a little practice he can learn to step a rod at five paces, which will answer very well for ordinary farm work. Ascertain the number of rods in width and length of a lot you wish to measure, and multiply one into the other, and divide by 160, and you have the number of acres, as 160 square rods make a square acre. If you wish to lay off one acre, measure thirteen rods upon each side. This lacks only one rod of full measure.

UNDERDRAINING LAND—ITS EFFECTS.—Experiments in underdraining land were made in Scotland last year, for the purpose of determining the effect on the temperature of the soil, compared with that in the same vicinity which was not drained. The result was that the draining raised the temperature 1.5 degrees, equal to a removal of the land from one hundred to one hundred and fifty miles south. This is an important consideration connected with the compact, heavy soils, whose retentiveness of water renders them cold and comparatively inert with respect to vegetation. Draining land involves considerable expense, but its increased productiveness soon repays this, besides assuring increased profits for the future.

SLUGS.—Mr. Mechi sends the following notes on "Lime as a cure for slugs," to the *British Agricultural papers*:—"At midnight we sowed lime at the rate of four bushels per acre on the one and a-half acre of wheat which they had attacked. The lime was sown against the wind, and the lantern showed that they were out feeding and had been destroyed by the lime. Not a blade has disappeared since. It is clear to me that we have been neglectful in not applying it earlier. As soon as a few plants were missed, the lime should have been sown. We had, however, attributed the loss of plant to the wet weather. Our attack from wireworm on the light land was at once arrested by the salt dressing, which I have always found a certain cure if taken in time. The damage done by slugs this season has been very considerable, and wireworm, on the light lands, has done much mischief. As it is, half my peck of wheat per acre is uncut by slug, and the adjoining three pecks per acre will probably be all the better for having been partially destroyed. I have fifty acres of wheat a full plant from one bushel per acre—in fact, some of it would be, in my opinion, better if not sown so thick. It is clear to me that lime should be sown late on a mild night, and against the wind, in order effectually to destroy the slug."

THE BARLEY QUESTION.—It is in the production of malt liquor and ardent spirits, and in the fattening of live stock, that our barley crops are chiefly consumed. We have no doubt that it would be better for the whole community if this grain were more largely used in the form of butcher's meat and greatly less in that of beer or whisky. It has been customary for farmers to look upon distillation as beneficial to them from the ready market which it affords for barley, and more especially for the lighter qualities of this and other grain crops. But this is a very short-sighted view of the matter, for careful calculation shows that when the labouring man spends a shilling in the dramshop, not more than a penny of it goes for the agricultural produce (barley) from which the gin or whisky is made; whereas when he spends the same sum with the butcher or baker, nearly the whole amount goes for the raw material, and only a fraction for the tradesman's profits. And not only so, but the man who spends a part of his wages upon strong drink, diminishes both directly and indirectly, his ability to buy wholesome food and good clothing; so that, apart from the moral and social bearing of this question, it can abundantly be shown that whisky or beer is the very worst form for the farmer in which his grain can be consumed. Were the 50,000,000l. at present annually spent in Great Britain upon ardent spirits (not to speak of beer), employed in purchasing bread, meat, dairy produce, vegetables, woollen and linen clothing, farmers would on the one hand be relieved from oppressive rates, and on the other have such an increased demand for their staple products, as would far more than compensate for the closing of what is, at present, the chief outlet for their barley.—*Mr. J. Wilson, of Edington Mains, in British Farming*

## Stock Department.

### Live Stock on a Model English Farm.

**NOTE.** The Sheep have already been described as of the pure South Down breed and averaging in number about 800. Out of this number 400 would be stock ewes, 9 rams, 10 ram lambs, 40 ewe and wether lambs going on for next year's shows, 20 shearlings (wether and ewe) feeding for show, 6 two-shears ditto, 135 ewe lambs for stock, 80 lambs, feeding, 100 culled ewes, feeding. Great pains have been taken with the flock during many years, to produce uniformity of character both by careful breeding and by annually culling out all such ewes as have any defect or mark which might disqualify them. A little fresh blood is every year introduced into the flock by making use of rams hired from some of the principal breeders in the country; \$200 a-piece has frequently been given for the hire of these rams during the season. The present flock is chiefly from the stock of Messrs. Jonas Webb, Rigden, Throgmorton, &c. The lambs, like the calves, are marked in the ear when a few days old, and a record kept of their pedigree.

The flock is managed by a head shepherd, under-shepherd and boy, an extra man being put on during the lambing season or at any other particularly busy time. The shepherd, like the herdsman, sends in his weekly return of the flock.

The ewes are put to ram about the beginning of September: they are first turned loose in a meadow, with two or three teasers, whose breasts have been well ruddled, and as soon as they come into season are brought in singly, to be served by such rams as have been selected for use, which are kept confined in small pens by themselves. Each ewe then receives two ruddle-marks one to show the ram by which it was served, and the other to mark the date. The lambs, by this arrangement, begin to come in about the last week in January. A short time previously to this, such ewes as are expected from the ruddle-mark to lamb within the first fortnight, are got into a convenient pasture not far from the buildings, and the sheep yard is fitted up with warm pens made of stuffed hurdles. When the proper time arrives the ewes are brought into this yard every night, and as soon as their lambs are dropped are put with them into one of the pens—each ewe separately. As soon as the lambs are strong enough they are put out with their dams to grass by day, and brought in at night. After the lambing season is over, the ewes are kept with their young at grass, with mangold and a few tail out for the ewes, and a little corn and cake for lambs, till the vetches come in. When the lambs are three months old they all have their tails docked, and the males are castrated, from twelve to fifteen of the best-looking rams being kept back to select from as breeders. At four months old all the lambs are weaned, with the exception of about forty of the best, (twenty ewe and twenty wether,) to select from for exhibition. These are allowed to run a few weeks longer with their dams and are fed somewhat better than the rest, and when weaned are kept in a separate enclosure, with a daily allowance of cake and meal; the ram lambs are treated in the same way. The large lot of lambs, when weaned, are kept on the vetches as long as they last: the ewes following on the same ground, to feed off what they leave. When this crop is exhausted, they are turned on to the pasture lands. When nearly six months old, all the lambs are dipped in a solution of arsenic, soap, and water, as a guard against the attack of insects.

About the first week in June, the process of shearing commences, all the sheep having been first washed; two extra hands, besides the shepherd and under-shepherd, are employed in the operation. About 600 fleeces are made up annually; that is, 400 odd from the ewes, about 10 from rams, and the remainder from the tegs. The ewes average nearly four pounds per fleece, and the tegs from six to seven pounds.

A short time after the shearing process is over, the breeding flock is drawn; about 100 of the oldest and plainest ewes being culled out, and somewhere about the same number of one-shears taken in. Each ewe at this time receives a ruddle mark to denote its age. The culled ewes are then separated from the rest of the flock, and begin immediately to feed for the butcher, in two months some of them are fit to kill, and they then weigh from sixty to seventy pounds each. About this time, the shearing wethers going on for show as two-shears, at the Christmas show of the next year, are looked over, and a few of the plainest culled out to feed with the ewes.

During winter, all the sheep, with the exception of the breeding ewes, are generally housed; the lambs are provided with a good yard, the ewes and wethers being separated by a row of hurdles; the former, (intended for stock,) get about two pounds each of hay and five pounds of Swedes, the latter two pounds of hay, quarter pint meal, quarter pound cotton cake, and seven pounds of Swedes, each, per day. This last lot begin to come in for the butcher about the beginning of February, and at that time weigh about fifty pounds each. Sometimes, when the weather promises well, and the root crop occupies a light, dry portion of the farm, the lambs are penned out during winter instead of being fed in yards, the roots having been previously pitted out on the land as already described; but this is not very often practicable, owing to the tenacious character of the soil. If the root crop promises badly, the wether lambs are sometimes sold off during the fall.

Sheep intended for show are confined in the building marked A, on the plan, which is kept at a tolerably equal temperature, by means of ventilation and doors, and as quiet as possible; the head shepherd of course taking the entire charge of the building. The best lambs are taken in from grass towards the end of October—fifty or sixty in all—that is, about twenty ewe lambs, twenty wether, and twelve ram. For the first few months they have a daily allowance each of half a pint crushed peas and oats, and one pound of oil-cake, with as much hay and roots as they will take; in spring they get a little cut green food, such as vetches or lucerne, and the meal of those intended for the summer shows is increased to one pint per day. When April sets in, every sheep in the sheep-house is shorn, and from that time to the date fixed for the show, those intended for exhibition, during summer require the most careful treatment, both in regular and careful feeding, and in the frequent application of the shears, in order to produce a roundness and uniformity in their appearance, which is aided by the use of a "wash," the component parts of which appear to be known only to the shepherd. After the show the wethers are usually sold, and the theaves on their return are gradually reduced, and then put to ram in the fall with the rest of the ewes. Rams for show are treated much in the same manner as the wether and ewe tegs, about two-thirds of their number being sold to the butcher early in spring, leaving the best only to go on for exhibition or use. At the Smithfield Show are usually exhibited one pen of two-shears and two pens of shearlings. Two-shear wethers, when weighed alive just before show, average about 250 pounds; shearlings about 210 pounds.

**Horses.**—The horses are of the Suffolk breed, and sixteen in number, that is, fourteen in working condition and two colts, besides which may be one or two yearling colts. The working horses in winter are allowed 1½ cwt. each per week of hay, 1½ bushels crushed oats, and ¼ bushel beans, besides chaff and screenings. During summer they lie out at nights, (i. e. from about the second week in May,) also during the day when not wanted for work, their feed being continued the same as in winter.

Two or three colts are bred every year; the mares foal about April, and are worked till within a few days of their time. When the colt is a week or ten days old it is put out to grass, with its dam, in some small pasture ground, with shed adjacent; at five months old it is weaned; during winter it is provided with hay and a few oats, and when spring comes is put out to grass again. The horses are castrated when rising two; and when three years old are broken in for work. It is very seldom that a horse is sold off the farm; they are generally kept as long as they can work, and then killed.

**Pigs.**—The pigs, already described as of a small white breed, have been for many years celebrated for their many excellent qualities. They have white, pinky skins, a moderate quantity of hair, short thick-set muzzle, and possess a remarkable aptitude to fatten.

The breeding stock consists of twelve sows and three boars. The whole number on the farm at one time is about eighty. The sows are good breeders; they farrow twice during the year, and produce from eight to ten at a litter. The young pigs are either made into pork when about three months old, or brought on for bacon. The porkers are fed on whey, with a little thin barley-meal, and when killed weigh from forty to fifty pounds; pigs for bacon are fed on about one bushel barley-meal per week, and weigh from ten to twelve score when slaughtered. In the course of a year about ninety pigs are killed for pork, and thirty-five for bacon. The villagers occasionally purchase young stores for feeding, but as a general thing no pigs are sold but such as are fit to kill. Breeding animals fetch fancy prices; \$50 was one year given for a boar hog, eight months old. The sows and young stores are fed principally on whey, grains, and a little meal, with such wash or kitchen refuse as may be at hand. In the fall they have the run of the stubbles, and when this provision is exhausted, they pick up acorns under the trees. In winter they get a few Swedes, or mangolds. Pigs intended for exhibition are picked out about eight months previous to the show; if for fat bacons, they are eight or ten months old when chosen. For the first three or four months they are merely kept clean and fed moderately; after this time they get about ½ bushel of meal each per week, mixed with whey, which during the next two months is gradually increased up to 1½ bushel per week, which is about as much as they will take. Towards the end of their time they require great attention both in feeding and keeping clean, and in preventing them from getting suffocated in the straw, by frequently propping up their backs, and putting wooden bolsters under their snouts. For the last three weeks or so before the show they have to be visited several times during the night in order to ensure their safety. When fully fat they weigh from twenty to twenty-three score. All the pigs are under the charge of one man, whose spare time is occupied at the water-mill and the churn, besides milking every morning and evening. Like the herdsman and the shepherd, he sends in his return of the pigs every week.

To the foregoing details might also be added a few examples of the account books kept on the farm, but as these would probably occupy too much space, I will merely state that accurate and systematic registers are kept in every department of farm labour and stock, and weekly returns made under each head, to the superintendent of the farm. With this brief allusion to the accounts, my description of "a model English farm" must end.

LONDON.

E. F. W.

### Grass for Horses.

Many think that horses that are kept in the stable all summer should not be allowed to eat grass. They think it will make the horse soft, wishy-washy, and that it will throw him out of condition for hard work. This is particularly the case with some of the trainers of trotting and running horses. And horses that are kept up for farm and other work are refused grass because their drivers think they will not eat hay so well. This was formerly the case, more than it is now. But these are all erroneous opinions and practices, and are giving way, gradually, to a more reasonable and natural system of feeding.

Grass is the natural food of the horse. It is cooling and healthful food. It keeps the bowels open and sharpens the appetite. It promotes digestion and removes fever from the system. Therefore, by all means, let the horses nip grass fifteen or twenty minutes daily. Whether training for trotting or running, it will be attended with the highest benefit. The horse will lose none of his speed by such a course of treatment. Horses that are kept up the year round for farm work should certainly be allowed a nice nibble at grass every day. They work hard, and all they get for it is something to eat. Let them have, then, what they all like so well.—*Colman's Rural World.*

**CANADIAN SHEEP STILL AHEAD.**—Mr. Snell, of Edmonton, has sent us the following:—"A paragraph has been going the rounds of the papers, that a farmer in Michigan sheared from six sheep, this spring, what seems to be considered an extraordinary weight of wool—78 lbs. I beg to inform you that Canada has beaten that a long way. I have sheared from six sheep, this spring, 103 lbs. of wool—viz.: from one 21 lbs., from two 17 lbs. each, and from three 16 lbs. each."

## The Long-Horned Breed of Cattle.

This breed of cattle, which formerly occupied large areas of the centre and west of England, and still extensively prevails, more or less pure, in Ireland, is not merely distinguished for the length of the horns, but also for the thickness and firm texture of the hide, the length and closeness of the hair, and a general expression of coarseness, particularly about the neck and legs. These characteristics were no doubt owing, in some measure, to climatic influences, for it was remarked that the Longhorns, bred in the Eastern and drier parts of England, lost much of their original coarseness, with sometimes a tendency in the horns to turn upwards. Their size was, as is the case with all animals, mainly influenced by the degree of elevation and richness of the pastures on which they fed; and their prevailing colour was black brown, with patches of white on the body, and a streak of the same extending along the spine. Their bodies were long and sides inclined to flatness, their flesh was of a darkish colour and the fat of a yellow tinge, not well intermixed. They were exceedingly hardy, and seldom had any artificial food or protection, and did not readily amalgamate with other varieties. The cows were good nurses, yielding very rich milk, but not a large quantity.

Lancashire was formerly considered the headquarters of the Longhorns, from whence they became diffused through the neighbouring counties, and at length obtained a firm footing in Yorkshire. The Craven district became celebrated for its bulls, for which there was a wide demand; and in a few places in this locality may still be found excellent specimens of the old native race of Lancashire.

It was subsequently, however, in the midland

counties where the Longhorns received the greatest attention, and the breed became much improved, both as regards symmetry and earlier development. Our space will only admit of a bare allusion to Sir Thomas Gresley, of Staffordshire, and Mr. Webster, of Warwick, who, with others, effected considerable improvements in the Longhorns during the first half of the last century; but it was left for Robert Bakewell, of Dishley, in Leicestershire, the originator of the Improved Leicester sheep, to bring about a new era in the breeding of this once celebrated race of cattle. Mr. Bakewell commenced farming on his own account about the year 1725, when he resolved on the execution of those plans which he had for some time been carefully maturing for the improvement of the domesticated animals;—the result, particularly in the case of sheep, having immortalized his name. He commenced his career as a breeder with the earnest conviction that "like begets like;" a maxim which, though not new, he was the first, perhaps, rigidly to adhere to and carry out to its legitimate consequences. His primary aim was to produce an animal of a large and symmetrical body, with a small head and neck, fineness of bone, with large hind quarters, reducing what is termed offal to the minimum amount: a common saying of his being, "all was

useless that was not beef." It was with him a settled conviction that everything depends on breed, or in other words, that the points and qualities of parents, be they good, bad, or indifferent, are certainly transmitted to their progeny. The brilliant successes which have attended the efforts of stock-breeders since the time of Bakewell are, in the main, distinctly traceable to the constant recognition in practice of this most important physiological principle.

It is somewhat remarkable that, beyond the fact of Mr. Bakewell's practice of breeding from animals without relation to their affinities in blood, that is, what is termed, "in and in breeding," to an extent wholly unprecedented, but little is known with certainty of the methods he pursued in working out the results, which gave both to his sheep and cattle the right to be recognized as improved and distinct breeds. Bakewell succeeded, throughout his career as an improver of stock, in keeping secret the most

while that of Bakewell has become almost a matter of mere history. "It has given place to other breeds," remarks an eminent writer more than a quarter of a century ago, "possessing characters as grazing stock, in which it is deficient. A few eminent breeders still employ themselves in the rearing of bulls, chiefly for exportation to Ireland, but the numbers of the breed reared in England are continually diminishing, and the time will probably arrive when all that remains of the breed of Dishley will be the record of a bold, curious and interesting experiment. On the very farm on which Mr. Bakewell's original experiments were instituted and completed, and within many miles around, there does not exist a single bull, cow, or steer, of the breed which he had cultivated with so much labour. Its history forms a singular contrast with that of another race of animals which he had formed by similar means, namely, his breed of sheep, which has extended over all the

kingdom, and which remains established as one of the most important additions to the domestic animals of these Islands."

We must not altogether omit the mention of Mr. Robert Fowler, of Oxfordshire, who was a distinguished breeder of Longhorns, after the fame of Bakewell had somewhat declined. He purchased several heifers from Mr. Webster, of Canley, and hired the bull Twopenny from Mr. Bakewell, from which he soon raised a herd that became celebrated, including the noted bull, Shakspeare, so distinguished in the pedigree of Longhorn stock. His splendid herd, consisting of 50 head of both sexes, averaged the handsome sum of nearly £86 each!

The accompanying illustration, taken from the *Farmer* (Scottish), is a portrait of a bull inheriting Webster blood, "Old Sparkenhoe," the property of Mr. R. H.



important means by which he effected his objects, and therefore, but little has come down to us of a reliable character that can satisfy the legitimate demands of curiosity, in relation to much that properly belongs to the origin and means of progress of his celebrated stock. "The opinion, seemingly founded on the best authorities, is, that he obtained some of his first cows from Mr. Webster, of Canley, but that he likewise selected elsewhere the best animals, male and female, that he could obtain. He is said to have purchased, among others, a very fine cow from Sir William Gordon, of Loughborough, and from her to have had a fine bull, which he called Twopenny, because a person had observed of him that he was not worth twopenny. This bull became the most celebrated of the early stock of Bakewell, and is constantly referred to in the pedigrees of the improved Longhorns."

It should be borne in mind that when Bakewell adopted the old Lancashire Longhorns as the basis on which to found his new breed, the modern Herefords were not called into existence, and the Short-horns were a coarse race, but little known or appreciated beyond a few districts. The course of events has clearly shown the great superiority of the two latter breeds, which have now an unrivalled reputation,

Chapman, of Upton, Nuneaton, Warwickshire. Mr. Chapman's ancestors commenced breeding Longhorns as early as 1756, and the Upton herd contained copious strains both of Bakewell and Webster blood. The Royal Agricultural Society of England occasionally gives prizes to the Longhorn breed, but so rarely are these animals now found in a state of purity, that only now and then a specimen is presented at these exhibitions. Old Sparkenhoe obtained a prize of 15 guineas at the Royal Show at Plymouth in 1865, and attracted great attention. "This extraordinary looking animal was the chief attraction amongst the cattle classes to sight-seers, many folk wondering to what bovine tribe he belonged; and a contemporary, when giving an account of the stock classes of the exhibition, said that 'not one person in five hundred could guess his breed,' never having seen them in that part of Devonshire. The catalogue of the Royal Society states that Sparkenhoe's sire was Tom, bred by Colonel Inge, a Longhorn breeder of great note in Staffordshire, and his dam Fillpail, also a prize cow at the Royal, and bred by Mrs. Baker, of Little Rollright, in Oxfordshire, where the great Longhorn breeder, Mr. Fowler, used to live."

In a late number of the *Farmer's Magazine*, a notice appeared speaking still more favorably of this breed

## The Dairy.

## The Butter and Cheese Trade, Canada.

The *Montréal Free Press* says.—As the season for butter and cheese making has returned, we take the opportunity to call the attention of the farming community to the importance of their entering more largely into the production of these articles. The evils attending the continuous growth of wheat and other grains have been frequently adverted to. In consequence of doing this, much of the best farming lands have greatly deteriorated in richness, and a decline in the annual yield has resulted. The best remedy for this state of matters is a change in farming; in other words, for farmers to enter into dairy-farming, and discontinue turning all their energies to wheat farming, as many of them have done in the past.

Of late years Great Britain has bought considerable quantities of our butter. During the last twelve years we exported butter to the value of \$6,616,384. This sum appears large, but is nothing like the quantity which this country ought to be able to export. Of the amount stated, Great Britain took a large share. During the last four and a-half years of the time mentioned, the shipments to Britain and the United States were respectively as follows:—

Sold to Great Britain.....	\$2,918,965
Sold to United States.....	1,230,504

Britain took most by .....\$1,688,461

If our farmers entered more largely into butter making, and made it good, no fears need be entertained with regard to securing a market therefor. Great Britain and the Maritime Provinces could buy all we would want to sell, and thus we would be able to render ourselves less dependent on American markets. Taking the collateral advantage arising from improvement in the lands into consideration, butter making affords the farmers good returns.

We are glad to be able to say that Canada is now entering into the manufacture of cheese in good earnest. One would suppose that a greater anomaly than an agricultural country like Canada buying cheese abroad could hardly exist, and yet, up till very recently, we bought largely from our Yankee neighbours. During the twelve years ending in July, 1865, we purchased from them close on \$2,000,000 worth. This was very absurd when we could make cheese just as good and just as cheap ourselves. However, we are glad to know that a remedy is being rapidly applied, and that cheese factories are going up all over the country—the farmers of Ontario and Quebec vying with each other in this respect. Some of the establishments started a few years ago have paid well, and in localities where there is plenty of fodder for cattle the business can be entered into with every certainty of success, if properly conducted.

The success of cheese factories in New York removes any doubts as to their paying those who enter into the business. That State is nearly full of factories, and they are very generally successful. The general opinion there is, that cheese-making pays better than wheat-growing, and even than butter-making. Our own cheese-makers give the same report, and wherever enterprising men start such establishments the farming community should afford them every encouragement. Any farmer who has good pasture land may rest assured that, if judiciously managed, dairy farming will afford handsome profits.

Canada should not only not have to purchase any cheese abroad, but be a large exporter of that article, which is always in good demand in the markets of the world. Our exports of butter ought also to be increased. To effect this, an improved mode of making butter is greatly needed in some sections. It does not rank so high in quality as our cheese does, and does not command that price which it ought. One of the main causes of this is, that the making of butter is regarded as a secondary consideration by the great bulk of farmers. When as much attention is bestowed upon it as on raising grain there will be no cause to complain of quality, and we may expect our exports of it to augment rapidly.

**BUTTER FOR THE MARITIME PROVINCES.**—The *Hamilton Spectator* says:—"We notice that butter is now bringing 21 cents per lb. in Halifax. A gentleman in the neighborhood, who lately shipped a lot of butter to the maritime provinces, informs us that he realized a very handsome profit by the transaction. It is essential, that the butter should be really a first class article; bad butter is not suitable anywhere, and as a large quantity of Yankee butter has lately been sent into Halifax under the name of Canadian butter, buyers in that city are now more cautious than ever as to the quality of the article offered. But if our farmers will see to it that their butter is well made and well packed, they may rely upon it that quick sales and large profits may still be realized."

## Butter from Whey.

The *Utica Weekly Herald* gives the following account of an improved quality of butter from whey, and the process of manufacture:—

"At the recent Dairymen's Convention in this city, Messrs Riggs & Markham, of Turin, Lewis county, described, in part, their patent for extracting butter from whey. They exhibited a sample of butter manufactured by this process, which we examined with considerable interest. It had a fine colour and good texture, and though not entirely perfect in flavour, was much superior to any butter we have ever seen manufactured from whey. We may remark here, that the butter exhibited would be considered a fair table butter; and to our objection while tasting it that it was not quite perfect in flavour, though in other respects unobjectionable, Mr. Riggs stated that the sample was made in October, and had been exposed to the air, thus giving it a slight taste not belonging to perfectly fresh prime butter.

While in England during the past summer, we tasted several samples of whey butter as commonly manufactured there by running the whey into leaden vats, allowing the cream to rise, and then churning in the ordinary way. Large quantities of butter are made in this way in England, where it is used upon the table in the farmers' families. The samples shown at the convention were much superior to that we saw in England, and it was of so good a quality that we never should have suspected but that it had been produced from milk or cream in the ordinary way.

"As the question of extracting butter from whey under this process seemed to be new and important to the dairy public, we requested Mr. Riggs to give a plain statement of his process and apparatus, for publication.

"We arrange and condense from his description the following, as comprising the leading features of the process and its requirements.

## APPARATUS NEEDED.

"Any of the vats in use—steam, or a fire under them—can be used for raising the cream. No extra vats will be needed until the flush of milk, when one will be required. The vat should be placed on the floor a little lower than the one used for cheese-making, so that the whey may be readily drawn from the curd with a syphon. These, with two or three barrels for keeping the acid, will comprise the apparatus.

## THE PROCESS.

"After drawing the whey from the curd into the vat referred to, one gallon of acid is added to the whey for every fifty gallons of milk, if the whey is sweet. If the whey is changed, a less quantity will be sufficient; and if the acid is not sharp, one pound of salt should be incorporated with it. The acid having been added in the above proportion, heat is applied to the mass until it indicates a temperature of 200° to 210° Fahrenheit. When the cream rises, it is skimmed off and set in a cool place and left to stand until the next day. It is then churned, at a temperature of from 56° to 66°, according to the temperature of the weather, and it is worked and salted in the ordinary manner of butter-making. The whey of 150 lb. of milk will produce 1 lb. of butter.

## MAKING THE ACID.

"The acid is made by taking any quantity of whey, after extracting the cream, heating it to the boiling point, and adding a gallon of strictly sour whey for every 10 gallons of boiling whey, when all the casein remaining in the whey will collect in a mass. The casein is skimmed off and the whey left to stand for twenty-four to forty-eight hours, when it will be ready for use as acid. The Messrs. Riggs & Markham claim that the whey, after the butter is extracted, is more valuable as feed for hogs than when fed in the ordinary way, because it retains its sweetness longer. We can hardly agree in this without well-conducted experiments show it to be more valuable. But if butter can be made from whey of the quality shown at the Convention, and in the quantity claimed by the patentees, then Messrs. Riggs & Markham have hit upon a process which will be of great value to cheese manufacturers. They say that the sample of butter referred to was made on the 12th of October last, from the whey of milk that yielded 1 lb. of cheese to 8 29-100 of milk. The whey of 136 1-3 lb. of this milk, after the cheese was taken, yielded 1 lb. of whey butter. The matter is of great importance to dairymen, and it would be well for them to give it a thorough investigation."

## The Curd Mill as a Means of Improving the Texture of Cheese.

DAIRYMEN are rather slow to adopt new notions. It is some three years ago that we suggested that the Cheddar-shaped cheese be made at factories, since more remunerative prices would be obtained than from the old style of cheese of 120 to 150 pounds weight, then commonly made. A few factories at first adopted our suggestion, and found ready sales for their cheese at an advanced price; the majority, however, could not see the advantages of the small size, and Cheddar shapes, until they found that the market would not take their large cheese unless at reduced rates. A great many thousand dollars would have been saved to dairymen, had they adopted our suggestion in the first instance, but they waited and waited until doubly convinced they were losing money, and then made the change.

In our addresses before the cheese conventions, we recommended the use of the curd mills at factories. A very few may have introduced them, or proposed to do so; as yet the majority of manufacturers seem to hesitate in regard to their utility. From our observations abroad in the manufacture of English Cheddar cheese, we are convinced that the use of the curd mill and the English mode of salting, have much to do in securing that close, compact texture which is characteristic of this style of cheese. Where the curds are put to press for a short time, and then passed through the curd mill and salted, a more uniform incorporation of the salt is effected, and cheese-makers can better regulate the proportion; since, by the American process, we can never know the quantity of whey in the curd, and the salt carried off by that means in pressing. There is no reliability, therefore, of the cheese being uniform by this process.

The English cheese-makers say, that if the curd is salted before being put in the hoops or ground in the curd-mill, the salt has the effect of giving a skin to each of the particles of curd it comes in contact with, which prevents them from intimately uniting; and although the curd may be pressed together and become good cheese, yet it never becomes a close, smooth, solid mass, like that which is first put to press, then ground in the curd-mill, and salted, but is of a loose texture, and crumbles when cut.

A great deal of our factory cheese is porous, and in consequence will not sell at top prices. The question of "what makes porous cheese" has been discussed over and over again, and still porous cheese continues to be made, and it will continue to be made, so long as manufacturers continue to adhere to old methods. If manufacturers will read our remarks on Cheddar cheese making, in the "Report of the American Dairymen's Association," just issued, they will learn, in part, the method pursued by the Cheddar dairymen of England for manufacturing their high priced cheese. Factories should introduce the curd mill at once, and improve the texture of the cheese, since good prices are to be maintained only by an improvement in "the goods" manufactured.

X. A. WILLARD.

## Important Milk Suit in Herkimer County, New York.

We learn from the *Utica Weekly Herald* that an interesting and important case, involving the question of the value of the Hydrometer and Lactometer as tests for the purity of milk, was lately decided at the Circuit Court, held at Herkimer. The suit was brought by the Treasurer of the Frankfort Cheese Factory, against one of its patrons, to recover a penalty for alleged violations of the law to prevent adulteration or watering of milk. The evidence adduced by the plaintiff, was the test of the above instruments, which on several occasions had shown a deficiency of twelve to fifteen per cent. from the standard specific gravity of pure milk. The defendant denied the allegation, asserting that the milking and carrying had been done by himself and his three sons, and that no water, to their knowledge, had been added to the milk. To support their defence, they produced the testimony of experienced dairymen, and the results of experiments, to show that in unquestionably pure milk the specific gravity is subject to considerable variation. The judge decided for the defendant. The *Utica Weekly Herald* remarks, in closing the re-

port of this case, "that the result of this suit does not lessen the value of the hydrometer and cream gauges, in the hands of intelligent persons. They act as sentinels, warning the operator of any unusual condition of the milk, and when such occurs, he should not hastily jump at conclusions, but look carefully at all the causes likely to have influence in the case, and then make up his judgment upon them." We cannot help feeling, however, that the practical effect of such suits must be to lessen the value of detective instruments, and seeing that so many persons regard the adulteration of milk, by the addition of water, as a most venial offence against society, it is very much to be desired that an infallible method of discovering the fraud could be hit upon."

### Packing Butter in Summer.

A Vermont butter maker writes to the N. Y. Farmers' Club, concerning packing butter to keep:

Pack it in well soaked tubs or firkins, put a little damp salt in the bottom and place it in a cool dry cellar, on a bench of wood 1<sup>1</sup>/<sub>2</sub> inches from the cellar bottom, and the same from the wall. Stone or earthenware does not keep butter well, as the moisture from the surrounding atmosphere in warm weather, condenses on such vessels and soon affects the butter. Put no salt on or between the layers. Fill to within half an inch of the top, place a clean wet cloth over the butter, pack the edges down with a knife, and then spread thin wet salt over the cloth. Having made and dealt in butter for some time, I can say the above mode of packing and keeping butter will be useful to many, and cause a smile of delight to the buyer.

**HOLDING UP MILK.**—Mr. L. Morton informs the *Rural American* that when his cows trouble him in this way he reaches his hands up and places the ends of his fingers on the backbone, forward of the hips, and presses down hard for a minute or so, and they will always give down.

### The Apiary.

#### Introduction of Italian Queens.

To the Editor of THE CANADA FARMER:

SIR,—About two years ago, I adopted a plan of introducing Italian queens to black stocks, based upon this peculiarity in the nature of bees—that when filled with honey they will not sting; and since that time I have not failed to make a successful introduction in every case. Having, as I think, fully tested this method, I now give it for the benefit of my bee-keeping friends. I would here say, however, that in the May number of the *American Bee Journal* there appears an article from Elisha Gallup, of Osage, Iowa, giving nearly the same plan. I had also written an article for the *Bee Journal*, giving the plan I give here, and which I expected would appear in the May number, but which I presume was received too late. The plan is this: As soon as you receive your Italian queen, remove from its stand the stock into which you wish to introduce her; smoke them a little, then remove the comb-frames; find the queen and take her away. Now set the stock on its stand again, that the bees which were in the field and have returned may enter, waiting say ten or fifteen minutes; then remove again; smoke them, and rap on the hive until the bees have filled themselves with honey, which they will do in a few minutes. Next remove each comb-frame, shaking or brushing off the bees into the hive, setting the frames down outside, or place them into another hive. The bees being filled with honey, and deprived of their queen and combs, will cluster on the sides of the hive, making a mournful sound, and no longer manifesting any disposition to sting. Now introduce the Italian queen and the bees sent with her, by opening the box and letting her out in the hive. The comb frames may now be replaced and the hive returned to its stand. This plan has advantages over all others, as it is safer, and there are no queen coils to cut out, and the stock is no longer deprived of a laying queen than during the short time you are introducing the new Royal Bee.

J. H. THOMAS.

### Straw as a Material for Bee Hives.

To the Editor of THE CANADA FARMER:

SIR,—It is a fact patent to all who have given attention to the subject, that if bee-keeping was as well understood, and managed with as much skill and success as are most other branches of rural economy it would be exceedingly interesting and profitable. And since, according to Quinby, "the advantages of bee-keeping depend as much upon the construction of hives as any one thing," all real improvements in bee hives are gladly welcomed by all admirers of the little model of industry. A hive should give all possible facilities for the storage of honey, and promotion of breeding, and the protection of the bees from the weather. Though inventors have been more successful in the first two particulars than in the last, it is evident that, in proportion as we succeed in the latter, we are in a position to reap the benefits of the former. Ours is a cold, changeable climate, and this is the direct or indirect cause of nearly all the bee-keeper's losses. Obviate the losses resulting from these causes, and even the bee-moth ceases to be such a formidable enemy, as it can make but little headway in strong stocks. Early strong swarms, too, would be the result. The honey season is "short at the longest"—sometimes very short. Ten days earlier or later, may be in good season or very late. A strong swarm will often collect three pounds per day, and it follows that a gain of ten days in the issue of a swarm, is equivalent to twenty or thirty pounds of honey.

A colony in a wood hive, wintered in the open air, is subject to continual annoyance and loss from accumulations of frost within the hive. If upward ventilation is given, much of the needed warmth escapes with the upward current of air, and the influx of cold air to supply its place reduces the temperature of the cluster, and breeding is retarded. If wintered inside, in a suitable place, they do much better: but this suitable place is rarely to be found, so that the losses resulting from moulded combs and diseased bees, are often as great as when wintered on the summer stand. Many of the bees are lost by sudden changes from warm to cold. The bees having spread themselves over the combs during the mild weather, are overtaken by the sudden chill, which is quickly felt in a wooden hive, and those on the outside failing to follow the rapidly contracting mass, are soon frozen. This process may be repeated so often as to materially weaken the colony. Sudden changes are likewise detrimental to breeding in the spring. Mild weather will stimulate the queen to deposit eggs in the cells, when a cold storm, which quickly reduces the temperature of the hive, causes her to lay a plurality of eggs in the warmest part of the cluster. These are removed by the bees and eaten, or dropped to the bottom of the hive. Thus the space occupied in rearing brood is only as large as can be kept to the requisite temperature during the cold spells. The temperature in the common wood hive is so variable, that the cluster is kept enlarging or contracting as the temperature rises or falls. This activity causes a greatly increased consumption of honey. This is well illustrated by the experiments of Bidwell Bros., of Minnesota, in burying bees. All external causes of excitement—light, noise and variable temperature—being excluded, the average consumption of honey, per hive, while in winter quarters was only a trifle over seven pounds.

The cause of these evils is indicated in the following paragraph from Langstroth. "A serious disadvantage attaching to all kinds of wooden hives, is the ease with which they conduct heat, causing them to become cold and damp in winter, and if exposed to the sun, so hot in summer as often to melt the combs."

The remedy consists in surrounding the bees with a good absorbent and non-conductor, and adopting a system of ventilation that will carry off the moisture

without causing a draft through the hive. The best available material for this purpose is flag; and next in order straw. The latter will hold much confined air within its hollows and interstices, but its external surface contains considerable silica, which diminishes its absorbent properties. Confined air is a good non-conductor. The thousands of air cells in the straw and flag being so many dead air spaces, prevent the escape of heat, and permit the passage of moisture. An external wall of wood with an air chamber between, will, of course, add to the efficiency of the hive in this respect. This is the plan upon which the hive noticed in the last CANADA FARMER is constructed. With your permission I would correct a mistake in the article. The "inner wall of straw" is not "the only novelty about this hive" as the peculiar system of ventilation adds much to its value; for without it, the straw would soon lose much of its value as an absorbent. The idea of double-boarded hives, with an air chamber between, is not new, it "being already in use," not only "in Thomas's double-boarded hive," but also in many others; among which are Kidder's, patented in 1858, hundreds of which have been in use in Canada for some years, and a hive described in the *Am. Agriculturist*, July, 1864. A writer in the *Rural New Yorker*, April, 1862, says, "The advantages of straw as a material for hives have been so long apparent that attempts have been made to secure the same with double walls of wood, having a dead air space between the boards composing it. This secures the warmth, but does not dispose of moisture without ventilation, which takes away all its advantages." Quinby says, "Hives made with double walls of boards, enclosing a dead air space, do very well in regard to warmth, but do not dispose of the moisture with sufficient rapidity. This must be got rid of, and in no way can it be done so well as by straining it through straw. Besides being advantageous for wintering, straw hives are superior in keeping the temperature warmer, and more uniform, throughout the spring, thus promoting early breeding and swarming." On the preceding page he says, "I shall err greatly in my judgment, if straw, as a material for hives, does not in a great measure regain its former position in public favour."

The only objection raised by Langstroth to the use of straw hives, is "the difficulty of making them take and retain the proper shape." This difficulty has been entirely overcome. Propolis will gradually accumulate, which will slightly diminish its absorbent properties, but it can be removed by scalding and rubbing with a brush, or crumbled off by rubbing it roughly in cold water. The objection raised in the last CANADA FARMER I never saw before, nor even thought of, though I have all my stocks in these hives, having begun to introduce them two summers ago. If the hives should get soiled in this way, I suppose it could be cleaned, quite as well as of propolis; certainly as well as a box hive, in which bees are often kept for years without being cleansed. Bees never deposit their faeces within the hive except when they become diseased from being wintered in hives in which the air is damp and temperature variable; the very evils which this form of hives is designed to obviate. I have found no special trouble from the moth, and Quinby says, "Out of a large number containing bees through the summer, not one has ever been injured in this way." The idea of pacing the straw wall outside and the boards within, since you entirely lose the advantages of the absorbent quality of the straw and put a comparatively good conductor of heat, instead of a non-conductor, next the bees, I think, has no merit, unless it be for originality.

"Protect all things; hold fast that which is good."

A. N. HENRY.

Oshawa, May 23rd, 1867.

NOTE BY ED. C. F.—We do not pretend to any large amount of knowledge or experience as to bee-keeping, but we affirm that three healthy, well-wintered stocks of our own had defiled the walls of their habitation when last winter's imprisonment came to an end, and that on setting them out we found it necessary to give said walls a good scraping, such as would have torn a straw lining all to tatters. Our correspondent admits that the bees will cover the straw with propolis, and suggests "scalding and rubbing with a brush" to get it off. The "scalding" would have to be done with water, we imagine, and after the process, the anti-moisture expedient would be in a state to illustrate the "similium similibus curantur" law of Homoeopathy with a vengeance. The straw wall, it seems to us, is too thin to be of much service as a non-conductor and absorbent, while we are by no means convinced that our objection does not lie against it.

## Veterinary Department.

### Diseases of the Chest.

THE thorax or chest, or thoracic cavity is formed laterally by the ribs and intercostal muscles, and above by the bodies of the vertebrae of the back (dorsal), below by the breastbone (sternum), and behind by a large muscle called the diaphragm, which forms the partition dividing the cavity of the chest from that of the abdomen. The thoracic cavity is also lined by a serous membrane called the Pleura. The organs contained within the chest are the lungs, the heart, and the large vessels springing from and entering into that organ, part of the windpipe (trachea), and part of the gullet, (oesophagus), besides nerves, lymphatics, &c. The lungs are those two spongy organs formed for the purpose of respiration; they are divided into a right and left, the right being the larger of the two, and made up of three lobes, while the left consists only of two. The lungs of the horse, owing to the rapid exercise he is often called on to perform, are liable to disease, and therefore a very common affection is congestion of the lungs. This disease may occur at any time, but is generally most common during the winter and spring months. This is supposed to be partly owing to the sudden and frequent changes of temperature, and also to the condition of horses when they are put to hard work, as is usually done, in the spring. The immediate causes are neglected catarrh, as driving a horse a considerable distance when he is suffering from catarrh, or it may be brought on as a sequel to any of the affections of the air passages. A very common cause in Canada, during the sleighing season, is driving horses fast, and especially when they are in a fat or pampered condition. The violent exercise causes an increased quantity of blood to be sent to the lungs, more than they can accommodate, and congestion soon takes place. This disease may also be produced by impure air, as from horses standing in filthy stables, &c. When the result of fast work, the symptoms are well marked, and congestion of the lungs can be easily noticed. The horse begins to shiver or tremble, and will often break out into a profuse sweat; the shivering will cease, and he begins to breathe hurriedly; the ears and legs at this time are generally very cold, and the pulse is often almost imperceptible at the jaw; the ear applied to the sides can also detect an alteration in the sounds of the lungs. When caused by impure air, the symptoms are not quite so plain. The horse is dull, and the pulse quickened, varying from fifty to sixty beats per minute; the ears are alternately hot and cold, and the breathing is also quickened. Congestion of the lungs, although a serious disease, if properly treated is not a very fatal one. The horse should have plenty of pure air; the placing of him in a comfortable and well ventilated stable is indispensable in this affection; his body should be well clothed, and the legs well hand-rubbed and bandaged. When the pulse is weak, stimulants must be given, as nitrous or sulphuric ether, one ounce every two or three hours. When the breathing is very much disturbed, the application of cloths wrung out of hot water, to the sides of the chest, is generally found to give relief. When the acute symptoms are abated, a mild laxative may be given, and nitrated drinks. Bloodletting, as a general rule is injurious except where the pulse is very strong.

**NASAL GLEET.**—Alexander M. Cole writes: "I have a four year old colt diseased on the right nostril since February, and supposed it to be a bad case of distemper, until you made reference in the CANADA FARMER, of 1st April, to chronic diseases of the air passages of the horse. The colt breathes with difficulty discharging white and yellow fetid matter from the nose every eight or ten days, the right eye dropping water, and the bones bulging from the eye downwards. Will you give a cure for this disease?"

Ans.—We presume your colt is affected with nasal gleet, and judging from your description, we are of opinion that a cure cannot be effected without having recourse to an operation; therefore we would recommend you to have the colt examined by a qualified Veterinary Surgeon.

## Poultry Yard.

### Raising Turkeys.

A CORRESPONDENT of the *German Town Telegraph* gives the following as his experience in raising turkeys: My first experiments with the turkey were all unsuccessful and most of my good neighbours, when they heard of my failure, were prompt to exclaim, "I told you so." But the loss of my eggs the first year, and but little better success the next, did not convince me that turkeys could not be raised; and for two or three years past I have succeeded so well that I feel some confidence in saying that others will run no risk in adopting my plan.

He who would succeed well in this business must, during the winter, feed his flock well and familiarly. By the middle of March or first of April they will probably commence laying. If they are quite tame, as they can readily be made to be, they will be likely, if allowed to run at large, to lay about the farm or outbuildings, but the best way is to drive them into some shed every morning and let them out at noon. They will lay in the corners of the room, and when they come to set they will be content to be taken care of, and by closing the door at night they are free from harm.

I never feed the turkey on the nest, and am decidedly opposed to the practice of so feeding them. It is well enough to place food where they can get at it; but if the turkeys are hardy and in good condition this is not necessary.

Most turkeys are good setters, and will commence hatching in twenty-eight days. They should be kept on the nest until the young are dry and able to stand. The hen may then be put with a coop in a warm, dry place, and the chicks be permitted to run out, but should not be fed for twenty-four hours, or for even a longer period. I am very particular on this point, as I think many young turkeys are destroyed by over feeding soon after they are hatched.

After the first day a little curd or hard boiled egg may be scattered upon a board or flat stone. If the weather is cold or wet, it is well to season their food with pepper. I have experimented with giving young turkeys food very high peppered, and have seen no bad effects from it, but have frequently noticed cases where I was quite sure that the use of it produced much good.

After the first two or three weeks, it is well to let the old turkey out some four or five hours each pleasant day, if you have pasture or other suitable grounds. There is much danger in leaving them out at nights, as they are disposed to wander about while the dew is on the grass.

I would also again caution all who hope for success not to feed too high for the first week or two; afterward feed often, but sparingly.

If during the first four or five weeks any of them should droop and decline eating in the morning, give them pepper by taking a small quantity of their regular food and about an equal quantity of pepper mix it and give to each one as much as a healthy one of the same size would eat.

One of the most important points is to prevent the turkeys from getting wet during the first six weeks or two months of their life, for during this period a good soaking will generally prove fatal to a large majority of the flock. Nor should they, for this reason, be turned out too soon in the morning—not until the dew is entirely dried off the grass.

For feed during the first week I use common cottage cheese with a small amount of pepper, and to prevent the old hen from eating it, feed her whole corn, which the young chicks cannot eat.

NOTE BY ED. C. F.—We have found the food best adapted to young turkeys was a mixture of curds and bran.

**THE HEN AND DUCK AS EGG PRODUCERS.**—A paper has been received by the Paris Academy of Science from M. Comaille on the comparative value of the hen and duck as egg producers. His observations were limited to three hens and three ducks, all fine animals, hatched at the same time in the month of February. During the following autumn the ducks laid 225 eggs; they recommenced laying in February, and continued to do so until the middle of August. The hens laid no eggs during the autumn, but began in January, and left off about the middle of August. The totals of each at the end of that time were—the hens, 257 eggs; the ducks, 617. M. Comaille next examined the nutritive value of each kind of egg, and found them nearly equal in that respect.



### More about Difficult Calving.

To the Editor of THE CANADA FARMER.

SIR.—One of your subscribers says, "in this and the neighboring townships a great many cows have died this spring, under singular circumstances," which he explains by saying the passage to the calf-bed is almost grown up, and when forcible means have been resorted to, the cows have all died.

I shall not attempt to answer the question whether this is a disease of the womb or not. In one respect I am like Jacob's sons, my trade has always been among cattle; but in fifty years' experience, I have only found two cows and one ewe in the unnatural position described by your correspondent.

The first was a poor man's cow, and the cow was as poor as the man; and as I had never heard of a cow being saved under such circumstances, nothing was attempted. Of course the beast died; the fate of the ewe was the same.

The other cow alluded to was a valuable one, in the prime of life, and in fine condition. She had been sick, if I remember right, eighteen or twenty hours before I was sent for. Nature had done her utmost, the pains had ceased altogether. I told the owner that nothing could be done unless he would risk an operation, which was only an experiment, and might or might not succeed. However, he said death was certain if something could not be done, and therefore requested me to do the best that I could under existing circumstances.

After some deliberation I took a sharp pocket knife, and putting my finger over the end of it, cut the calf bed a good piece above the natural passage; found the calf dead, and wrong end foremost, and the hind feet down towards the udder; but by pushing the calf back, and getting my hand to the feet, then doubling them backwards, and with the assistance of two neighbors we relieved the cow. She did well afterwards, and had another calf next year, and then was turned off to the butcher.

I do not know whether the same experiment would be successful in another case, as this is the only favorable one I have ever known, or heard, or read of. Clayton's cattle doctor's book makes no mention of such cases.

JAMES PETERS

SPEEDSIDE, Eramosa, May 24th, 1867.

### Cheap Bread.

To the Editor of THE CANADA FARMER:

SIR, In these times of apparent scarcity of wheat, or at least of the high price of grain and bread, it is surprising to me that so little effort has been employed to cheapen food by an admixture of the flour of other grain with that of wheat. I am aware that rye flour has been used to some extent for this purpose, and probably corn flour, but BARLEY FLOUR seems never to have been thought of, and I presume could not at present be had in our market. Now, it is well known to be nutritious and wholesome, and in Scotland is highly relished both for cakes and porridge. I am told that barley meal, when bolted and mixed with wheaten flour, to the extent of one-third or more, will make very palatable loaves—although a little darker in colour than what are generally sold. If so, any miller introducing both barley meal and barley flour into market will not only do a public service, but will command a large sale for both when the community know that either may be had when required.

ECONOMY.

TORONTO, 30th May, 1867.

**EXCELSIOR BEE HIVE.**—G. S. wishes to know whether the Excelsior bee-hive is patented in Canada or not.

Ans.—Gordon's Excelsior bee-hive was patented November 28th, 1865.

**A PROFITABLE EWE.**—Mr. S. E. Pickett, of Lowville, informs us that Mr. John Cottrill, of Nassagaweya, owns a ewe which he said had raised in five years fifteen good healthy lambs, all making good sheep. Mr. Cottrill also stated that he sheared last year, from the same ewe and the three lambs that she raised the year before, twenty-nine pounds of good, clean, merchantable wool.

**CIDER PRESS WANTED.**—“A Subscriber” asks: “Will you inform me, in your next issue, where I can procure a cider press, and what the probable cost may be?”

**Ans.**—We cannot give the desired information, but perhaps some of our readers can.

**MILLER'S TICK DESTROYER.**—An “Enquirer” asks: “Is Miller's Tick Destroyer a fit application for the lambs as well as sheep; will it injure them; and should it be applied more than once?” Full directions for use accompany each canister of this preparation; and we believe that, if applied according to the instructions, the remedy is safe and effectual; we would recommend its application twice in the year, after shearing time, and before the sheep enter on their winter quarters.

**HORSE HAY FORK.**—A Subscriber wishes to know which is the “best Horse Fork, and the price.” We are not prepared to say which is the best; but there are several now manufactured in the Province, or introduced from the States, and we believe they answer their purpose efficiently. In this city Mr. Hewitt sells a good imported implement for \$11, Mr. Rice Lewis sells another kind, manufactured by Ray & Hill, Markham, for \$10 50; and C. Dawbarn & Co. advertise one for \$13 from the factory of J. & S. Noxon, Ingersoll, and also one manufactured by J. Watson, of Ayr.

**KEEPING CAULIFLOWERS DURING WINTER.**—A correspondent asks whether “cauliflowers, pitted as cabbages are usually pitted for preservation during winter, will keep as well, or whether there is any better plan of preserving them?”

**Ans.**—Cauliflowers that have headed will not keep long so as to be fit for use; but those that have not headed may be made available during winter, by taking them up by the roots, before the frost sets in, taking off the outer leaves, and planting them in soil in a moderately warm cellar, letting them have as much light as possible, when they will head finely.

**BARBERRY AS A HEDGE PLANT.**—A correspondent sends us the following:—“I have seen frequent inquiries in THE CANADA FARMER as to the best kind of shrub for hedges. The subject is important to farmers, as the future will prove when the present material for fencing (wood) will be nearly exhausted. I procured a quantity of barberry berries from N. Y. State two years ago, and put them in the ground in the fall, and the next spring planted them, and they grew well, and this spring I transplanted them as an experiment into a future hedge of about three rods long. It is a very hardy shrub, has stood the last two winters well, and what is very important, it is full of thorns. If this information is considered of any benefit to my brother farmers, I will give in future the result of my experiment.”

**BEST VARIETIES OF HOPS FOR CANADA.**—An “Enquirer,” writing from London, says: “In your issue of the CANADA FARMER, of May 15th, you give very good advice on the culture of hops, and speak of a few different kinds, without recommending any one sort in particular as the best producers, or as yielding the most saleable variety of hop. Would you be kind enough to do so in your next?”

**Ans.**—The White Vine, known in New York State as the “Early Cluster,” we believe, is a variety to be commended. The Golding is also a rich and valuable hop, in quality superior to the foregoing, but on some soils not so certain a bearer. Cuttings of these varieties may probably be got at Brantford, Brighton, and other places in Canada where hops are cultivated. An importation of the best sorts from England would be a great acquisition. At all events, we would recommend our correspondent not to propagate from the coarse, half-wild hops, that are but too frequently found in this country.

**LARGE LAMBS AGAIN.**—The notice, in a previous number of the CANADA FARMER, of a fine lamb raised by Mr. J. C. Hogaboom, has elicited the following communications. R. F. says: “I noticed in the CANADA FARMER a description of a fine lamb, which weighed, at the age of four days, 17 lbs., and when thirty days old, 34 lbs., consequently, at the time of its birth it could not have exceeded 15 lbs., as its weight increased over  $\frac{1}{2}$  lb. per day. Mr. S. Vrooman, of Centreville, Camden East, is the owner of a lamb which, when seven hours old, weighed 16 $\frac{1}{2}$  lbs., and was extremely well proportioned. The dam is a Leicester ewe, brought from Amherst Island.” Mr. O. Modeland, of Mayfield, Chinguacousy, informs us that a lamb in his possession, “dropped on the 7th April, weighed 15 $\frac{1}{2}$  lbs. at birth, and 57 lbs. on the 20th May. It is of the Cotswold breed; the ram was purchased of Mr. Stone, of Guelph, last fall.” Mr. John Halkirk, of McKillop, Co. Huron, tells us that he has in his possession “a large ram lamb which weighed 40 lbs. at four weeks old. This lamb was bred from a Leicester ewe.” And again, Mr. Isaac Lester, of Erin, writes that he found a lamb of his “at thirty days old weigh forty pounds. It is a mixed breed between Southdown and Leicester.”

**NOTICE TO CORRESPONDENTS.**—Several communications have reached us too late for their insertion or reply, and are therefore unavoidably deferred. Will our correspondents bear in mind that the edition of the CANADA FARMER is now very large, that the making up and printing occupy considerable time, and that it is absolutely necessary that communications should reach us several days in advance of the time of going to press, if they are to be inserted in any immediately forthcoming number. We will attend to the enquiries and communications remaining on hand as soon as possible.

## The Canada Farmer.

TORONTO, UPPER CANADA, JUNE 15, 1867.

### The Season.

**DURING** the past fortnight, the weather has been superb. Warm rains have been followed by steady sunshine, and the night air has had the genial breath of summer in it. Growth has consequently been very rapid, and the capabilities of our Canadian climate have displayed themselves in a remarkable manner. The woods have suddenly burst into foliage, the fields are decked with luxuriant verdure, fruit and flower gardens are blooming and gay with bud and blossom, and the face of universal nature is clad in smiles. Even the great grumbler, man, is mute with wonder and satisfaction. Murmurings and complaints about the late spring are giving place to exclamations of delight about the crops, all of which, without exception, so far as we know, promise well. Grain and grass look extremely healthy and vigorous all over the country. Drought, midge, grasshopper, wet, or some other of the thousand ills farming is heir to, may possibly be in store for us, but at present the auguries are all propitious. Joy, gratitude, and hopefulness are the duties of the hour, let the future bring forth what it may. For once we have escaped the dreaded June frost, that bane of our Canadian spring. Orchard culturists breathe freely now, for the tenth of the month is over and gone, without the after-clap of winter that we so often get. The cherry season will soon be here, not minus the cherries, as it sometimes is. It will quickly be followed by other welcome fruits, of which there is prospect of great abundance. So far, the season is favourable for dairy operations, and our cheese factories, which are springing up in all parts, are having a good run of business. Bees are gathering largely now, and though swarming will

be late, there is reason to anticipate a good honey harvest. The wool clip is, we believe, up to the average mark, but owing to the United States tariff, prices run low, and will doubtless continue to do so.

By accounts from the adjacent States, and from Europe also, we learn that we have not been alone in our experience of the backward spring, indeed the long-continued prevalence of wet and cold weather has been general in these countries, and in some parts especially has considerably retarded all farm operations. Notwithstanding this, however, all the reports from those widely separated regions, with a uniformity of opinion observed, speak most encouragingly in regard to the prospects of the coming harvest.

### Wool Prospects.

**THE** staple which gives the farmer the earliest return in each season, bringing in the ordinary course his first cash receipts, namely, the wool clip, is now again coming into market, and it becomes a question of some interest to all concerned, what are the prospects of the present season in regard to this branch of trade. It is not always easy to come to correct conclusions on such a question, and the most experienced men of business are sometimes deceived in their calculations. There are, however, certain facts and considerations in the present aspect of affairs which seem to indicate the probability of lower prices for wool than of late years farmers have been in the habit of receiving. Among the various circumstances pointing to this conclusion, it may be mentioned that the clip this year is large, giving the prospect of an abundant supply. At the same time, we understand that there are large stocks of the old clip throughout the Province. Then, in the adjoining States, which have formerly been the principal customers of the Canadian wool merchants, a variety of causes combine to close in great measure this market against us. The high protective duties which our neighbours have so unwisely imposed on Canadian wool is foremost amongst these adverse causes—adverse most, however, to themselves—and the state of their manufacturing establishments is a further bar to any considerable exportation in that direction. We are informed that many of the large woollen factories are now working short time, and that the stock of woollen fabrics in their possession is very large. It must also be taken into consideration that the fall in the price of cotton has again brought that fibre into requisition for the manufacture of union or mixed fabrics, thus still further diminishing the manufacturer's demand for wool. The financial difficulties of the country, aggravated by the enormous extravagance that lately prevailed amongst nearly all classes across the lines, have, moreover, brought about a marked change in this respect, and compelled the practice of a rigid economy throughout the community.

Taking these circumstances into consideration, it seems clear that we must look to other and more distant countries as markets for our surplus stock of wool. The finer sorts will no doubt be largely employed in home manufacture, for which these wools alone are suitable; and the coarser kinds chiefly will be exported. For these England will certainly be our principal market; and the prices there must necessarily rule the rates that will be given by Canadian buyers. By last reports the price of wool in England is quoted at 1s. 3d. per lb.—or about thirty cents of our currency. Deducting from this sum the cost of transportation, &c., the corresponding price on this side the Atlantic would be about twenty-five cents. How far prices may deviate from this rate we do not presume to say; but there seems on the whole a probability of lower prices prevailing than the Canadian farmer has been receiving during the last few years.

In connection with this matter, the following resolutions, recently passed by the New York Wool Growers' Association in reference to the subject of pre-

paring wool for market, may be interesting to Canadian sheep-breeders; and we would especially direct the attention of all such, and of the buyers also, to those clauses respecting the washing of the sheep and the condition of the wool brought into market. It has always seemed to us that unless the washing is effectually done it is worse than useless. The coldness of the waters in streams fed by elevated springs, the sudden transitions of our seasons, and the distance from the farms in many parts of suitable washing places, render the operation often very inconvenient, and not altogether safe for either the flocks or the men engaged in the task. As a consequence the work is often very roughly and ineffectually performed. We have known a flock of sheep merely forced into a deep and wide stream and compelled to swim to the opposite bank, and this was all the washing they received. We have also seen sheep driven, on one of our hottest summer days, over roads several inches thick with dust, washed in a cold stream, and brought home over the same dusty track, looking on their return several shades darker and dirtier than when they set out. The mere circumstance of the fleeces being washed or unwashed is surely a very secondary consideration in comparison with the actual condition of the wool. So long as buyers continue to give the same or nearly the same prices for all sorts of fleeces, so long will the farmer be discouraged from making any efforts towards the improvement of his breed of sheep, or taking any special pains with the condition in which he offers his wool for sale.

The Resolutions adopted by the New York Convention are as follows:

*Resolved*, That sheep should be guarded as far as practicable from an admixture of hay, straw, thistles, burrs, or other like extraneous substances, with their wool.

*Resolved*, That washing sheep in running streams, in season to shear them at the proper time in the Spring, is often dangerous, by reason of the coldness of the water, especially in regions where the streams descend from mountains or highlands, that it is not conveniently practicable in other regions, on account of the remoteness of running streams; that in many localities the prevalence of contagious diseases, like scab and hoof rot, render it unsafe to take sound sheep to any of the convenient washing places; that the natural yolk or "grease," if left in the sheared wool, does not injure it in any respect for keeping or manufacturing; that the greatest portion of the wool grown in the world is, and always has been, shorn and sold unwashed, without objection from any quarter; that we possess certain information that many of the largest wool manufacturers in the United States are willing, and a large number of them prefer, to have American wool brought to market unwashed; and that, accordingly, we recommend the wool-growers of the country to consult their own convenience and inclinations in this matter.

*Resolved*, That the length of time which should elapse between washing and shearing cannot be determined properly by the number of days, but it should also be regulated by the state of the weather, that wool should not be shorn after washing until it has acquired its characteristic glossy look and soft feeling.

*Resolved*, That wool is not injured in the least degree for manufacturing by being done up as tightly as practicable; that, however, when done up extremely tight, and then pressed together by its own weight in large masses, the difficulty of separating it by the sorter is increased; that there is no danger of producing this effect by any ordinary application of strength, when the fleece is folded and tied by hand, but that it may be produced, especially in the case of greasy wools, in wool presses; that the twine used for tying should not be unnecessarily large, or used in unnecessary quantities, and should be of such texture that particles of it will not become incorporated with the wool.

*Resolved*, That dead wool, or any other wool of inferior quality or condition, should not be put within fleeces; but that, such being the prevailing and well understood custom in this State, it is proper, in the absence of any contrary understanding, to put the tags of every fleece within it, if in equal condition.

*Resolved*, That any uniform and arbitrary rate of deduction on unwashed fleeces operates unequally and unjustly on growers, because some breeds and varieties of sheep have far more yolk or "grease" in their wool than others, because the proportion of yolk or "grease" which is retained in the unwashed fleeces of even the same sheep, depends in a great degree upon the care with which they are housed from rain and snow, because some flocks are kept where their wool becomes mixed with dirt and other heavy substances, while others are not; that such arbitrary rate of deduction for impurities is not tolerated in the sale of other farm products, that no excuse can be set up for it in the case of wool, but

the inability of the buyer to determine the relative amounts of the impurity—in other words, his ignorance of his business; that wool-growers are not required to submit to loss and injustice to enable wool dealers or wool manufacturers to employ cheap and unqualified agents.

*Resolved*, That the practice which has obtained among buyers of establishing a maximum price to offer for the best wools of a neighbourhood, which is sufficiently low to enable them to offer nearly the same price for all the wools of that neighbourhood, thus, in effect, sacrificing the interest of the grower who aims at high quality and condition, for the benefit of the grower of inferior and dirty wools, directly encourages the production of the latter, and offers a premium on those bad modes of preparing wools for market of which the buyer so loudly complains; that it has tended, more than all other causes put together, to the debasement of American wools; that when the buyer will make a just discrimination in favour of superior quality and condition, he will have no difficulty in securing them.

*Resolved*, That we favour no proscriptive combinations, and that we utter no menaces to those of our number who do not carry out our recommendations; nor do we propose to be in the least degree influenced by such action on the part of others towards the persons who buy of us.—

### Selection of Judges for the Provincial Agricultural Exhibition.

The following letter has been addressed by the Secretary of the Board of Agriculture to the Toronto papers, in reference to the important subject of selecting judges for the Provincial Exhibition. The explanations it contains should be generally known by all agricultural societies and others interested in their proceedings, and we think it well that those who indulge in the easy task of finding fault, should also know how solicitous the Board, are to discharge their onerous and important duties efficiently, impartially, and faithfully. Mr. Thomson's letter is as follows:—

The choosing of properly qualified and at the same time perfectly unbiased judges for the numerous classes of animals and articles at the exhibition has always been one of the most difficult matters which the association has had to manage. Those who are well qualified to act as, a general rule, either exhibitors themselves, or in some way connected or associated with those who are, and, therefore, whether they would display partiality in their judgments or not, would at least be suspected of doing so by some one or other of the exhibitors, and so cause dissatisfaction. As the exhibition of the association is Provincial, and the exhibitors come from all parts of the Province, it has been considered desirable that the judges should be selected from all parts of the Province also. But the Board of Agriculture, as the directors of the association, could hardly be supposed to have a personal knowledge of all the persons residing in the different counties who might be competent and willing to act, and therefore it became the custom to apply to the county agricultural societies for assistance, and to ask each one to send up the names of two properly qualified persons to act as judges upon certain classes named by the Board. At the same time it was also the practice, both as a matter of courtesy and for the sake of the advantage of their known skill and judgment, and their supposed perfect disinterestedness, to invite a few of the leading agriculturists and cattle breeders from the adjoining States, generally the State of New York, to act along with our own judges. In return for this outside assistance, which we sometimes obtained and sometimes did not, our association has been in the habit of sending delegates to act in a similar capacity at the New York and other State shows; and I may venture to say here, that on either side such delegates have always been received in the most cordial and friendly manner, and the assistance they gave highly valued.

The foregoing continued to be the practice till about three years ago, say 1864. But, unfortunately, it often happened that parties sent up by the county societies were found to be totally unqualified to act, either because no really competent person was found available by the society applied to, or because sufficient care was not taken in the selection. In the year above mentioned, therefore, 1864, the Board decided to appoint the judges themselves, without applying immediately to the societies, using, however, in doing so the list of names which had been sent in by the societies for a series of years back, and selecting from these lists such persons as were known to the Board to be possessed of good qualifications for judging. The persons chosen, therefore, had all been

nominated by the societies at some time, though not during the current year, excepting the few foreigners, invited as on previous occasions. This mode of selection was adopted in 1864 and continued in 1865. It did not give entire satisfaction, however, as many of the societies were of opinion that they ought to be applied to anew every year, and at the annual meeting in 1865 a resolution was adopted requesting the Board to return to the former system. The old system was therefore resumed last year, and is to be continued this year, and it was under the resolution adopted in 1865, and not last year, that the committee of the Board met the other day. The committee present consisted of Messrs. Christie, Burnham, Stone, Denison, Buckland, and J. P. Wheeler, President of the Agricultural Association. As there are sixty-three county agricultural societies, and the Board of Arts and Manufactures now appoint the judges in the arts department, it has been found that to invite two judges from each county society gives a greater number than is required. And as it is a somewhat delicate task to decline the services of persons after they have been nominated by the societies, it was decided that as a general rule it would be sufficient to apply to the societies to nominate one judge each instead of two as heretofore. And in a few of the more important classes, in which it is very difficult to obtain the services of a sufficient number of thoroughly competent and at the same time entirely disinterested judges from amongst ourselves, it was decided to invite a few gentlemen of known good judgment from the adjoining States or Provinces—one, two, or three for each such class, as the case may be—to act along with judges nominated by our own societies. This is not done so much from a regard to the interests of foreign exhibitors, as they in fact rarely exhibit with us, although eligible to do so, but with a view to strict justice being done to exhibitors amongst ourselves, and also, as I have already mentioned, as a matter of reciprocal courtesy between neighboring State and Provincial societies.

As this subject is one in which a good deal of interest is taken by agricultural societies and by exhibitors, you will perhaps excuse the length (greater than I intended) at which I have entered into it.

HUGH C. THOMSON.  
Sec. Board of Agriculture.

TORONTO, May 25, 1867.

### Progress of Agriculture in Nova Scotia

The Board of Agriculture of Nova Scotia have published their third annual Report, from which we learn that very satisfactory progress in agriculture has marked the history of that portion of the New Dominion during the past few years. This result has been in great measure owing to the operation of the Board, and the formation of Agricultural Societies throughout the Province.

The number of these useful institutions at present established there is fifty-eight, the number of members 3,000, and the sum total of their annual subscriptions, as nearly as can be ascertained, \$3,200. The efforts of these societies have been directed to various objects for promoting better systems of culture and stock raising in their respective localities. To this end they have established agricultural exhibitions, and have awarded premiums also for the best crops, &c. Much useful agricultural literature has been circulated through the country by their means, but among the most important of their operations has been the importation of improved stock and new seeds, both from Europe and Canada. The *Journal of Agriculture*, a monthly periodical, published under the auspices of the Board, has done good service in diffusing agricultural information, and stimulating a spirit of enquiry and enterprise.

EXIT FROM PUBLIC BUILDINGS.—Proprietors, trustees, or managers of churches and public buildings, should bear in mind that, by Act 29, 30 Vic, cap. 22, it is made imperative that all exit doors thereof, and gates of outer fences, must be so constructed or altered as to open "outwards"; and that a failure to comply with these provisions of the law, by the 15th of August next, will involve a penalty of "Fifty Dollars, and a further fine of Five Dollars for every week succeeding in which the necessary changes are not made." The duty of seeing that the Act is enforced devolves upon the High Bailiff, Chief Constable, or Chief of Police, in cities, towns, and villages, under a penalty of Fifty Dollars for neglecting to perform such duties.

## Agricultural Intelligence.

### A Fortnight in Lennox and Addington.

To the Editor of THE CANADA FARMER.

SIR,—Having recently made an agricultural tour in the United Counties of Lennox and Addington, a few remarks, founded on my memoranda, will not be uninteresting to your readers in that part of our Dominion, and may probably afford some useful suggestions to others.

I met and addressed the members of Agricultural Societies in the following places: Bath, Odessa, Centreville, Newburgh, Napanee, North Fredericksburgh, and South Fredericksburgh. The weather was unfortunately cold and wet, and all farm operations consequently very much behind. Notwithstanding, the attendance at our meetings was, on the whole, satisfactory, and I had much pleasant intercourse with farmers and others, which, I trust, was mutually interesting and beneficial. As there must necessarily be considerable sameness in the subjects and discussions at meetings of this kind, I shall not occupy more of your valuable space than is required by a brief reference to the more important matters that came under my observation.

The meeting at Bath was pretty well attended. I was struck, in looking over the farm of Mr. Davey, at Bath, and also Mr. Dayly's, of Odessa, by unmistakable signs of the peculiar adaptation of the soil to pasturage. Permanent pasture, owing perhaps more to the character of our climate than the quality of the soil, cannot be obtained on this side of the Atlantic as in the British Isles: and in the generality of cases land can be kept profitably in pasture only for a very few years. The term can, no doubt, be lengthened, except on the most unsuitable soils, by the adoption of a better system of management. Mr. Dayly took me over a hundred acres of his farm that had been down in pasture for more than a quarter of a century. The land had received no top dressing; it was laid down to grass in the ordinary way, and continues to sustain the usual number of sheep and cattle. The ground is full of white clover, with mostly indigenous grasses; and I have no doubt that, with judicious draining, of which some of the land stands in great need, and occasional top-dressing of wood ashes, well rotted dung, or any other such matters, however slightly, the pasturage might not only be sustained, but progressively improved for a yet indefinite period. The subjacent rock of this district is limestone, which forms a soil, when sufficiently deep, admirably adapted to the growth and permanency of the finer and more nutritious grasses. *Pasture more, and cultivate less and better*, appears to me to be the true policy of farmers in this as in many other sections.

We had quite an interesting meeting in Odessa, which is a pleasant and thriving little village, with good water power, made available for different purposes. Mr. J. B. Aylsworth, Secretary of the Addington Society, drove me to Centreville, in Camden; but owing to the extreme wetness of the weather, the journey was unpleasant, and the meeting thinly attended. As one proceeds northerly, the limestone rock seems to come nearer the surface, over larger areas, rendering tillage difficult, and in some places quite impracticable. Such land is only suitable for pasture, which in dry summers gives out.

I had the pleasure of spending a day with Mr. James Nimmo, near Newburgh, second Vice-President of the Provincial Association, who has the credit of having erected the best, and most complete and convenient farm buildings, in the Province. For compactness and mutual adaptation, warmth, cleanliness, and ventilation, the saving of manure and protection of implements, they certainly exceed anything I have ever seen, either in Canada or the United States; and not long since they would not have been excelled by very many farmeries in the old country. Mr. Nimmo

has laid his adopted country under obligation for the taste and enterprise he has displayed, not only in his homestead and extensive garden and ornamental grounds, kept with scrupulous care and neatness, but likewise for the improvement of stock, the draining of land, straightening of fences and water-courses, and in a word, the making of literally "rough places smooth." Some things here reminded me of what I saw a quarter of a century ago, on Tiptree Hall farm, in England, belonging to the world-renowned Mr. Mechi. It is of great public interest to have such practical illustrations of what can be done in Canada as Mr. Nimmo has given; for although the mass of our farmers may find it practicable to follow the example only at a humble distance, yet every step taken in such a direction is an important point gained, improves our agriculture, and increases the wealth of the country. Mr. Nimmo had an extensive sale of his stock early in the spring, chiefly cattle, (Short-horns and Polled Angus), realizing satisfactory prices. The distribution of such breeding stock must prove of great public benefit. His Angus are the purest breed that I have seen on this side the Atlantic, and are liable to be confounded by persons not well versed in their characteristic points with the Galloway, to which they have a near affinity and resemblance. They are, however, less compact in form, and longer in their limbs, and have not the great depth of rib so characteristic of the true Galloway; but they are said to be better milkers, fatten readily make excellent beef, and are hardy. They have been crossed with the Durham with admirable results, for feeding purposes, and deserve to be better known than they generally are on this continent.

At Newburgh, we had quite an animated meeting, discussing some of the more important points in relation to the local improvement of agriculture. Mr. Nimmo stated his experience in a lucid manner, and urged the adoption of draining, alternating crops, better culture and improved stock. Newburgh is an improving village on the Napanee river: it has considerable manufacturing power and the Addington Society has here a capacious, permanent building, after the plan of that at Kingston, with adjacent grounds: and the County Shows. I was informed, have in consequence been of a much improved character. The superior preparations for holding Agricultural Exhibitions, that have come under my observation of late years, in various parts of the country, clearly indicate the increasing interest that is being felt in their important objects, and the progressive usefulness of our Societies. A cheese factory has just been started in the village, well fitted up, and the milk of some 300 cows is reckoned on. There are five cheese factories in operation in these United Counties, the soil of which is generally well adapted to dairying purposes. The chief thing to be aimed at is to make a good article, which will always command a market, at a remunerating price.

The day on which I visited Napanee was unfortunately extremely wet and hoisterous, consequently the attendance was small. I had, notwithstanding, an opportunity of much personal intercourse with farmers, implement makers, and others, that rendered my brief sojourn here both agreeable and profitable. Napanee is fast improving, and does already a large business in lumbering, milling, and the transport of grain both by water and rail. The new County buildings are very creditable; and the capacious public school, which at present meets the whole educational wants of the town in an efficient manner, clearly indicates the good taste and sound moral sense of the people. I remember casually passing through this place some twenty years ago, when it contained only a very few wooden houses! Truly our progress has been marked, and in some instances very rapid. Croakers and fault-finders should open their eyes impartially, and look abroad, and compare Canada as it now is, with what it was fifteen or twenty years ago!

Mr. James, the Secretary of the Lennox Society, drove me to a meeting of the North Fredericksburgh Society, which, though the attendance was not very large, was of a spirited and improving character. Next day, Mr. Smith, whose father was one of the first settlers in this district, some seventy years ago, took me to a meeting of the South Fredericksburgh Society, on Hay Bay. The day was fine, and the Town Hall

well filled with as enquiring and intelligent a class of men as I ever met. I trust that the three hours we spent together will not have been in vain. In the evening I reached Adolphustown, whither I was conducted by Mr. Mallory. The southern part of Addington, and nearly the whole of Lennox, contains a soil of great agricultural value, and although early settled, very much yet remains to be done in order to fully develop its immense latent capabilities. I have not seen in any part of the Province a better soil than is commonly to be met with here, and yet my friends in this district will, I trust, excuse me when I say, that many farmers have not yet passed the threshold of modern agricultural improvement. In so old a settled district as along the shores of the beautiful Bay of Quinte, I felt surprised to see how comparatively little had been done in the way of draining, a process that constitutes the *beginning and foundation* of all solid agricultural improvement. Without draining on soils naturally wet, and consequently cold, deep and clean culture, a judicious rotation of crops, and a liberal application of manure, they will necessarily lose by far the greater portion of their value. First, I would say, improve nature's drainage, by scouring out, where needed, the water channels of the little streams and creeks, to be succeeded by open ditches, and subsequently covered drains through the lowest and wettest portions of the fields. Such a work, of course, must be progressive; it cannot be commenced and completed even in a generation, when the extensive area of a new country is the sphere of operations; and if anything approaching to a general movement, *real and healthy growth*, can be recognized in this direction, it would be as much, perhaps, as under all circumstances should be expected. I met with several individual instances of successful draining, but on the whole, here, as elsewhere, this primary improvement, the harbinger of all others, makes no progress at all commensurate with its necessity and importance. At a season like the present, what a pity it is; what a reproach to our boasted knowledge and enterprise, that one should see so many thousands of acres of the richest land rendered unmanageable and unproductive for the want of a few open ditches, or it may be the removing here and there of obstructions in the natural water-courses. In this district of country, stone can be readily got for draining, in many localities, and tiles or pipes are made at Napanee, two inches in diameter, for \$8 per thousand.

I heard complaints in several places that wild mustard, or, as it is sometimes called, Charlock, is getting very troublesome; a result clearly arising from inferior cultivation. This weed is exceedingly troublesome to eradicate, as its seeds will remain for an indefinite period in the ground, in circumstances unfavourable to germination, and a little deeper subsequent cultivation will often develop them into life. A good, deep summer fallow, followed by crops sown in drills, carefully weeded, is the best practicable way yet known of extirpating this troublesome pest.

Couch grass, quick or quack, as it is sometimes called (*Triticum repens*), is much complained of in many localities, and from what I heard and saw, the evil seems of late to be greatly on the increase. I did not hear nearly the complaint about thistles—which, by the bye, are in some places yet too numerous—as of couch, which, like many other plagues, is the result of superficial and imperfect cultivation. The roots of the couch grass, I observed, were in most places exceedingly vigorous, denoting a good soil; then far more the pity. Speaking on this subject to Mr. Penner, of Adolphustown, who still continues to feel an ardent love for agricultural pursuits and their improvement, that gentleman informed me that he found but little difficulty in clearing land of this troublesome weed. In summer fallowing, he uses Colman's Cultivator drawn by three stout horses; the tines are so set as to go into the ground ten or twelve inches, bringing to the surface the roots of the couch grass, which are readily gathered into rows by an ingenious and useful implement, called a "chain harrow"; a horse and boy will in this way gather up more of the roots than could be done by half a dozen men by hand. The roots are then put into heaps and burnt. The chain harrow is very useful in covering clover or other grass seeds, as it leaves the surface in a fine and smooth condition; and in pasture fields grazed by cattle, it can be advantageously employed in disintegrating, and working evenly over the surface, the solid excrements of animals. I regret to say that I saw no signs, anywhere in this district, of raising flax for commercial purposes, although the soil is well suited, and good fibre and seed have been raised from the earliest settlement, for domestic use. This matter is deserving of serious consideration, which I trust it will receive, after the way it was brought up at the different meetings.

GEO. BUCKLAND.

University College  
May 31, 1867.

## Wolfe Island Cheese Factory.

A SUBSCRIBER sends the following account of the above factory:—"We have now in our midst, thanks to the enterprise of T. S. Bennett, Esq., a splendid cheese factory in complete working order.

"At a meeting of the supporters of the factory, held in April last, Mr. John Davis in the chair, Mr. John McRae, secretary, Mr. Bennett proposed to convert the milk into cheese for 1½c. per lb., on condition that each person sending milk would furnish his own boxes, bandages, etc. This arrangement was unanimously agreed to by the farmers present, and the establishment was accordingly opened on the 1st ult. Since then it has been progressing rapidly. It now receives upwards of 4,000 lbs. milk daily, and, owing to the excellent pasturage on the Island this season, is receiving more and more every day.

"The proprietor, Mr. Bennett, has had a good deal of experience in cheese-making, and this fact, together with the position of the factory, in the centre of the Island, augurs well for its prosperity.

"Allow me to say, in passing, that Mr. Bennett's cheese took the first prize at the County Fair held in Kingston last year.

"Some of his cheeses of this year have been cut already in Kingston, and have been pronounced A No. 1, by competent judges."

It is estimated that there are 16,000 acres devoted to hop-growing in the United States.

Late reports from nearly all parts of Illinois represent the prospect for fruits, including peaches, as unusually fine.

England has about 400 steam ploughs and cultivators in operation, saving the labor of about 2,500 horses.

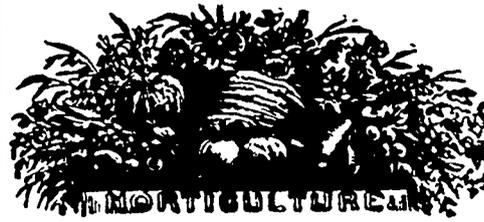
An exchange says there will be no Provincial Exhibition in Lower Canada this year. Quebec having failed to raise the \$4000 required for building purposes.

Complaints continue of great distress in the townships of Harrington, Arundel and De Sallaberry, Lower Canada. Many have lost their whole stock of cattle, and besides have no seed.

**CANADA THISTLE.**—The Illinois Legislature, at its last session, passed a law providing that any person bringing into the State seed of the Canada thistle, in the packing of goods, grain or grass seeds, or otherwise, and permitting the same to be disseminated and vegetate, shall be liable to a fine of \$400; and any person allowing this thistle to mature and disseminate its seed upon his lands shall be subjected to a fine of \$15.

**CATTLE PLAGUE IN ENGLAND.**—Repeated outbreaks of Rinderpest in various parts of England, though consisting of comparatively few and isolated cases, and not extending, or rather not being suffered to extend, in the several neighborhoods, still keep alive among the British public an uneasy sense of the presence of this terrible scourge, and serve to show the inveterate nature of the disease and the necessity for vigilance and unrelaxed efforts to guard against its introduction or spread. It may be some time yet, we fear, before a clean bill of health as regards this obstinate disorder, can be reported.

**INTER-COLONIAL TRADE INCREASING.**—The St. John (N. B.) *Telegraph* says:—"The product of the Charlottetown tanneries has met with ready sale in Canada at remunerative rates; the Canadians are purchasing leather in Halifax also. The other day a Halifax merchant received an order from Canada for a thousand sides at the market price, and intimations have been received from Canada that several orders, equally as large will be forwarded to Halifax in a few weeks. Nova Scotia coal is beginning to figure largely among the imports of Canada, and the Cape Breton Coal Mining Company has opened agencies in Toronto and Montreal for the sale of its products. Our Halifax exchange tells us that "there is a prospect that this as well as other coal companies will do a large business with Canada, to the advantage and benefit of all parties concerned. Since the establishment of the Portland line of steamers trade between Nova Scotia and Canada has largely increased, and doubtless there will soon be other channels for the profitable exchange of commodities with all the Provinces comprising the Confederation."



## Horticulture of the Paris Exhibition

Among the many attractions of this vast assemblage of the world's products and industries, not the least beautiful are the arrangements of the horticultural department. These, we are told, have been admirably conceived and most successfully carried out.

For the exhibition of international horticulture a considerable space, amounting to rather over 70,000 square yards, has been set apart and enclosed by an iron railing. Within this inclosure are gathered specimens, in endless variety, of the floral productions of almost every portion of the globe, and here the splendid proportions and gorgeous hues of the Tropics are seen side by side with the graceful forms and delicate beauty of more temperate lands; while the influence of man's intelligence and skill in controlling the forces of nature or stimulating them to a more rapid and fuller development may also be witnessed on a very extensive and effective scale.

The following description of the horticultural display at the Paris Exhibition is taken from an account which appeared in the *Farmer* (Scottish), and will give a far better idea of the marvellous scene than any report that we could give.

Entering the enclosure by a fine avenue, a splendid panorama bursts on the view. Not a vestige of the Exhibition building or its numerous appendages is visible, but the limpid surface of a vast lake relieves the verdant hue of the expansive sward. From the centre of the former rises a lofty mass of superincumbent rocks, surmounted by a cascade, which, in its never-ceasing flow, restores to the lake the waters to which it owes its life. The sward is crowned by a small crystal edifice constituting the Winter Garden, and appropriated to the reception of exotics. On each side of this building are formed two artificial gorges or ravines, at the end of which the ground rises, and on the level spaces are a couple of greenhouses, surrounded by ponds filled with aquatic plants. The entrance to these gorges is guarded by masses of rockwork, and embellished with lakes and cascades, while through the falling spray can be dimly seen the gloomy mouths of grottoes and caves, alike inviting the curiosity of the visitor, and by their sombre appearance forbidding him to gratify it. Towards the right of the house devoted to the orchids stands a large semi-circular building with an elegant colonnade and portico. It is the diorama, and is a peculiar feature of the Exhibition, and was invented by M. Rouzzi. As it was impossible to collect all the known plants of the world in one spot, a number of photographs, amounting to 4,000, of the most interesting specimens were obtained in different lands and forwarded to Paris. In order that these might be viewed of the natural size, fifty magnifying glasses are provided for the purpose, to each of which is attached a handle. By turning this handle the visitor causes to pass in review before him about eighty different specimens of foreign plants. A natural fac-simile of the photograph is appended to each, where it has been possible to procure it. Passing the collections of fruits and vegetables, we find ourselves under the palm trees, by the banks of a river. Following its sinuosities, they lead to a lake filled with rare and curious fish, while its banks are bordered with plants of a nature seldom seen in our northern climates. In the large lake previously mentioned are the famous carp which were brought from the ornamental water of Fontainebleau by per-

mission of the Empress. They are of an enormous size, and are said to be two or three hundred years old. The submarine chamber, although not strictly connected with our subject, deserves notice. It is about sixty feet in length, and the first impressions created by entering it are those of mingled astonishment, fear, and admiration. The sea is above, below, on all sides; the finny inhabitants congregate in myriads to gaze upon their unknown visitors, and sea-horses and dolphins sport and gambol above their heads. A large oyster-bed, and marine plants of every hue and shape, serve to increase the illusion. Near the marine aquarium is the building devoted to the reception of Brazilian orchids; an elegant kiosk for bouquets à la main; a hothouse for large forced vegetables; and a beautiful little crystal palace, where, surrounded by the fruits and flowers indigenous to their tropical climate, the humming-birds pass the livelong day, flitting from one flower to another with never-tiring wing.

Situated in the avenue parallel with l' Ecole Militaire, is the conservatory appropriated to the reproduction and growth of plants, and which, of all others, claims the first attention of the horticulturist. Let those who are sceptical on the subject of rapid growth enter and observe how the flower is born, grown, and multiplied, not by a process contrary and inimical to the laws of nature, but by forcing her to proceed at full gallop, by compelling her to accomplish her results in the shortest possible space of time. It is not too much to assert that the present is a forcing age, no matter in what light it may be viewed. Men never forced their brains to so injurious an extent as they do now. The minimum speed of the race of life has changed from the post-horse to the locomotive, and a man lives now in twenty years more than his great-grandfather did in fifty. It is especially a fast age—fast for the mind, fast for the body. We not only force ourselves, but everybody and everything connected with us. We force all our mechanical means to the utmost, we strain the steel and stretch the iron until they can bear it no longer, and lamentable catastrophes bear witness to the truth. Discovery and invention were never so rife as now, and man's intellectual faculties are ever on the rack to keep pace with the strides of scientific investigation and research. To take relaxation and repose is to be idle, to lose time; and thus the only chance for a man to attain to the "three score and ten years" is destroyed by the restless system of life of the present century.

A writer in the *German town Telegraph* says, that sowing a ring of radishes around each hill in which the seeds of vining plants are planted will save them from the attacks of the striped bug, as it prefers the radishes and will confine itself to them.

**HOW TO RAISE CAULIFLOWER.**—"The best of all flowers," said a famous English writer "is the cauliflower." That it is a very palatable article of food, none will deny who have eaten it. The question is how to raise fine plants, with plump, tender, crispy heads. For the first cutting of the season, the Early Paris and Demi-dur are probably the best. For late, the Erfurt White, Lo Normand and Walcheren. The first crop should be started in a hot-bed or cold frame. If the turnip fly gets among the young plants dust them with plaster and ashes. For fall and winter use, the seed may be sown in the open garden any time in June. Choose a cool spot, say under the shade of a fence, and make the soil light and rich. When the plants are large enough for removal, set them out in rows two feet apart, the ground being well enriched with old manure. The heads will form in September and October, and be fine for fall use. Sink slops make an excellent dressing for this plant, applied once a week. Keep the soil well stirred.—*Rural American.*

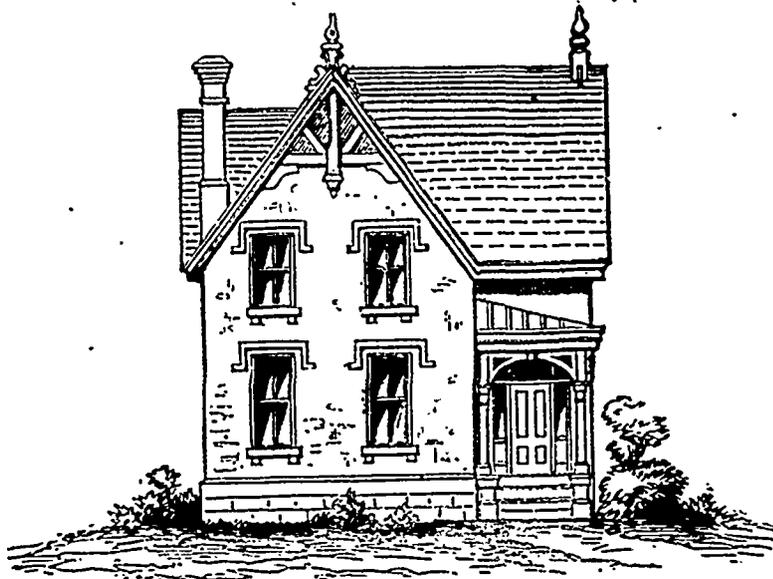
Rural Architecture.

Design for a Country House.

We again present our readers with a very pleasing and attractive design for a small country residence. The accompanying illustrations give the plan for a Cottage or Farm House, or would answer well for a

materially improve the appearance of the house. The roof is high pitched and gabled to the back and front, the front being ornamented with trussed work; the side is relieved of its plainness by a small pediment in the centre, in which is placed a full length window to light the middle bedroom. It will be observed that although this is only a story and a half house, all the rooms have large windows. This advantage is obtained by having the roof steep

room, with a neat chimney-piece attached. At the end of the main hall is a passage leading outside, without having to pass through the kitchen, and at the end of this passage is a small pantry, connecting with the kitchen.

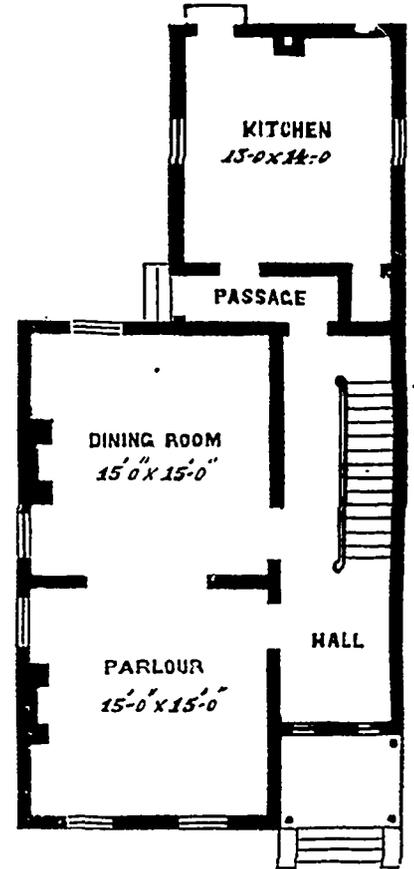


FRONT ELEVATION.

Manse or Parsonage, where there is not much room required; but, if necessary, two additional bedrooms could be made, by building another story on the kitchen.

This house could be built of wood on brick foundation for about \$1200. In 1863, a house similar to the above was erected in Toronto, of wood, and plastered on the outside, complete, including all the out-buildings, fencing, &c., for \$900; but as building materials and labour are so much advanced, \$1200 would now be required to complete it in the same manner.

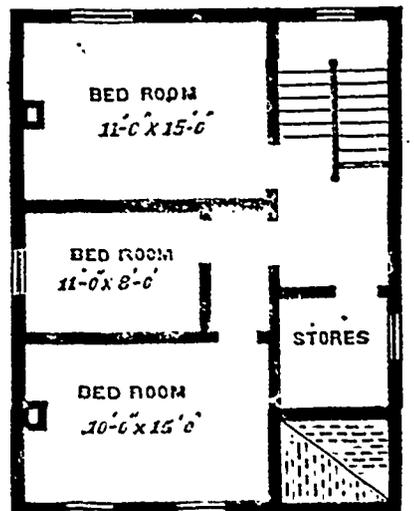
and gabled. Another and important advantage gained by this kind of construction, is the improved appearance of the exterior of the building. The gables are ornamented with turned wooden pinnacles and tracery, cut out of 1 inch boards. The chimney stacks are also made to form a feature in the design, being split in the middle, and furnished with projecting heads. The windows are ornamented with wooden drip mouldings, and the sashes are made to open and close with weights and lines. The front door has side lights and fan-light, to light the hall. The hall is seven feet wide, with neat stairs leading to the



Ground Floor.

The cellar, which should have a concrete floor, and be well drained and ventilated, is under the dining room, and the stairs leading to it are under the main stairs.

The first floor contains three good sized bedrooms and a large linen closet; the latter could be made into a bath-room if required, it being large enough for that purpose; the size of the bedrooms will be seen by referring to the plan.



First Floor.

Instead of plastering the exterior of the house, if it were covered with boards tongued and grooved into each other, and the joints battened with a board three inches wide, it could then be painted a colour to harmonize with the surroundings.

By building a neat picket fence round the lot, and planting a few flowering shrubs and evergreen trees, an attractive and pleasing appearance would be obtained without a large outlay.



SIDE ELEVATION.

The extreme outside dimensions of this house are 24 feet wide, 32 feet long; the kitchen extension is 15 feet wide, and 19 feet long.

The usual monotonous appearance of a single house, is overcome by recessing the hall part of the building seven feet back from the front line, and forming in its place a small verandah, which would be a good protection to the front door, and would

bedrooms, the stair rails, newels, and balusters, being of red pine, turned and varnished. To the left of the hall we have two good sized rooms, with sliding doors between them, so that when required both can be thrown into one. If these rooms had a cornice round them, and a neat plaster centre flower fixed on the ceilings, their appearance would be very much improved; there will be a fire-place in each

## Entomology.

### Entomological Society of Canada.

This society, with commendable enterprise, has recently published a list of Canadian Coleoptera (beetles), which includes no less than 1231 species, contained in fifty-five families and 432 genera. The list is well and carefully printed, and is adapted for labelling specimens in cabinets, as well as for reference. The labour of its preparation which was by no means slight, as it involved a correspondence with all the principal collectors in Canada, a careful investigation of the claims of each individual species to be included in the list as a native of the country, and an intimate knowledge of the most recent classification and nomenclature of the best authorities—all this labour was undertaken and brought to a most satisfactory conclusion, by Mr. William Saunders, Curator of the London Branch of the Society. The publication of this list, and the previous lists of Lepidoptera, prove conclusively the great advance made in the study of the Entomology of our country since the formation of the Society, a few years ago. It will, we trust, prove a stimulus to collectors in all the orders of insects, and induce others also to enter upon the exploration of the many still untrodden fields of this branch of natural science.

### Flea-Beetles on Rhubarb and Spinach.

A FRIEND lately drew our attention to his rhubarb plants and young spinach, the leaves of which were being rapidly destroyed by some minute insect. On inspection we discovered that a great number of little flea-beetles (*Naltica*) were hard at work, eating holes in the leaves and doing their best to make them useless. The rhubarb suffered the most, its leaves being completely riddled with large holes; the beetle, however, was very dainty, confining his attention almost entirely to the early scarlet variety, though it was intermingled with plants of the ordinary coarser kind in the same bed. The spinach, while free from large holes, was rendered in many cases unfit for use, being at this time young and tender, and easily injured.

As might have been expected from the difference between the plants, the beetles attacking them were of two different species, though both of the same genus, *Naltica*, to which belongs the well-known pest, the turnip flea-beetle, or "fly," as it is popularly termed. That on the rhubarb was of a dark shining bronze color, apparently smooth and polished to the naked eye, but showing numerous punctures and stria when observed through a lens. The species is new to us, but resembles very much *N. Nana*, Say, from which it chiefly differs in the form and sculpture of the thorax. It is about one-tenth of an inch long, and possesses the very active, jumping habits of its congeners, which render it very difficult to capture. The species on the spinach is only about half the size, being very little over one-twentieth of an inch long; it is, however, broader and thicker in proportion to its length. This tiny insect is black, with the exception of the antennae and legs, which are pale brownish; the wing-cases are deeply striated and punctured; the thorax is very convex, and has a deep furrow across its hinder part; the thighs, as in the foregoing and all the other species of this family, are very much thickened, in order to supply the great muscular power required for their wonderful flea-like leaps. The name of the species is *N. pubescens*, Illig. (*N. cucumeris*, Harris); it is said to attack also cucumbers, beans, beets, tomatoes, and potatoes; its destruction is therefore a matter of importance.

The best remedy that we can recommend for both these insects, and for the other members of the genus, at least sixteen species of which are known to inhabit this country, is to water the affected plants with a

solution of whale-oil soap, or strong soap-suds; in the case of the rhubarb it will probably be necessary to turn back the leaves in order to get at the depre-dators, as they seem to prefer the obscurity of the under side. Many may be collected in a gauze bag net fitted to a stiff ring, and swept over the foliage; specimens thus captured should be at once killed by crushing under foot, or dropping in boiling water.

### The Plum-tree Curculio.

(*Conotrachelus nemophar* Herbst.)

A CORRESPONDENT, Mr. John Harvie, of Plattsville, Bienheim, desires to know the name and best remedy for the insect that destroys the plums when they are about the size of common cherries, and on till they are ripe; they appear (he states) to be stung by something, as there is a white substance on the outside, and finally they drop off. The insect referred to is the well-known PLUM-TREE CURCULIO; we cannot better afford the desired information than by publishing the following account of this insect from the pen of Mr. Walsh, Editor of the *Practical Entomologist*.

This insect may be distinguished from all other N. A. Snout-beetles by having on the middle of each of his wing-cases an elongate, knife-edged hump, which is black and shining, so as to resemble a piece of black sealing-wax. Behind these two humps there is usually placed a broad clay-yellow band, marked in the middle with white; but sometimes this entire band is white.

The female "Curculio" makes her appearance early in the season, and as soon as the young plums are a little larger than a hazel-nut. Alighting upon a plum, she then, with the minute jaws placed at the tip of her snout, proceeds to make the singular crescent-shaped slit in the skin of the fruit, which is characteristic of the species, and to which the popular name of "little Turk" refers. In this slit she excavates with the same instruments a hole such as a pin would make, to as great a depth as the length of her snout will allow, widening and enlarging it a little at the bottom so as to make it somewhat gourd-shaped. Depositing in the slit a single egg, she next proceeds to crowd it down with her snout, to the bottom of the hole, where the cavity is sufficiently large to avoid all danger of the flesh of the injured plum growing in upon and crushing the egg. She then repeats the same process upon other plums, or occasionally to the extent of three or four eggs upon the same plum, till her stock of eggs is exhausted. According to Dr. Trimble, who has dissected many of these insects, the greatest number of eggs ever found by him in a single female "Curculio" was twenty-five. After a few days' time, the egg deposited in the plum hatches out into a whitish, legless grub with a scaly head, which bores a tortuous path through the flesh of the plum, eating its way as it goes. Finally, after the lapse of several weeks, the plum falls to the ground, its natural growth having been checked by the workings of the grub, and gum having very generally exuded from the orifice of the original wound. The larva then bores its way out, having by this time reached its full growth, and penetrates into the ground a few inches beneath the surface, where, in a cavity hollowed out for that purpose, it changes into the pupa state, and at length, in three or four weeks' time, comes out in the form of the perfect Beetle.

REMEDIES.—1st. Gather up and destroy all the wormy fruit, as fast as it falls from the tree, and before the larva has had time to leave the fruit and retire under ground. Thus you nip the evil in the bud. The cheapest and easiest and most "Western" method, is to allow a gang of hogs the range of the orchard—hogs being very fond of green fruit and not having any squeamish scruples about the worms contained in it. This is the practice adopted by Dr. Hull, of Alton, Illinois, one of the most successful plum-growers in the West. Sheep and cows will also eat green fruit; but then they will also browse upon the trees, and perhaps occasionally bark them. Where hogs are

objectionable, either because other crops are grown under the same fence with the fruit trees, or because the sense of propriety and neatness is offended by the habits of these animals, all that remains to be done is to hire that work done by human hands, which the hogs will do gratuitously and thank you for the chance. In any case, the work must be done systematically and regularly. It will be no earthly use to pick up and destroy the fallen fruit, after the larva has left it and gone under ground.

Of course it will be understood, that by destroying the wormy fruit you do not diminish the crop of "curculios" for the current year, but only that for the ensuing year. And as "curculios" can and do fly, it will be seen that it is of the utmost importance that a whole neighbourhood should co-operate in this plan. Otherwise a fruit-grower, who did not allow a single "Curculio" to come to maturity on his own premises, might be perpetually pestered with such as have been raised by his neighbours, flying in upon his fruit trees, day after day and week after week. As cherries, unlike all other cultivated fruit, do not fall prematurely to the ground, when infested by the larva of the "Curculio," it is plain that in this particular case the above method can have no application. Hence, if cherry trees are to be kept free from "Curculio," we must depend solely and entirely upon the following method.

2nd. Jar your trees regularly every day, catching and destroying all the "Curculios" that fall therefrom. But recollect that the tree must be suddenly jarred, not slowly and gradually shaken; for the wind shakes the boughs of every tree continually, and yet the "Curculios" do not fall to the ground in consequence. But how are we to catch the "little Turk" after he has fallen to the ground? The old method was to spread white sheets on the ground under the infested tree, and to pick up the insects by hand as they fall, and destroy them in any convenient manner. For this purpose, Dr. Trimble recommends a large square sheet to be prepared, with a straight strip of wood sewed along the whole length of one of its edges, by way of stretcher, and two shorter stretchers, each sewed to one half of the opposite edge, the sheet being slit from between these two short stretchers to its central point, to receive the trunk of the tree. By this means the sheet is more easily spread out, and the wind is prevented from roughing it up. But so long as the whole surface under the boughs of the infested tree is covered by white cloth, so that no "curculios" shall be likely to fall outside and escape observation, it is immaterial for the success of the process what fashion of cloth be adopted.

Where the tree is not very large, and a limb of an inch or two in diameter can be conveniently spared, it is a good plan to saw off such a limb so as to leave a short stump to strike with the mallet in the jarring process. Otherwise, if the trunk itself has to be struck, it becomes necessary to pad the mallet to prevent injuring the bark. Where trees are quite large, Dr. Trimble recommends that a common mop-stick be padded at the end and applied successively to the leading limbs, one after the other.

## The Household.

### Miss Leslie on Slang.

"There is no wit," says the author of the *Behavior Book*, "in a lady to speak of taking a 'snooze,' instead of a nap—in calling pantaloons 'pants,' or gentlemen 'gents'—in saying of a man whose dress is getting old, that he looks 'seedy,'—and in alluding to an amusing anecdote, or a diverting incident, to say that it is 'rich.' All slang words are detestable from the lips of ladies. We are always sorry to hear a young lady use such a word as 'polking,' when she tells of having been engaged in a certain dance too fashionable not long since; but, happily, now it is fast going out, and almost banished from the best society. To her honour be it remembered, Queen Victoria has prohibited the polka being danced in her presence. How can a genteel girl bring herself to say, 'Last night I was polking with Mr. Bell,' or 'Mr. Cope came and asked me to polk with him?' Its coarse and ill-sounding name is worthy of the dance. We have little tolerance for young ladies who, having in reality neither wit nor humour, set up for both, and having nothing of the right stock to go upon, substitute coarseness and impertinence (not to say impudence,) and try to excite laughter and attract the attention of gentlemen, by talking slang. Where do they get it? How do they pick it up? From low newspapers or vulgar books? Surely not from low companions? We have heard one of these ladies, when her collar chanced to be pinned awry, say that it was put on drunk—also that her bonnet was drunk, meaning crooked on her head. When

disconcerted, she was 'floored.' When submitting to a thing unwillingly, she was—'brought to the scratch.' Sometimes she did things 'on the sly.' She talked of a certain great vocalist 'singing like a beast.' She believed it very smart and piquant to use these vile expressions. It is true, when at parties, she always had half a dozen gentlemen about her, their curiosity excited as to what she would say next. And yet she was a woman of many good qualities; and one who boasted of always having lived in 'society.'

### Preservation of Meat.

A PROCESS of preserving meat has lately been patented by Professor Gamgee. By a novel and apparently painless method of slaughtering, the cattle are caused to undergo the preliminary pickling stage whilst in *articulo mortis*, and by this means the meat is endowed with the power of resisting decomposition and preserving its fresh pink color, for a period of five or six weeks. The completion of the process consists in packing the joints (containing bone, fat, skin, &c., just as they would be supplied by the butcher to the customers) in an iron case, exhausting the air from it, and then filling up with a gas or vapor; after which the case is soldered down, and the preservative process is complete. So little is the appearance or taste of the meat affected by the new method of killing, that, at Christmas last, joints of meat from animals so slaughtered were in great request at a butcher's in the neighborhood, where they had been hung up experimentally. The length of time which meat so preserved will retain its fresh color, appearance, and taste, has not been ascertained; but we lately examined a sirloin of beef killed early in November last, and were unable to distinguish it from fresh meat. Experiments have now been in progress for a sufficient length of time, and on a sufficiently large scale, to test its practicability; and we believe that before long arrangements will be concluded for carrying Professor Gamgee's valuable discovery into operation in South America and Australia, as well as on the Continent of Europe.—*Chemical News.*

### Dressing Sheep-Skins for Mats, Robes, Mittens, &c.

MAKE a strong suds, using hot water; when it is cold wash the skins in it to get the dirt out of the wool; then wash the soap out with clean cold water. For two skins dissolve alum and salt, of each half a pound, with a little hot water, which put into a tub of cold water sufficient to cover the skins, soaking twelve hours; then hang over a pole to drain; when well drained, spread or stretch carefully on a board to dry, tacking them down if necessary. When yet a little damp, have one ounce each of saltpetre and alum, pulverized, and sprinkle over the flesh-side of the skin, rubbing in well; then lay the flesh-side together and hang in the shade for two or three days, turning the under skin uppermost every day, until perfectly dry; then scrape the flesh-side with a blunt knife, to remove any remaining scraps of flesh, trim off projecting points, and rub with pumice and rotten stone, and with the hand. Lamb-skins, thus prepared, will make beautiful and warm mittens for ladies and gentlemen.—*Journal of Board of Arts and Manufactures.*

USING UP STALE BREAD.—A lady has kindly furnished the following hint for using up scraps of stale bread, which in some houses are set on the table in most uninviting manner, in others are thrown into the swill tub for the benefit of the pigs, and in others are altogether wasted. The directions given are to steep the dry morsels in cold water, and when ready to use them, slightly warm them on the stove, then add them to the flour and work them up with the dough for a fresh baking of bread. The stale bread will thus be readily incorporated with and detract nothing from the good quality of the new loaves.

CEMENT FOR KNIFE HANDLES.—1. Lay a piece of allum on the stove, and when melted roll the knife shank in it, and immediately thrust it firmly into the handle. It will soon be ready for use.

2. Fine brick dust stirred into melted rosin, and used hot will fix knife and fork handles very firmly.

3. Mix equal parts of wood ashes and common salt with water enough to make a mortar. Fill the handle with this, and then drive in the shank and let it dry. I also fixed a stove spud in this way and it is very tight.—*American Agriculturist*

### Miscellaneous.

#### Beauty of Water Scenes.

The Romans delighted in their fish-ponds, not so much as ornaments as preserves for epicurean delicacies. The lampreys were their water-gods, which, as in the case of Hortensius, they alternately petted and devoured, and to whom they now and then sacrificed a human victim, not to appease the anger of the deities, but to satisfy their appetites, and improve them for the table. Our English fish-ponds and aquaria bring suggestions of a more domesticating character, in unison with our national feeling and love of rural elegance. Water is the life and soul of a garden, whether on the ground-plot of a suburban cottage, or the embellished lawn of an extensive villa. It can be rendered appropriate to any style of gardening, and is equally adaptable to the classic refinement of Italian terraces and gay parterres, as to the scrubby umbrage of a rustic wilderness. The appearance of water is always pleasing; even if ever so clumsily shaped or planted, still it is water: it reflects the blue sky and the fleecy clouds like

"Some dead lake  
That holds the shadow of a lark,  
Hung in the shadow of a heaven;"

and it gives a brighter verdure to the adjoining lawn a sweeter fragrance to the neighbouring flower border. It accommodates itself to every situation, is the most interesting object in a landscape, and the happiest circumstance in a retired recess; captivates the eye at a distance, invites approach, is delightful when near; it refreshes an open exposure, it animates a shade, cheers the dreariness of a waste, and enriches the most crowded view; in form, in style, in extent, may be made equal to the greatest compositions, or adapted to the least; it may be spread in a calm expanse to soothe the tranquility of a peaceful scene, or, hurrying along in its devious course, add splendour to a gay, and extravagance to a romantic situation.—*Gardeners' Magazine.*

#### A Farmer of the Old School.

THE *Inverness Courier* says that a worthy and eccentric individual, of the name of Hugh Miller, died at his farm of Budgate, Cawdor, on the first Sabbath of the new year, at the advanced age of eighty-two. All Hugh's acts bore the stamp of eccentricity. He still adhered to the ancient style of tying the hair in a cue, and wore the broad blue bonnet in vogue nearly a century ago. His farm-houses were of the most primitive construction, quite in keeping with the huts of Barra or Uist, but certainly rarely to be seen at the present day in any part of the mainland of Scotland. The door of Hugh's house had to do service for both bipeds and quadrupeds, the owner and his cattle occupying respectively the opposite ends of the same domicile, while the poultry were allowed to roost or lie in either end, as their instincts dictated. To the modern modes of agriculture Hugh was a perfect stranger, adhering rigidly to the good old system of tillage which obtained in this country some sixty years ago. He ploughed shallow, sowed his grain at least seven weeks or more later than the ordinary time for doing so, and, as might be expected, reaped a deficient crop at a corresponding late season in autumn—Hugh's motto being that "the worst farmer had his chance of getting a good year as well as the best." Notwithstanding his detrimental treatment of the land, his kind landlord generously permitted him to end his days in peace without molesting him in the least, or interfering with his eccentric plans.

A MODERN DICTIONARY.—Water: A clear fluid once used as a drink. Rural Felicity: Potatoes and turnips. Dentist: One who finds work for his own teeth by taking out those of other people. My Dear: an expression used by man and wife at the commencement of a quarrel. Policeman: A man employed to sleep in the open air. Bargain: A ludicrous transaction, in which either party thinks he has cheated the other. Wealth: the most respectable quality of men. Bonnet: The female head-dress for the front seats of the opera. Esquire: Everybody, yet nobody; equal to captain. Jury: Twelve prisoners in a box to try one more at the bar. Informer: a wretch who is pardoned for being baser than his comrades. Modesty: A beautiful flower that flourishes in secret. Lawyer: A learned gentleman who rescues your estate from your enemy and keeps it himself. Money: The god of the nineteenth century.—*Mark Lane Express.*

SENSIBLE ADVICE.—An American paper, among other suggestions which will enable a person to avoid the cholera, says:—Endeavor, if possible, to keep a clear conscience, and two or three clean shirts. Rise with the lark, but avoid larks in the evening. Be above ground in all your dwellings, and above board in all your dealings. Love your neighbor as yourself, but don't have too many in the same house with you."

EFFECTS OF ALCOHOL.—Experiments made by Drs. Ringer and Rickards on men and animals go to show that the temperature of the body falls nearly as fast after the use of alcohol, in doses sufficient to produce intoxication, as after death itself. The facility with which drunkards freeze to death, is explained by this fact. Dr Jolly declares that an increasing tendency towards mental disease has been generated by the increasing consumption of spirits. Official reports show that the abuse of alcohol accounts for one fifth of the insanity in France.—*Er.*

INFLUENCE OF THE MOON ON THE WEATHER.—Observations fail to confirm the popular impression relative to lunar influence in determining the character of the weather. Dr. Marcet examined a register kept at Geneva for 35 years, to test these. The results obtained seemed upon the whole to lend some support to the popular notion of the influence of the new and full moon, but none whatever to any special influence of the 1st and 3rd quarters. Against this slight confirmation are set the results made at the Greenwich Observatory since 1810, from which it seems that changes of weather have been found to be as frequent at every age of the moon as when she is 7, 14, 21 or 28 days old.—*Boston Cultivator.*

A VIEW OF THE ENGLISH NATION.—Despite of a thousand inconsistencies, a thousand excesses, a thousand foul blots, the English race is, of all the modern races and of Christian communities, the one which has best preserved the three fundamental bases of every society worthy of man—the spirit of liberty, the spirit of family, and the spirit of religion. How has this nation, in which Pagan pride still survives and triumphs, and which has yet remained, even in error, the most religious of all the nations of Europe, how came it to be Christian? How, and by what hands, have these imperishable roots been implanted? The question is surely the most important of all those which history makes mention of, and its interest is the more important when we consider that on the conversion of England depended, and still depends, the conversion of many millions of souls. English Christianity was the source of the Christianity of Germany. From the depths of Germany the missionaries formed by the Anglo-Saxons carried the faith into Scandinavia and among the Slavics; and day after day, at the present moment, either by the fruitful expansion of Irish orthodoxy or by the stubborn impulsion of Protestant propagandism, Christian societies are created, speaking English and living English life, through the whole of North America, in both the Indies, in vast Australia, and among the islands of the Pacific. Over nearly half the world Christianity has flowed, or will flow, from the source which first gushed out from the soil of Britain.—*Montalembert's Monks of the West.*

### Advertisements.

#### RICH'S SHEEP DIPPING COMPOUND

Pronounced Superior to all Others!

It has now been used in Europe for many years with great success, and for the past six years in the counties of Elgin, Middlesex, Kent and Norfolk. It will free your sheep from ticks, produce you more wool, and the sheep will thrive much better on the same feed.

Price 35 cents per tin; will dip 20 sheep.  
" 70 " " " will dip 40 sheep.

For sale wholesale and retail by

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PELLOW AND WALTON, MANUFACTURERS of Cheese Vats and dealers in all kinds of Dairy Utensils. Their Vat took a Special Prize at the Provincial Exhibition of 1866.

PELLOW & WALTON,  
King St., Oshawa, C. W.

May, 1867.

v4-11-44

# 500 STOCKS OF BEES WANTED!

To any person sending to Whitty Station a good stock of bees free of charge, safe arrival guaranteed. I will in return send free of charge, one of my First Prize Double-boarded Bee hives including right to make. Price \$6. I will also take in exchange for Territory, good Stocks of Bees or a good Horse and Buggy, and will not refuse Money.

## ITALIAN STOCKS.

Having received all the orders for Italian Stocks that I am able to fill without extra expense, the price after this date will be as follows. In the Single-boarded hive including right to make \$18 In the Double-boarded hive, including the same, \$20

## ITALIAN QUEENS.

My Italian Queen, imported from Lake Maggiore, Italy, has arrived. She is a large, fine queen, breeding beautiful light coloured queens, even to the third generation.

N.B.—This is the only queen in Canada imported from Italy. Persons who desire to secure queens bred from her this season would do well to send in their orders at once. Price of queens bred from her, and ordered to be shipped in July \$7 after that \$5. Queens bred from last year's importations and guaranteed pure, \$5. Orders for Stocks, Queens, Hives, Books, &c., will receive prompt and careful attention, addressed to

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Franklin, C. W.

v4-12-4f

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USE Dana's Patent Mark and Register. It will save you much trouble and expense. Send stamp for stamp. Agents wanted. ARCHIBALD YOUNG, Junior, Maker, Sarnia.

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It is put up in boxes at 35c, 70c, and \$1, with full directions on each package. A 35c. box will clean twenty sheep

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PARTIES desirous of purchasing the above Hives, resident in the Counties of Carleton, Russell, Ottawa, Pontiac, Renfrew, Lanark, Leeds, Grenville, Dundas, Stormont, Glengarry and Prescott—apply to the undersigned Agent,

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May, 1867

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## 5 Callows.

1 Herford Bull, 20 months old.

60 Leicester Sheep.

30 Improved Berkshire Pigs.

All the above Stock may be exchanged for good milking cows

Apply to

MR. DENISON,

Dovercourt.

Toronto, May 16th, 1867

v4-10-11

# Markets.

## Toronto Markets.

"CANADA FARMER" Office, June 13, 1867

Since our last weekly report, the produce market has been very dull, with only very few transactions reported.

**Flour.**—Market very dull. The only sales of the week were made on Saturday, when the market was rather more active, fresh ground No. 1 superfine being in demand. The sales on that day were 1,000 barrels No. 1 superfine, at \$7 25, ground and delivered in July; 300 barrels do. at \$7 75, at Weston, present delivery, 500 barrels do. ground and delivered, July, \$7 50.

**Wheat.**—Transactions during the past week have been entirely confined to the street market, and for car lots; prices are therefore nominal. For choice car loads spring, from \$1 60 to \$1 70 would be paid, and for choice fall, \$1 55. On the street, market remained steady, at from \$1 60 to \$1 65 for spring; and from \$1 70 to \$1 80 for fall.

**Coarse Grains.**—In coarse grains there has been nothing doing in wholesale lots during the week, and prices are nominal

**Oatmeal.**—Dull and difficult of sale, nominally worth \$5 50.

**Pork.**—Dull; very little doing—mess held at \$10 50.

**Cut Meats.**—The market is very dull. There is not enough doing to establish quotations. The following are the nominal prices:—

Bacon in salt, 8c; smoked, 10c. Hams in salt, city cured, 9 1/2c; smoked, 11c.

**Butter.**—Very dull; 4 lb. rolls in plentiful supply, and difficult to move at from 11c to 11 1/2c. On the street market, selling at 12 1/2c to 15c.

**Lard.**—Dull, and without enquiry; held at from 8 1/2c to 9 1/2c.

**Eggs.**—In more plentiful supply; held at from 9c to 9 1/2c in wholesale lots; from farmers' baskets, 10c.

**Salt.**—American, on the wharf, \$1 75.

**Cheese.**—Factory, old, 14c; new, 11c.

**Dried Apples.**—\$1 70 to \$2.

**Hay and Straw.**—Hay selling at from \$13 to \$16, straw from \$6 to \$7.

**Wool.**—Very little coming in, selling at 27c to 28c

## THE CATTLE MARKET.

The following are the prices current, per 100 lbs, dressed weight:—1st class cattle, \$7 to \$7 50; 2nd class do, \$6 to \$6 50. Inferior, few offerings; prices nominal.

**Sheep.**—Scarce, and in demand. 1st class, \$6 to \$7 each; 2nd class, \$5 to \$5 50 each; 3rd class (yearling), \$4 to \$4 50 each. Spring lambs coming in freely at \$2 50 to \$3 each.

**Culves.**—1st class, \$5 to \$10 each, 2nd do, \$7 to \$8 each; inferior, \$3 to \$4 each.

**Petroleum.**—Refined, car loads, 17c to 19c per gal; do, retail, 18c to 21c do; benzole, 35c; crude at Petrolia, \$1 25; do at Bothwell, \$1 75; do at Oil Springs, nominal.

## HIDES AND SKINS.

Green butchers' hides buying at 6 1/2c. Green calfskins, 12 1/2c to 13c. Wool skins, \$1 60 to \$2. Murrain hides, 5 1/2c to 6c. No. 1 inspected hides selling at 7 1/2c to 8 1/2c, No. 2 inspected at from 7 1/2c to 7 3/4c.

**Hamilton Markets.**—Flour.—From white wheat, \$10 50 to \$11, red winter, \$9 50 to \$10, spring, \$9 50 to \$10, mild dungs, \$8 to \$9. Oatmeal, \$6 to \$7. Cornmeal, \$2 25 to \$2 50. Bran, 87 1/2c to 91c. Coarse shorts, \$1; fine do, \$1 25. Chop feed, \$1 25 to \$1 50 per 100 lbs. Grain.—We quote red wheat at \$1 85 to \$1 95, spring, \$1 80 to \$1 90. Barley, 65c to 65c. Oats, 45c to 60c per bushel. Wool.—The deliveries of wool to-day were rather larger, but still we do not think there were over 1,500 lbs. in the market. The prices remain the same as hitherto, from 25c to 30c, though for choice lots 31c was sometimes realized, the discount on silver making this about equal to 30c in bills.—Spectator.

**London Markets, June 11.**—The decline in breadstuffs noted last week still continues, and any samples brought forward out of condition are scarcely saleable at any figure; good sound samples, however, sell freely at quotations. Coarse grains are dull and neglected. Wool begins to arrive freely, and notwithstanding the views of the large buyers, that prices are far too high, sells readily at 30c to 32c.—Prototype.

**Guelfh Markets, June 11.**—Fall wheat per bushel, \$1 70 to \$1 85; spring do, per bushel, \$1 35 to \$1 60. Oats per bushel, 45c to 45c. Peas per bushel, 60c. Barley per bushel, 50c to 55c. Wool, 30c to 31c. Eggs per dozen, 8c to 9c. Butter per pound, 10c to 12c.—Herald.

**Galt Markets.**—Fall Wheat Flour, per 100 lbs, \$4 50, spring wheat flour, per 100 lbs, \$4 00. Fall Wheat per bushel, \$1 70 to \$1 80; amber wheat per bushel, \$1 70 to \$1 75, spring wheat per bushel, \$1 30 to \$1 60. Barley per bushel, 50c to 55c. Oats per bushel, 40c to 45c. Butter per lb, 11c to 12 1/2c. Eggs per dozen, 8c to 10c.—Reformer.

**Montreal Markets, June 12.**—Flour.—Superior extra, at \$10, extra, at \$9 25, fancy, none, Welland Canal superfine, at \$7 50, superfine No. 1 Canada wheat, \$7 75, superfine No. 2, at \$7 50, fine, none. Wheat.—Fall, nominal, spring, nominal, Western, nominal. Rye.—none. Oats.—Per 32 lbs, 41c to 42c. Barley.—Per 49 lbs, 70c. Peas.—Per 65 lbs, 82 1/2c. Butter.—None. Pork.—Mess, \$19 to \$19 25, prime mess, \$15 25 to \$15 50, prime, \$14 to \$14 25.

**Boston Markets, June 10.**—Flour.—The receipts since Saturday have been 3,146 bbls. The market continues dull and prices are nominal. We quote Western Superfine at \$9 50 to \$10, common extra, \$10 50 to \$12; medium do, \$13 to \$14; good and choice do, \$15 to \$18 per bbl. Grain.—The receipts since Saturday have been 17,125 bushels corn. Corn is dull and prices are nominal. We quote Southern yellow at \$1 20 to \$1 23, Western mix'd, \$1 10 to \$1 15 per bushel. Oats are in steady demand. Sales of Northern and Southern at 92c to 95c per bushel. Rye is in limited demand at \$1 57 to \$1 60 per bushel. Shorts are selling at \$35 to \$37; no feed, \$37 to \$38; middlings, \$39 to \$40 per ton. Provision.—Pork is firm. Sales of prime at \$20; mess, \$23 75 to \$24; clear, \$29 50 to \$28 per bbl. Beef is firm and in demand. Sales of mess and family extra at \$15 to \$19 per bbl. Lard is selling at 13 1/2c to 14c per lb; Hams 15c to 16 1/2c per lb.

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