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THE RURAL CANADIAN.

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RURAL NOTES.

The *Iowa Register* speaks of "those scabs called patent agents."

The *N. Y. Tribune* denominates the Wilson strawberry—"despitefully used, but irrepressible."

Tuberculosis is prevailing among the cattle of Iowa to a serious extent. So says the *Farmer's Review*.

Experiments in India have proved that Indian corn can be successfully grown there, and steps are being taken to introduce it generally.

Squeezed curd is excellent food for young turkeys. By "squeezed curd" is meant curd from which all the watery portion has been taken.

Mr. Vick's large seed establishment in Rochester, N. Y., passes into the hands of his four sons, who have been educated in it from boyhood, and thoroughly schooled in its management by their late father.

The long-continued experiments of Messrs. Lawes and Gilbert have proved that nitrogen is the element in the soil that first fails under a long course of cropping without manure. Clover is the simplest, cheapest, and most effectual restorative.

The Maryland Legislature being required by law to make an annual appropriation to the State Agricultural Society, has voted $5 for this year. This shows that the Solons of Maryland have either a low appreciation of agriculture, or a poor opinion of their Society.

The American Association for the Advancement of Science will meet in Montreal next August, and during its sessions there will also be held the annual meeting of the "Society for the Promotion of Agricultural Science." For further information, address F. W. Putnam, Sec., Salem, Mass.

Though the area of pasturage in Great Britain has greatly increased of late years, there has been an immense decrease in the number of sheep kept in the old country. This falling off is attributed by some to "liver-rot," but the *Mark Lane Express* says it is owing to lack of capital—"*purse-rot.*"

"No man," says a prominent dairy authority, "can afford to keep a cow that will not make from 200 to 220 pounds of butter or its equivalent in a year. And," he adds, "never keep a poor cow a second season,"—advice which we beg to amend thusly:—"Never keep a poor cow a single season."

The English *Agricultural Gazette* notes it as a remarkable fact, that nearly half of Lord Bective's present herd of Shorthorns "are from cows re-introduced from America." Most of them, we believe, were re-introduced from *Canada*, but that is the usual way of speaking in England. It's all "America," without distinction, to the average John Bull.

A well-deserved baronetcy has been conferred upon the world-renowned farmer and experimenter of Rothamstead, England, and the name of J. B. Lawes will go down to posterity with a "Sir" prefixed to it, in proof that his country and age were not ungrateful to the public benefactor who made two blades of grass and grain grow where only one grew before.

Cattle accustomed to the locomotive whistle care so little for it, that trains are sometimes obliged to come to a dead stop while the train-men drive them off the track. To obviate this source of trouble, a device has been recently invented and patented, by which hot water can be squirted twenty yards ahead of the engine, and this, it is believed, will speedily clear the track of lingering bovines.

With the subsidence of the Shorthorn mania, under the influence of which extraordinary prices were given for fancy animals, must be chronicled the rise of a similar Jersey mania. At recent sales of this breed in New York, very high prices were got. One cow sold for $4,800, another for $3,700, a third for $3,550, and a fourth for $2,525. A young bull calf, three months and three days old, brought $1,810.

Efforts are being made in France to get up machinery that will extract sugar from the beet root by ordinary labourers on the farm. A firm in Paris claims to have succeeded, and is giving practical lessons with fair results. Cheap machinery that farmers themselves can work, so as to enable them to produce beet sugar, as they now do maple sugar, will give an immediate impulse to this industry, and secure a widespread adoption of it.

Mrs. John M. Armstrong, of Oak River, Manitoba, writes the *Globe* an account of what she did last season with her "little Red River cow." She commenced making butter May 14th, and by Dec. 13th had sold 164 pounds, besides supplying her family of three persons. She thinks not less than two pounds per week were used for home consumption, or 61 pounds, making in all 225 pounds in seven months. She also raised the cow's calf. This is highly creditable both to the "little Red River cow" and her thrifty mistress.

The *Farmer's Review* (Chicago) states that about fifty young men from England, sons of lawyers, merchants, etc., have been sent to Fillmore and Olmstead counties, Minnesota, and placed on farms among leading farmers, to learn the art of farming. When competent to manage farms, they will be settled on land with a start of about $2,000 each. If the parents of these young men had known all they ought to know, and been as patriotic as they should be, they would have apprenticed their sons to farmers in Ontario, and arranged for their future settlement on British territory.

The *Guelph Mercury* says.—"Some time ago a man representing himself as A. L. Burke, agent for a patent washing machine, succeeded in swindling two Eramosa farmers out of $282. He sold one of his so-called machines to them, and received three joint notes of $94 each, and was to forward the machine immediately. The notes are now due and the machine has not arrived. Burke tried to cash the notes in Guelph, but did not succeed. He got them cashed, however, at Hay & Co.'s, Listowel, and as the notes are perfect in every respect the farmers will have to pay the shot. Time and again the farmers have been warned against having any dealings with this sort of characters, unless they are perfectly satisfied that the parties represent some well-known and reliable firm. Those who purchase articles of this kind and give their note in payment have only themselves to blame."

The *Manitoba Free Press* says.—"Mr. Robert Campbell, lately of the Hudson's Bay Co., has returned from his visit to Scotland, and has brought with him some twelve head of Highland cattle of the purest breed, which are at present at Quebec, where they have to remain in quarantine for the specified period. They are, we believe, the first of the kind ever imported into Canada, with the exception of a few which were within recent years taken to the vicinity of Montreal, and will certainly be the first of this well-known stock ever brought to the Prairie Province. They have been selected from the best herds in Scotland—some from the Duke of Athole's stock, which are directly descended from the famous breed of the late Marquis of Breadalbane; some from the original stock bred by the Stewarts, of Cashlie, Glenlyon; and some from Bochastle, where the first prize-takers of the present time are reared. From their hardy nature, they should thrive well in this country. They are to be taken to Merchiston (the old Riding Mountain House, formerly a Hudson's Bay Co. post), where a son of Mr. Campbell's is farming.

FARM AND FIELD.

BARE FALLOWS.

Prof. Caldwell, in a recent contribution to the *N. Y. Tribune*, shows that there is a constant tendency in a well-tilled soil, bare of vegetation, and in which the air has free circulation, to the passage of nitrogen in any of its forms of combination into the final form of nitrates. This is alike the case with organic matter—as stable manure, bone meal, animal refuse, and the remains of former vegetable growth; or in the more valuable, because more soluble, form of ammonia. In the form of nitrates, large quantities of nitrogen pass off in the drainage, when the land is in a bare fallow state; but when vegetation is growing on the surface, much less nitrate is found in the drainage water. Considering the loss of time and crop while the land lies fallow, and the loss of fertility by the leaching away of nitrogen in the way described, the Professor thinks there is good reason for the doubt many entertain whether bare fallows are profitable at all, and whether prudent farming does not require that some crop should always be growing on as large ar area as possible, and on every foot of tilled land. The waste from the soakage away of nitrates is greater during a wet season than a dry one. In a year of average rain-fall, with a drainage of 9.8 inches of water, Mr. Lawes estimated that from a bare fallow plot thirty-two pounds of nitrogen per acre would be carried off. This, if replaced by commercial sodium nitrate, would cost at present rates about $8. We are glad to find our views as to the impolicy of bare fallowing sustained by the patient and thorough investigations of such eminent agricultural scientists as Prof. Caldwell and Mr. Lawes.

Observant practical farmers have arrived at the same conclusions. In the last issue of the *Country Gentleman* a correspondent of that journal discusses this very subject, and shows the superiority of green crops, even if only raised for manurial purposes, over fallows, because they "catch and hold the nitrates that would otherwise be washed away." This writer considers clover the very best of all the green crops for this purpose, especially because it has long and deep feeding roots, which reach down and seize upon the partly escaped food elements, bringing them back to the surface, where they are stored in the roots and decayed leaves of the clover.

BLACK WALNUT CULTURE.

At the meeting of the Indiana State Board of Agriculture, Mr. W. H. Ragan read a paper on the black walnut, in which he gave the following directions for planting and cultivating: Prepare your ground by breaking and harrowing in the fall. Furrow it off each way as you would for corn, except that the rows should be about seven feet apart. Take the nuts fresh from the tree; it is not necessary that they should be hulled; placing two nuts in each crossing. This is to insure getting a good stand. The nuts should be covered very shallow—just enough earth to hide them. In the spring the land should be furrowed off midway between the rows of nuts, and the spaces planted with corn or potatoes. Cultivate as you would a corn crop by cross ploughing, being careful to give the young trees a fair chance and good clean culture. The second spring thin out your plants to one tree to the hill. If there are spaces entirely missing, they may be filled by transplanting from the hills containing duplicates. The second and perhaps the third year it will pay to plant corn between the rows, after which the trees should be regularly cultivated until they fully occupy the ground so as to keep down by their shade all weeds and grass. The period at which cultivation may be discontinued cannot be definitely stated, as much will depend on the character of the seasons and the quality of the soil. Of course seven feet each way will be too close for permanent trees, but as they will protect each other when small, and make much better growth, it is preferable to have them closely planted. When they begin to crowd, the alternate tree in each row may be removed. The trees thus removed will be of sufficient size to be useful in various ways on the farm. A second thinning will in a few years be necessary, taking the alternate trees the other way. Your permanent trees will now stand fourteen feet apart each way, a sufficient distance for a number of years, though not for large trees, but the thinning will always pay a large percentage on the value of the ground occupied.

THE FARMER.

The king may rule o'er land and sea,
The lord may live right royally,
The soldier ride in pomp and pride,
The sailor roam o'er ocean wide,
But this, or that, whate'er befall,
The Farmer he must feed them all.

The writer thinks, the poet sings,
The craftsmen fashion wondrous things,
The doctor heals, the lawyer pleads,
The miner follows the precious leads,
But this or that, whate'er befall,
The Farmer he must feed them all.

The merchant he may buy and sell,
The teacher do his duty well,
But men may toil through busy days,
Or men may stroll through pleasant ways,
From king to beggar, whate'er befall,
The Farmer he must feed them all.

The farmer's trade is one of worth,
He's partner with the sky and earth,
He's partner with the sun and rain,
And no man loses for his gain,
And men may rise, or men may fall,
But the Farmer he must feed them all.

The farmer dares his mind to speak;
He has no gift or place to seek:
To no man living need he bow;
The man that walks behind the plough
Is his own master, whate'er befall;
And, king or beggar, he feeds us all.

God bless the man who sows the wheat,
Who finds us milk, and fruit, and meat;
May his purse be heavy, his heart be light,
His cattle and corn, and all go right.
God bless the seeds his hands let fall,
For the Farmer he must feed us all.

—*Lillie E. Barr.*

MANAGEMENT OF PASTURES.

To be kept in the best condition through the summer, pastures need some special attention during the present portion of the season. We rarely see, even in those fields which are allowed a liberal growth of grass instead of close grazing, that evenness, uniformity of surface, and dense luxuriance which should characterize a perfect pasture. Cattle select and gnaw down the sweetest and most palatable patches of grass, and allow other spots to grow up, form seed heads, and yield coarse and woody herbage. If the field has been newly seeded, certain weeds spring up and deface the surface; or in old fields certain other weeds are seen. The weeds and the hard and dry seed-stalks of grass prevent the cattle from grazing beneath them, and thus a considerable portion of the field is lost.

There is a very simple and easy remedy. Set a reaping machine so as to cut eight or ten inches high, and sweep over the field as soon as the heads of grass have pushed out, and before the seed has formed. The machine will thus shave off all that ought not to remain, and the soft herbage below will be easily reached for the grazing of the animals. The whole surface will present a uniform appearance. Weeds will not shade or injure the sweetness of the grass below them. The seed-heads will be cut off before they have exhausted the roots. Such a pasture will present a green and fresh appearance much longer in the summer than with a growth of dry grass and dead weeds. This practice is to be recommended more particularly on account of the little labour and expense required for its thorough performance, the only cost being a man, team, and machine for one day, to go over ten or fifteen acres.

There are, of course, other important requisites for good pastures. Land which is not rich enough to raise heavy crops of corn will not give heavy crops of grass. A meadow yielding only half a ton of hay per acre, will not yield more feed when trodden and grazed by animals. Poor land must be made rich whenever an opportunity occurs. A light grass field, if well manured in autumn, turned over the following spring, and planted and well cultivated with corn, and in a year or two seeded down on a crop of winter wheat or rye which has had a finely-pulverized top-dressing of manure after the last ploughing, will probably be at least doubled in the quantity of grass it will yield; and the top-dressing just mentioned will insure a more even and dense growth of the new grass.

It is not, however, always necessary to plough, plant, and seed down in order to get an increased crop of herbage. Top-dressing with manure in autumn, for the autumn, winter, and spring rains to wash in among the grass roots, will give the crop a vigorous start. This treatment is particularly applicable to strong or heavy soils. If the field has been seeded in patches, the manure which remains on the surface may be finely pulverized with a sharp-tooth harrow early in spring, a new sowing of seed given and brushed and rolled in. A repetition of this top-dressing in subsequent years will make a rich pasture of a poor one.—*Country Gentleman.*

PLANT FOOD IN AN ACRE OF CLOVER.

Let us see what is the actual value of red clover as an accumulator of plant food, and compare its treasures with the demands of other crops, or more especially with wheat, which has little power of accumulating plant food for itself.

An acre of good clover will make 5,000 pounds of hay, containing 282½ pounds of mineral matter, or ash. In this ash will be 97½ pounds of potash, 96 pounds of lime, 84½ pounds of magnesia, and 28 pounds of phosphoric acid. The hay will also contain 108 pounds of combined nitrogen. These are the stores of available material which an acre of red clover can offer to any succeeding crop when it is ploughed under the soil, and is also available material which an acre of clover sod is capable of furnishing to a succeeding crop when a clover sod is ploughed up, for it is found that the scythe leaves to the field as much material, both organic and inorganic, as it removes in the hay it cuts.

Let us suppose that for every bushel of wheat we raise we have 100 pounds of straw, and on this basis from the average composition of wheat and its straw, let us estimate how large a crop of wheat and straw we may have furnished in each of the leading manurial elements contained in an acre of clover hay or clover sod.

In two and a half tons of clover hay, or in an acre of clover sod of corresponding quality, there will be, both for grain and straw, enough phosphoric acid for a crop of 84 bushels of combined nitrogen for 71 bushels, of potash for 102 bushels, of magnesia for 120 bushels, and of lime for 270 bushels. In other words, the clover hay or sod contains enough phosphoric acid for more than double an average crop, enough nitrogen for more than four average crops, and potash for more than six average crops of wheat! With such figures before you, do you wonder that

farmers are surprised at the large crops they can raise on a clover sod? You see also why lands in rotation with clover can endure the heavy tax of two crops of wheat in succession without complete exhaustion. But when a body of clover is ploughed in with the sod, we reach results that round out that figure of Oriental magnificence, "The pastures are clothed with flocks, the valleys also are covered over with corn; they shout for joy, they also sing."—*Prof. W. J. Beal, in Farmers' Friend.*

SPREADING MANURE AS DRAWN.

A *Country Gentleman* correspondent writes:—I will state why I think manure washes away on frozen ground, when a thaw comes, much less if spread than if left in heaps. My conclusion is made from many years' practice. When the rain comes pouring down on one of the "five or six hundred pound heaps," it washes out large portions of the soluble manure, more than the soil can absorb. But when already spread evenly over the ground, the small amount of soluble manure which comes from this thin layer is at once absorbed by the broad soil below. Twenty good two-horse loads of manure, when evenly spread, make a stratum not the fourth of an inch thick, and when there is a thaw and rain sufficient to wash out the liquid from this stratum, the surface of the ground has thawed to an equal depth at least ready to take in and secure it. The manure and the soil will both thaw together. It is only in swales or hollows that enough rain can accumulate to wash away manure. Take an umbrella and go out in the midst of a heavy shower, and examine the surface of the ground, and you will see no washing floods on level or upland surface. By the time that it has rained long enough to form brooks, the soil is thawed deep enough to hold the liquid manure. I have tried this over and over, but I always apply the manure, which is done in fall or winter, on grass, to be turned over for corn in spring, and suppose there is less chance to wash on a grass surface. I have placed manure on a steep hill-side, and could never find by the increased growth of the grass that the wash went five feet away from the manure.

I do not object to ploughing under manure in spring, provided it has lain broadcast on the ground all the previous winter. I found it to be a serious loss to leave it unspread in heaps till spring. Several different farmers have reached the same conclusion—namely, that manure is twice as efficacious if applied broadcast in autumn as when merely drawn and ploughed under in spring. There is one point liable to be misunderstood. To leave winter-made manure in heaps all summer, and then spread it in autumn, occasions a whole summer's loss, and this loss should not be charged to surface manuring. It would of course be better to use it at once and plough it under. Spread it in winter as fast as made, and do not leave it unspread a whole season.

EXPERIMENTS IN POTATO PLANTING.

The following experiments, says the *Massachusetts Ploughman*, were tried the past season. The first was to ascertain which end of the potato would secure the best results. A piece was first cut off the seed end of the potato, then a piece, as nearly as possible, of the same size cut from the opposite end. All but two eyes were cut from each piece. Two pieces were dropped in each hill. That there might be no possible chance for a difference in the soil or culture, the pieces cut from the seed end were planted in alternate hills, with those cut from the other end. The result at harvesting was as follows:—Whole amount from the seed cut from the large end of the potato, twenty-one pounds, of which thirteen and a half pounds were large and six and a half were small potatoes. Whole amount from seed cut from the seed end, twenty-seven pounds, of which twenty-one and a half pounds were large and six and a half were small potatoes. The tops of the potatoes that came from the seed end looked the best throughout the season, and were earlier than the others, but the potatoes were not as smooth, the worms having eaten them more, and quite a number of good-sized potatoes were rotten, which were not included in the above weight. Had it not been for the worms and the rot, the weight would probably have exceeded thirty pounds. The reason why the potatoes from the seed cut from the large end did not receive any injury from the rot or the worms, was undoubtedly because they were later.

The second experiment was to ascertain which is best for seed, small whole potatoes, or large cut. The small potatoes selected were about one inch in diameter, and the large ones would weigh about three-fourths of a pound each. The pieces were cut to a size, to correspond in weight to the small whole potatoes, and only two eyes in each piece, or whole potato, were left to grow, the others being cut out. The whole potatoes were planted in alternate hills with the cut. The result at harvesting was as follows.—Whole amount from large cut potatoes, thirty-five pounds, of which twenty-six and a quarter pounds were large, and eight and three-quarters small potatoes. Whole amount from small whole potatoes, forty pounds, of which twenty-seven pounds were large, and thirteen small potatoes.

The tops of the potatoes from the small whole potatoes looked the best during the entire season, but the potatoes, like those that grew from the seed end, were eaten by the worms. Quite a number of large-sized potatoes were so badly eaten that they were put in with the small ones. Several pounds of large potatoes were also rotten and not weighed. These losses account for the large proportion of small potatoes, and the reason of the loss may be attributed to the fact that they were a week in advance of the others when the roots formed.

The first experiment given above was tried in 1880, with nearly the same result as to the amount, but the quality of the potatoes, from the seed end, was equal to the others; in fact better, if size is to be considered. The same experiments will be continued, and the product from the small whole potatoes this year will be kept to furnish the small whole potatoes for seed next year, and so with the large cut, seed end, etc.

HARVESTING TIMOTHY HAY.

The hay harvest is approaching, and it is well to consider the advantages and disadvantages of cutting timothy early or late. If cut early—that is, at what is known as the "second bloom"—the hay looks brighter, smells sweeter, and stock will eat more of it. Furthermore, the Agricultural Department has advised the early harvesting of meadows, because the hay contains more of the albuminoids and other valuable food elements. Moreover, when the markets are bare, as at present, hay when cut early can often be sold in the field more profitably than at any time thereafter. These reasons have prompted the early cutting of timothy in this neighbourhood, but the result has not been as profitable as hoped for, since it has been learned that if timothy meadows are cut before the plant has attained a certain stage of growth, exposure to the sun will kill a portion certainly, if not all, of the roots. The three summer droughts in succession in Central Illinois have perhaps required the re-seeding of nearly half the meadow acreage, and it is only lately that it has been ascertained that the timothy bulb matures at nearly the same time with the seed. If the grass is cut early the bulb is left without support in its immature state, and where it is suddenly exposed to the sun and heat it dies. If the meadow is left to stand till the bulbs mature, the plant retains its vigour. This appears to be the explanation why one part of a meadow harvested late in June, or early in July, will show very serious injury, while on the other part, where the harvest was a few weeks later, the stand is good. Cattle feeders of fifty years' experience tell me that stock may eat more early cut timothy, but a less quantity of late harvested does more good.—*Illinois Correspondence, in Country Gentleman.*

EXTRA CULTURE.

On extra culture of soil, Professor Roberts, of Cornell University, says: "Herein I am satisfied lies the secret of England's success in raising large crops. It would take away the breath of a prairie farmer to hear even an Englishman's enumerations of the 'spuddings,' the 'grubbings, the 'twitchings,' the harrowings, the cross-harrowings, the rollings, the crushings that a heavy clay field is subjected to before it is considered ready for wheat. What is all that for? Simply to unlock the full storehouse of nature. That it is full has been proved time and again. By actual analysis it is found that an average soil contains in the first six inches plant food enough for from fifty to one hundred and fifty full crops of grain. I do not desire to discourage the purchase and use of fertilizers, but what I do protest against is purchasing on time commercial manures at $40 per ton to enrich cloddy fields already fairly rich in plant food; locked up, it is true, but there none the less, only awaiting a little judicious application of brain and muscle to set it free. If these hastily jotted facts and impressions are the means of inducing my fellow-farmers to remove some of the useless trees and fences, or to give the fields an additional cross harrowing or two before carting in the seed, and asking the Lord to bless the labour of their hands, my object will have been attained."

HUNGARIAN HAY.

The *American Cultivator*, replying to a correspondent, says of this hay: "For a number of years we have fed Hungarian hay without any injurious results. We are now feeding it to an aged, run-down horse with the very best results; in fact he prefers it to the best English hay, and notwithstanding he is being worked quite hard, he is rapidly gaining flesh. Cut up and mixed with meal we have found Hungarian an excellent flesh producer for our horses, and a food upon which they could do a large amount of work. We generally raise it as a second crop after winter or spring rye, oats, or early-sown fodder corn, thus enabling us to obtain two heavy crops in one season. If you are not in possession of a good supply of barnyard manure to apply when ready to put in your Hungarian seed, do not fail of obtaining a supply of some special fertilizer, for it is a heavy feeder, yielding a heavy crop, and will prove a very nutritious fodder.

DRAINAGE IN OLD TIMES.

Under-drains were used by the Romans and constructed of wood. Even brush drains have been made in various parts of England. Thorough drainage came into practice about the middle of the present century, through the exertions of Mr. Smith, of Deanston, and for a long time stone was the principal material used in their construction. They are either thrown in promiscuously or laid out in throats or channels. When tiles or pipes came into use stones were laid around them, but it is found that less soil percolates into the tile when the earth is close around it.

GARDEN AND ORCHARD.

AN ORNAMENTAL HEDGE.

But few fences are ornamental. An iron one is well enough about a handsome place, in a town having many other fancy places, but it is hardly in keeping with the ordinary house in an ordinary village, and its cost is such as to prevent the general use of it.

The picket fence, if well painted, and kept in repair, answers all the purpose of a fence about a lot in town, but is not very ornamental. It is so common that one is apt to tire of the monotony of seeing the same kind of fence in front of every lot on the street, and wishes there might be a change.

Last fall I went to visit a friend who lives in a thrifty inland place, which is in that transition state which reminds one of the boy who is passing out of boyhood into manhood. It is too large to be called a village, and hardly large enough to be called a city. While retaining many of its village characteristics, it is putting on city airs. About many of the houses are ornamental fences. About some are no fences at all.

My friend lives on a corner lot. Most of the houses on that street stand in open yards. There is really no need of any fence, but my friend felt, he said, as if there ought to be something to mark the boundary of his place. His idea of home was something that did not belong to everybody, and to leave his lot without a mark of some kind to tell where it began and his neighbour's ended, was like making it common property. Along one side of it—it was about 75 feet square—were three stumps, as luck would have it, about 20 feet apart, and standing in a row near enough to the edge to answer the purposes to which he put them. The idea occurred to him that he could make use of them, and thus save the trouble of removing them. They were large, and of oak, and it would have cost considerable hard labour to grub them out. He procured some Norway spruces, about six feet high, and set one at each end of the row, and one between each stump. This gave him a row of evergreens, alternating with unsightly stumps. Then he procured roots of the Virginia creeper, and set about each stump. When the plants began to grow, he fastened wires from stump to stump, setting a post by each tree to also fasten the wires to. The creepers soon completely covered the stumps, and were then trained along the wires until they reached the evergreens. When I was there, the creeper was brilliant in its full garb of crimson, and its bright leaves, contrasting with the dark hues of the evergreens, were like blossoms. The effect was extremely fine. At the front of the lot, in the centre, he made an archway of gnarled, knotty, and crooked limbs, and over this he had trained the creeper. Between the arch and the corners of the lot, evergreens had been set, and the creeper grew from one to the other, as it did along the side of the lot. Thus the lot had a sort of hedge on the two borders meeting the street. On the other two, his neighbour had built light fences to separate their possessions. No iron fence could be made that would be half so ornamental as was this hedge. It was a thing of beauty the whole year round. And the cost of it was next to nothing. The care it required was so small that it might be said to take care of itself.

SOFTSOAP VERSUS BORERS.

A correspondent advises orchardists to remove the earth about the stems of their apple trees and supply its place with gravel as far down as the roots. He has tried it, and feels certain that it kept the borers from harming his trees. We can see no reason why such treatment should bring exemption from injury. If the gravel would effect better drainage, it might indirectly do good in the direction mentioned. Vigorous trees are less liable to attack, especially from the big-headed borer, Chrysobothris femorata. The round-headed borer, Saperda candida, is just as liable to attack vigorous trees as any others. These borers do not work beneath the earth, and so the gravel could have no direct effect. The remedies already recommended in these columns have been widely proved, and if faithfully applied leave little to be desired. If we depend on the softsoap, it should be used three times—three weeks, six weeks, and nine weeks after the trees bloom. The best way to apply it is to put on an old cloth glove, or wrap the hand in a woollen cloth, and rub the trunk and the main branches thoroughly with the undiluted softsoap. This treatment should never be neglected in case of young trees, and may well be adopted in case of newly planted shade trees, where the latter are, like the maples, liable to attack by the borers. If the carbolic acid mixture already recommended is used, we need apply but twice, four and five weeks after the trees bloom.

ORNAMENTAL TREES.

The following select list of ornamental trees, for grounds of some extent, was made by H. H. Hunnewell, whose magnificent place near Boston is well known as one of the finest specimens of landscape planting in America:

DECIDUOUS TREES.

Elm, American,	Tulip Tree,
" English,	Magnolia acuminata,
Oak, White,	Magnolia Lennei,
" Scarlet,	Linden, European,
Maple, Sugar,	" American,
" Norway,	Virgilia lutea [Yellow-wood],
" Scarlet,	Salisburia [Gingko],
" Japanese atropurpureum,	Dogwood,
Other Japanese Maples,	Catalpa,
Beech, American,	Flowering Cherry,
" Copper,	Common Chestnut,
" Weeping,	Liquidambar,
Cut-leaved Weeping Birch,	Weeping Willow.

CONIFEROUS TREES.

Abies alba [White spruce]	Abies picta,
" canadensis [Hemlock spruce],	Pinus lambertiana,
" excelsa [Norway spruce],	" pyrenaica,
" orientalis [Oriental spruce],	" excelsa,
" menziesii,	" strobus [White pine],
" alcoquiana,	" combra,
" polita,	" sylvestris,
" douglasii,	Sciadopitys verticillata,
" nordmanniana [Nordmann's fir],	Larix americana,
" cephalonica,	" europæa,
	Retinospora obtusa,
	" plumosa aurea,
	" filifera.

PLANTS FOR SHADY PLACES.

Every garden contains some shaded beds and borders, and to know just what plants to place in them is a matter of grave consideration. Among those that thrive and do well in this situation I would mention the fuchsia, petunia, larkspur, achyranthus, centauria, begonia, lypodium, candytuft, ivies, ferns, madeira vines, morning-glories, forget-me-nots, pansies, seddiums, feverfeu, etc. Give these a shaded corner and they will rejoice in bud and blossom. The fuchsia, of which many ladies take especial care, cannot be often made to bloom freely; but place them in a shaded bed where a few hours only of sunshine reaches them, and you will be rewarded by a constant succession of flowers. They require plenty of strong light, good rich soil, free room to spread their roots, and abundance of moisture, and given a little liquid manure once a week they return hundreds of blossoms of the most perfect size and colour. The petunia planted in a shaded bed will be one mass of colour in a very short time. The fever-feu is a great lover of shady spots, and will continue to bloom until late frosts in the coldest climates. It is very lovely to dress the hair with, and desirable for all purposes of adornment of the person and the house. The achyranthus is a great favourite of all flower adorers, and needs only a moderate temperature to perfect its rich tints, deepest red, bright carmine or apple-green streaked with a deep shade of pink or ruby. The pansy also desires to shun the light, and lifts its wise bright face when the sun's rays come but feebly—although it delights in rich food, and given it will flower perpetually and magnificently. Pick off the flowers generously, and they will continue to bloom until heaviest frost. Ferns do well in a half shady position and a northern or western position. The soil for ferns to thrive best in must be one part silver sand and two parts dry and porous peat. If you plant them in pots, put in pieces of charcoal to the depth of one inch and add a little powdered charcoal to the soil, also some cocoanut fibre. To have your garden a success, and one that will delight the eye of the beholder and bring gratification to yourself, all these things must be given due attention, and in no one instance will it be proven of more importance than in finding a congenial amount of sunshine and shade.—*Aunt Addie in N. Y. Tribune.*

SACKING GRAPES.

A correspondent in the *Fruit Recorder* states that he sacked 20,000 bunches of grapes last season, putting the sacks on when the berries were quite small. If nearly grown, the sacking does not always prevent rot. He says the operation pays, but he does not state the expense. We make the following deductions from his statements:—For large bunches, as of Concord, he employs the paper sacks which are used for peanuts, and smaller ones for the Delaware—the former costing $1 per 1,000, the latter 65 cents. They are pinned on with common pins, costing 40 cents per dozen papers. One person puts on 1,800 in a day. The following would be about the cost of bagging 1,000 bunches of grapes: Paper bags, $1; putting them on, say $1; 1,000 pins, about 12 cents, or $2.12 for bagging 1,000 bunches of grapes. If they weigh half a pound each, and allowance is made for accidents and drawbacks, the cost would not much exceed half a cent per pound. If the fruit does not sell lower than three cents per pound, the cost of bagging would probably be warranted by its advantages in protecting from rot, birds and insects. This is the inference from one man's statement. But in the same number is another communication from a Vineland man, who applied 80,000 bags, and repeating, found it did not pay the expense. At first, six men put on only 2,500 in a day, but afterwards 5,000. To escape the rot, the spores of which often infect the grapes when they are the eighth of an inch in diameter, the bags were applied when the bunches were so tender that many broke off, and even then only one-third of the whole crop was saved—all the rest, being infected, were spoiled. He concluded emphatically that "it did not pay," and bagging is given up at Vineland.

RUSTIC WORK.

Rustic work, if neatly and tastefully constructed, and cautiously introduced in the more wild and picturesque portions of ornamental grounds, may give a very pleasing effect. But if fully exposed to the weather, without any kind of protection, it speedily decays—a result which is hastened by the slender young material used, and the numerous joints and crevices where water can enter. Nothing can appear much worse than de-

cayed and broken seats, distorted summer-houses, and crumbling and rotten bridges. To avoid these bad results, great pains and expense are sometimes incurred in procuring branches and poles of red cedar or other durable kinds of wood; but a cheaper and more lasting way to prevent this difficulty is to apply two or three heavy coats of crude petroleum to any kind of wood employed, by means of a coarse brush, the oil quickly penetrating the pores and entering the cracks and joints. We have now on our grounds lightly constructed work of soft and perishable wood, which has been exposed to the weather for fifteen years without any sign of decay, having been well impregnated, when new, with petroleum.—*Country Gentleman.*

LEANING TREES.

Often in a fine orchard we find one or more trees leaning over so far as to destroy the beauty of the whole orchard. It is also much more difficult to cultivate around a leaning tree. This may be easily remedied, while the trees are young, by partially digging up and replanting the tree. The roots will usually be found smallest on the side from which the tree leans, and therefore these roots should be loosened from the earth, the tree set in a perpendicular position and carefully fastened by stakes or guys, and the earth replaced around the roots. It would be well to add some rich compost to promote their growth. If, as is very probable, the top of the tree has become one-sided, it should be pruned so as to restore the balance. In this way pear trees may be righted up even when six inches through the stem, but the best way is to look after the young trees and not permit them to depart from the way of uprightness.

FRUIT-TREE CULTURE.

1. Instead of "trimming up" trees, according to the old fashion, to make them long-legged and long-armed, trim them down, so as to make them even, snug, and symmetrical.

2. Instead of manuring heavily in a small circle at the foot of the tree, spread the manure, if needed at all, broadcast over the whole surface, especially where the ends of the roots can get it.

3. Instead of spading a small circle about the stem, cultivate the whole surface broadcast.

4. Prefer a well-pulverized, clean surface, in an orchard with a moderately rich soil, to heavy manuring and a surface covered with a hard crust and weeds and grass.

5. Remember that it is better to set out ten trees with all the necessary care to make them live and flourish, than to set out a hundred trees and have them all die from carelessness.

6. Remember that tobacco is a poison, and will kill insects rapidly, if properly applied to them, and is one of the best drugs for freeing fruit trees rapidly of small vermin—and is better used in this way than to make men repulsive and diseased.

VERBENAS FROM SEED.

Gardening Illustrated gives in substance the following directions for raising verbenas from seed:—Sow the seed about the end of March, in a good, free, rich loam, in pots, covering the seeds with finely-powdered earth not over a fourth of an inch. Place them in a room at about 65 or 70 degrees of warmth, and keep the soil constantly moist. In three weeks the plants will be large enough to set three inches apart in pans, or pots, or shallow boxes. Begin to harden the plants gradually, and then put them into a cold-frame, and plant out in open ground the first of May, in a deep, rich bed, away from shade.

CHANGING THE BEARING YEAR.

The Horticultural Editor of the *Country Gentleman* recommends recourse to artificial means for changing the bearing year of fruit trees. He refers to the effect of a severe and cold storm which once swept through a fine apple orchard, and destroyed the whole crop. But it changed the bearing year for a time, and the next, an odd year, gave large and profitable returns, when fruit generally was scarce. Shearing of the blossoms on young fruit is suggested in order to accomplish the result. But instead of trying to alter the odd year, would it not be better to try and secure moderate crops every year, by thinning the fruit the season of excessive bearing, and feeding the orchard liberally every year? Excess of fruiting and scarcity of plant food no doubt cause the alternation of bountiful and barren years.

CORRECT NAMES.

There is no reason why horticulturists should not use good English in their valuable and practical communications. Many persons divide the name of a well-known peach, *Oldmixon*, in two parts, so as to read "Old Mixon." There is no such name as Mixon, either old or new, and one might as well write the name of an apple, Old Enburgh. The former Proceedings of the American Pomological Society had the word Oldmixon divided, but of late years the error is corrected; yet even in the last number some of the State reports continue the error. Some of these reports also give the imaginary word "thrip" as the singular of *thrips*. The Greek letter *ps*, used in this word, cannot be cut in two in this way.

TO HAVE FINE RADISHES.

If you want to have delicious radishes, don't pile on a lot of coarse stable manure, but go to your old chip pile—clear off the unrotted chips on top, and then put a waggon load or more of the soft rich soil made by the well-rotted chips on your radish bed. A very little sprinkle of ashes may help it. Plant the radish seed in this, pressing the soil firmly around it, and when the radishes begin to grow, keep the soil well stirred and all weeds killed. If the weather gets very dry, water once lavishly. Remember, you must apply water in very large quantity or you had better not put on any at all.—*Farmer's Advance.*

MULCHING.

A member of the Oneida Community, writing on the importance of mulching fruit trees and plants of every kind, says that he mulched a row of the Franconia raspberry, and also one of the Philadelphia, side by side. The effect was very marked. While the Franconias, which were not mulched, were literally scorched and the leaves crumpled in the sun, the row which received the mulching carried through nearly double the crop of fruit. The material used for mulching was old, half-decayed buckwheat straw, etc.

PORTULACCA.

We often read that the sun is never too hot nor the drouth too intense for this flower, but this hardly agrees with our experience. They will live through terrible drouths, but do much better with a moderate supply of moisture. It is true their bright eyes will open only to the magic touch of the sunshine, but in a partially shaded situation the blossoms are much more enduring. The flowers of the double kinds are more lasting than those of the single. Many think it difficult to preserve the double character of these plants, but we have not found it so.

CREAM.

GROWING QUIET.

Oh, the worry and the bustle
And the tumult of to-day;
Oh, the eager strife of people
And the myriad words they say!
In the rush and competition
There is little time to heed
The soft whispers of the Master
That would meet the people's need,
But sometimes there's a respite
And they hear Him say at length,
"*In quietness and confidence*
Shall be your strength."

Strangely falls such mystic teaching
On the panting hearts of men;
They but rest them from their struggle
To begin with might again;
Every morning bids them hurry,
And at noon they fill the street
With their crowding, and the clatter
Of a thousand hastening feet;
Will they ever cease the tumult?
Will they understand at length
That "in quietness and confidence
Shall be their strength?"

WANTED—An artist to paint the very picture of health.

ON the day of victory no weariness is felt.—*Arabic Proverb.*

DISCOURAGEMENT is not a fruit of humility, but of pride.—*Fenelon.*

IT is not death that makes the martyr, but the cause.—*Canon Dale.*

NONE but the guilty can be long and completely miserable.—*Goldsmith.*

A LAWYER is about the only man that ever made anything by opposing a woman's will.—*Yonkers Statesman.*

"THAT'S what beats me," as the boy said when he saw his father take the skate strap down from its accustomed nail.

BASHFULNESS may sometimes exclude pleasure, but seldom opens any avenue to sorrow or remorse.—*Johnson.*

THE firmest friendships have been formed in mutual adversity; as iron is most strongly united by the fiercest flame.—*Colton.*

THE new moon was pointed out one evening to Johnny, who was just learning to talk; being asked if he saw it, he said, "Yes, I see the rind of it."

THE troubles of life are sometimes but imaginary, and could be thrown aside to the mutual benefit of all. Throw them away, and keep your eye on the star of hope.

"WHAT made the mule kick you?" they asked of the gentleman who had been sent flying through the roof of a barn. And he answered: "Do you think I was fool enough to go back and ask him?"

FOR the best results there needs be the longest waiting. The true harvest is the longest in being reached. The failures come first, the successes last. The unsatisfactory is generally soonest seen. —*Henry Calderwood.*

"How is it, my dear, that you have never kindled a flame in the bosom of any man?" said an old lady to her niece. To which the young lady replied: "The reason, dear aunt, is, as you well know, that I am not a good match."

"DOCTOR," said a lady patient, "I suffer a great deal with my eyes." The old gentleman adjusted his spectacles, and with a Socratic air replied, "I do not doubt it, my friend; but then you ought not to forget you would suffer a great deal more without them."

A LOT of farmers who had been listening to a railroad land-agent's praise of Arkansas Valley soil, at last asked him, sarcastically, if there was anything that wouldn't grow there. "Yes," said the agent, quickly, "pumpkins won't." "Why not?" "The soil is so rich and the vines grow so fast that they wear out the pumpkins, dragging them over the ground."

HORSES AND CATTLE.

THE ROYAL GEORGES.

Due to what circumstances and to what commingling of blood will be seen as the narrative proceeds, Ontario can boast two families of horses, founded within her own borders, that are, beyond all question, eminently adapted for the purposes of the hour—the Royal Georges and the Clear Grits.

The Royal Georges are thus described by Dr. McMonagle:—

"The class of horses in Ontario particularly, that have a type of their own, that are firm in their characteristics, that are undying in their habits, and that have always held their ancestral heredity in spite of all opposition, are the Royal Georges. They originated in the Tippoos, coming through Black Warrior, and contain within themselves characteristics that cannot be destroyed. They have size, form, velocity, longevity, and a type that leads to permanency in the family; a type that makes good carriage horses, and has of late produced some valuable trotters—that trot close to twenty—campaigners, and winners. I have thought it possible that they could be the basis of a class of horses strictly Canadian, which, coupled with appropriately selected thoroughbreds, would produce the essential desideratum of the present day—the park or coach horse. The Canadian Royal Georges stand well on their limbs; they are large, muscular, have good, sound constitutions, and doubtless originally, in ancestral distance, had a pacing root."

The origin of these horses is given as follows:—

"The Tippoos and Royal Georges are, emphatically, a Canadian stock. They originated with Isaac Morden, of Prince Edward county, near Belleville or Napanee, in 1816 or 1818. The original founder was Tippoo, styled 'Old Black Tippoo.' He was the produce of a mare that was brought to Canada, it is said, from the United States, by a preacher, Mr. Howard. She was in foal when Mr. Morden obtained her from Mr. Howard, and she produced this black colt in the spring of 1817. The sire of Tippoo was never known, though it has been claimed, without proof, that he also belonged to the United States.

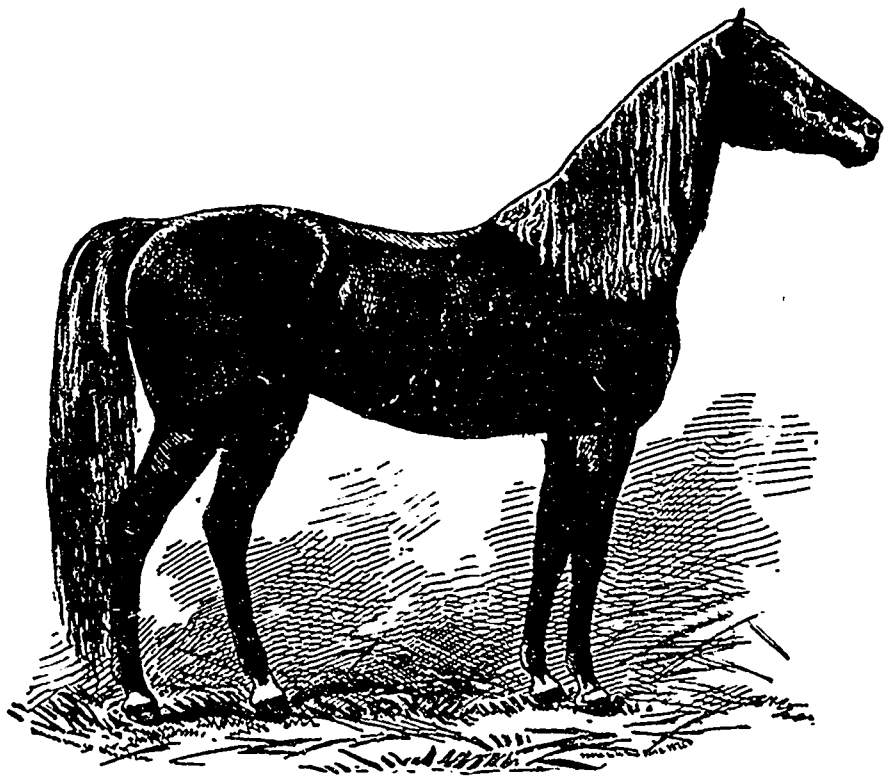
"From Tippoo we had Warrior. Warrior was a direct descendant of Tippoo. Warrior's mother was an English-bred mare belonging to an officer of the army, in the 1st Royals. She was of the Warrior lineage, and was brown, although the Tippoo family were black, and from her we have a brown horse, which is known as 'Black Warrior.' His owner, Mr. Johnson, in 1840, intended to take the horse to Michigan, but on his way he got lame, and was traded to a Mr. Barnes, living twenty miles south of London, who kept him until he died. Many of his get were pacers.

"From the veins of Warrior we have Royal George, and from the loins of Royal George we have the best breed of horses that ever lived in Canada. He produced Lady Byron, 2:28; Lady Hamilton, 2:30; Tartar, 2:28½; and Toronto Chief, 2:24¼ (saddle); also Royal Revenge, and others that have produced trotters going as low as 2:20¼, and selling in the market at as high as $10,000. His family also include Caledonia Chief, 2:29½; Byron, 2:25¼; Fred Hooper, 2:23; J. Ellis, 2:29; Lucy, 2:20¼; Belle of Toronto, 2:30; Nell, 2:27; John S. Clark, 2:30; Mike Jefferson, 2:29¼; Fanny Jefferson, 2:28¼; Thomas Jefferson, 2:28; Commodore Nut, 2:29; Ben Flagler, 2:26¼; Geo. F. Smith, 2:28; and many others not included in the 2:30 lists. The greatly dreaded old-time trotter, Tacony, with a mile record of 2:26, and a two-mile one of 5:2—the winner of more than twenty hotly contested events—the conqueror of Flora Temple in two set races, was Canadian bred, by Sportsman, a son of old Tippoo. Another son of old Tippoo, the Sager horse, got the fast mare, Crazy Jane, 2:27; another, a grandson of old Tippoo, got J. H. Burke."

The descent of Royal George, on the dam's side, is thus referred to:—

"An early descendant of Messenger, Harris' Hambletonian, sometimes known as Bristol Hambletonian, produced two daughters, which Mr. Billington, of Middlebury, Vt., was taking to Detroit, and while travelling near London, Ontario, the off one permanently injured herself by getting her foot through a corduroy bridge, and became crippled for life. She was sold to Mr. Barnes, the then owner of Black Warrior, and became the dam of Royal George.

"This was a dark bay or almost brown horse, fully sixteen hands high, and well proportioned. His head and neck were good, his body deep and round, joints large and strong, and legs and feet without fault or blemish. When Royal George was three or four years old, Mr. Barnes sold him to James Forshee; hence the 'Forshee horse.' During this period he was looked upon as a large, strong, handsome business horse, and a remarkably fine traveller, but nobody dreamed that anything fast would ever spring from him, or that he would found a Canadian family. Mr. Munger bought him from Mr. Forshee, and sold him to Mr. Dougherty, of St. Catharines, for $400. It was Mr. Dougherty that gave him the name of Royal George. In 1858, W. H. Ashford, of Lewiston, N. Y., bought him and kept him there and at Buffalo two or three years. I think he was again repurchased by Mr. Dougherty, and died at St. Catharines in 1861. There is no tradition of his ever being in a race except once, and that at Hamilton, on the ice, in 1852, in a contest for a very considerable wager with the famous 'State of Maine.' Royal George won easily, and was not extended beyond a 2:50 clip."



"WM. B. SMITH"—(Royal George).

Of the Royal George family, two stallions, available for stud service in Ontario at the present time, are prominently mentioned in the evidence. One of these, "Wm. B. Smith" (represented in the accompanying illustration), is owned by Mr. Wiser, M.P., of Prescott, and his services can be had at a moderate fee; the other, "Erin Chief," also available at a most reasonable charge, is the property of Messrs. A. & R. Wells, of Aurora (York). Of "Wm. B. Smith," Mr. Wiser says in his evidence:

"The horse I speak of is a descendant of Royal George, out of an imported mare. His name is Wm. B. Smith, and he was sired by Thomas Jefferson, a trotter with a record of 2:28, who, in turn, was sired by Toronto Chief, and he by Royal George. On the side of his dam, he is out of imported Heather Bloom by Tallyho. He is one of the kind of trotting stock from which I propose to breed our farm horses—those for lighter agricultural work. He is also of the kind to cross with the Messenger stock, so as to get the park horse, if we ever are to get it. He stands sixteen hands high, and is a bright chestnut colour. On my own track he has showed me a mile in 2:35, and a half-mile in 1:16."

Of Erin Chief, the following account has been obtained:—

"Erin Chief is a golden chestnut, 15¾ hands high, weighing 1,200 pounds, with fine trotting action, requiring neither weights nor boots. He is a very bright, intelligent animal, and of a particularly docile disposition. He was got by Howe's Royal George, whose sire was Field's Royal George, son of Royal George, the founder of the family, who was consequently grandsire to Erin Chief. His dam was Erin Queen, daughter of imported Charon, a horse of distinguished pedigree."

Erin Chief has been nine years serving as a stud horse, having in that time sired no less than 400 colts, which show his characteristics in a remarkable degree. He has had very little training, but can, it is said, trot a mile in 2:30, or better. A considerable number of his progeny are stated to be able to show three minutes or better in their three-year-old form. Five or six that have been trained have done 2:30 on a first-class track. No less than forty-six of his progeny were exhibited at the Toronto Industrial Exhibition last fall.

Mr. Williams, deploring the rapid disappearance of Canadian families of horses, remarks that the Royal Georges are going in the same way. It is much to be hoped that such a result may be averted, and a family of horses so well qualified to give reputation to the horse-breeding industry of Canada be carefully encouraged and maintained.—*From Ontario Agricultural Commission Report.*

BREEDERS SHOULD BE FARMERS.

We have more than once emphasized the fact that general farmers are properly to be classed as breeders. For some of our readers it is worth while to emphasize the kindred fact that breeders are also farmers.

The difference between fair profit and heavy loss from a stud of horses, or herd of cattle or pigs, or flock of sheep, may lie not alone in questions of good selection of animals, good pedigrees, and sound principles of breeding, but also in

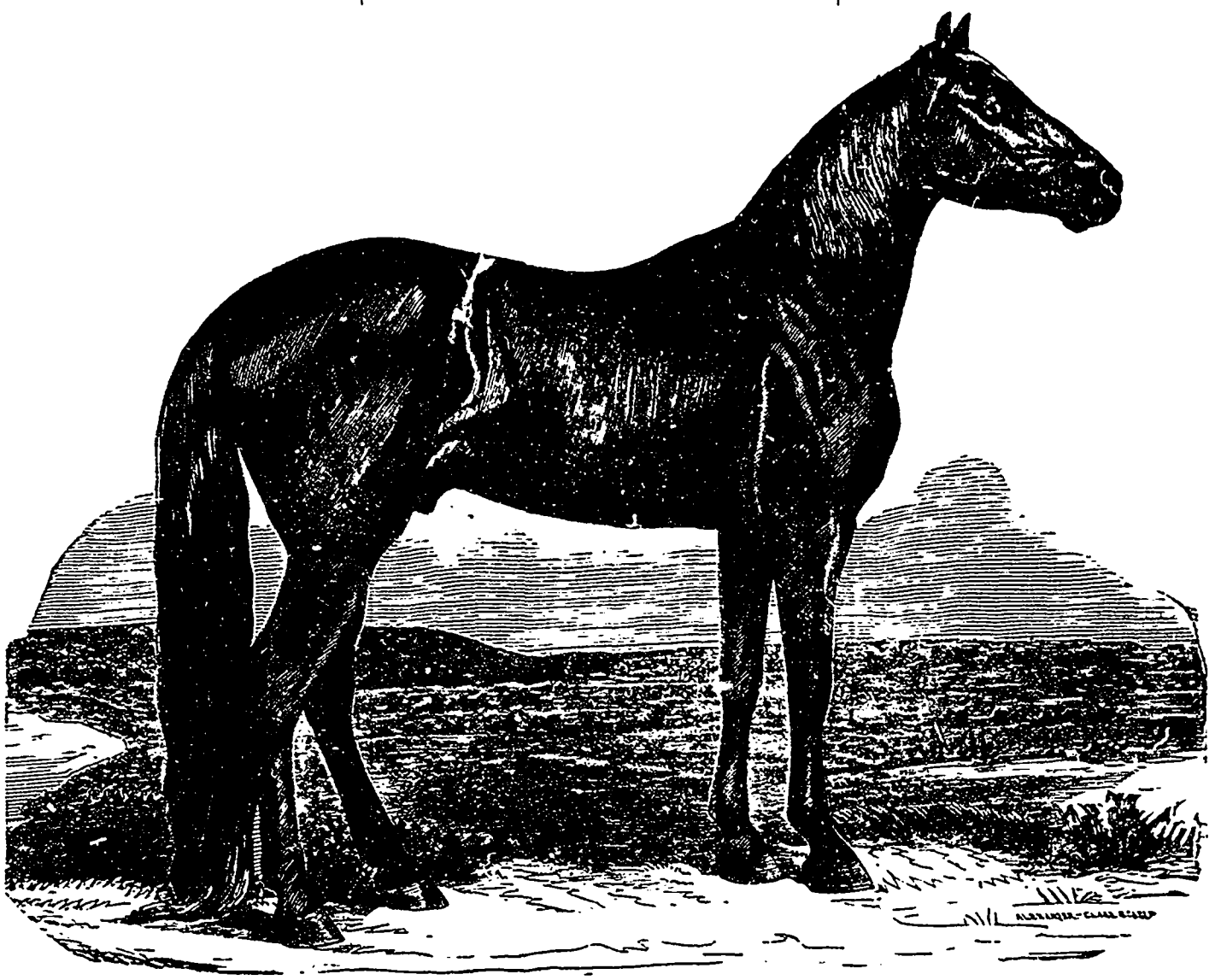
careful or careless management of the details of farming. One who is raising valuable animals can perhaps better afford to use his land to poor advantage than can he who raises common stock; but loss will come to him from bad management of his pastures. of his grain fields or of his labour, as certainly as it will come to the general farmer.

Some breeders pay quite too little attention to such questions as the drainage of pastures and meadows; the full stocking of the pastures; the selection of suitable varieties of corn and oats; the utilization of waste products of the farm, etc. There are cases in which it is cheaper for a breeder to buy feed for his stock than for him to produce it on his farm, but these are exceptional rather than the rule. There is no good reason why the man who grows good stock should not also grow good hay, corn, oats, roots, etc. In fact, the better taste and greater enterprise manifested by his choice of improved animals ought to be qualifications for good farming in all departments.

The sooner all breeders of improved stock cease to think of this work as anything else than an important part of the business of agriculture, the better. Good business management is needed in raising fine cattle or hogs as much as in corn growing.—*Breeders' Gazette.*

CARE OF A BREEDING MARE.

The best feed for a breeding mare is wheat-bran and oats. If she is old, the oats should be ground and the feed mixed half and half. If in good vigorous condition, and not worked, two quarts a day is ample; but if required to labour, the feed should be increased to eight or twelve quarts per day, according to circumstances. Breeding mares will generally do well when fed on hay alone, but the hay should always be free from mould. Clover hay is the best, and clover and timothy the next best; a change to straw, if free from rust and smut, is not injurious, and when not working is beneficial fed once a day, as it tends to maintain a good appetite. A mare in foal should be allowed exercise daily in the barn-yard to give opportunity to roll, and it would be better to confine her loose in a box-stall rather than tie her up. Gentle driving on the road, or even work, will not injure her. Many persons work their breeding mares in a team up to the time of foaling, and have them do well. This is a much better plan than to keep them tied up in a stall. I kept a breeding mare eleven years, wintering her on hay left by the sheep, and she had a colt each year, every one being perfect in health and form. This mare did no work, and did not get any grain. The mare should never, when advanced in foal, be turned in a yard or field with other horses. If there is a scanty supply of milk when the colt is born, the mother should be fed wheat middlings at the rate of eight or twelve quarts a day, beginning with four, and increasing the feed daily. Excessive feeding might lead to derangement of the bowels, which would be injurious to the colt. A very little salt should be given at a time, and care should be taken to avoid exposure to either wet or cold. It is always best to let a mare have a run to grass, if it is large enough for a bite, before foaling; it will help to make milk, and to put the system in a healthful condition to meet the wants of nature. At night she should be brought into a dry yard or suitable enclosure.—*N. Y. Tribune.*



THOMAS JEFFERSON, A "ROYAL GEORGE" HORSE.

TWO POINTS IN HORSE MANAGEMENT.

If there be an animal that commands our kind care it is that noble quadruped, the horse. But the kindness that kills is worse than neglect. I want to refer to two inhuman and cruel customs that would be more honoured in the breach than in the observance.

1. The so-called disease, *Lampas*, the bugbear of the groom, never exists. The arrangement of the palate is just as it should be, as it enables the animal to gather the grass more readily. The horse's molar teeth may require attention, but not the incisors nor their surroundings, whose functi ns are prehension, and not mastication. If then the horse is off his feed, in most cases the use of a slight alterative medicine, with soft and easily digested food, will effect a cure. Don't inflict that barbarous, terrible punishment of burning out the gums, and thus disable the poor brute from afterwards performing those natural functions which sustain life.

2. Another mistaken kindness is horse shoeing. It is not only injurious, but is a great tax—a two-fold reason why it should be discontinued. Much time and ingenuity have been expended in the effort to make a shoe free from objections; but all produce, more or less, physical injury, and do not prevent the horse from slipping. When a shoe does prevent slipping, it is from high, sharp heels. But such shoes strain his foot, cut his ankles, cork his hoof, make him stiff and sore, and cause him to wound his mate. All the best authorities declare that nine-tenths of the diseases of horses proceed from their feet as a consequence of shoeing.

A physician in Virginia—Dr. Perkins, of Hanover county—says that for a number of years he has not shod his horses, believing it to be the shoe and not the road that injured the foot. He rode and drove in his daily practice a horse for eight years without shoes, and during the whole period the hoofs were sound and good, and less liable to slip on ice than a shod horse. *A slight rasping to keep the feet in shape* was all the care bestowed upon them. This gentleman gives the example of a bold riding fox hunter who would leap fences and ditches and gallop on ice to show the superiorities of a barefoot animal to one shod, which feats his companions riding shod horses dared not imitate.—*Cor. Farmer's Review.*

The Rural Canadian.

EDITED BY W. F. CLARKE.

TORONTO, JUNE 15TH, 1882.

A VISIT TO BEETON.

The other day we enjoyed the long-contemplated pleasure of a trip to Beeton, where Mr. D. A. Jones carries on his large apicultural operations. We found the "bee-king" with his head and hands full, it being one of the busiest seasons of the year for the practical apiarian. At first sight of his grounds, it seemed as if our great apiculturist had returned to old-style bee-keeping. His yard was full of weather-worn gums, dilapidated box hives of all sorts and sizes, and various relics of a past age and style of apiculture. On asking an explanation of the queer state of things, we found that the motley collection was the result of a tour Mr. Jones had lately taken in a benighted district of Ontario, for the purpose of buying up a quantity of bees. Being in expectation of a large consignment of queen bees from his apiary in Cyprus, he wanted colonies in which to instal them, and took this method of obtaining them.

Unfortunately, the queen bee consignment proved a failure. The delicate insects got caught in the ice-fields of the St. Lawrence Gulf, and nearly all of them were chilled to death. Only two reached Beeton alive. This is one of many casualties which renders the importation of choice bees a matter of such difficulty and expense. The colonies of black bees that now bestrew Mr. Jones' yard, must await the arrival of another shipment from Cyprus, or the rearing of queens on the Georgian Bay islands, before the common queens can be displaced by better ones.

Business is indeed "booming" at the Beeton apiaries. The demand for colonies, queens, hives, foundation, smokers, and all other bee requisites is so great that it cannot be fully supplied. The number of persons who are going into beekeeping the present season is very great. Literally, their name is "legion." Many of these have before them a hard session in the dear school of experience. For, still the idea largely prevails, that bees work for nothing, and may be left to board and take care of themselves.

In spite of all the efforts made to disabuse the public mind of this delusion, people hug it, and only give it up when they have learned by actual trial that bees need care; that their management demands knowledge and skill; and that bee-keeping will no more succeed, if left to chance, than any other business.

Besides the large number of persons who are beginning bee-keeping, there are multitudes who have long kept bees who are finding out the advantages of improved methods and modern appliances. These want movable frame hives, pure-bred queens, honey extractors, and especially, artificial comb foundation. This last requisite Mr. Jones is manufacturing on a Dunham machine, which has been regulated so as to work with great nicety, and turns out very beautiful sheets. Two qualities are made—a thick one for frames, and a thin one for section boxes.

The weather was so unfavourable at the time of our visit, that not much could be done among the bees. A few of the colonies in box hives were transferred into the Jones hive, which gave us an opportunity of seeing how that operation is performed here. Some of the finer stocks of Italian, Cyprian, and Holy Land bees were opened, that we might inspect the queens, which are very fine. The general appearance of the workers and drones indicates that, as the result of the most careful breeding, great improvement is being made. Mr. Jones is reaping the reward of his labour and outlay in this direction, and the superior excellence of his bees cannot but strike the attention of all experienced bee-keepers by whom they are inspected. What Bates did for the Shorthorn, —Bakewell, Webb and others for the sheep tribes,—and what painstaking breeders are doing in other departments of live stock, that Mr. Jones is doing, and with eminent success, for the *apis mellifica*.

An interesting feature of his establishment just now is the presence of a number of promising young men, who have come for the season to learn the science and art of bee-keeping. They are sharp, shrewd, observant, quick, and active young fellows, who will pick up a rich store of knowledge as the summer glides along, and carry it away with them to their homes, there to reduce it to practice in the establishment of successful apiaries. They are from various parts of Ontario and Quebec, and each on his return will be an apostle and missionary of apiculture, in his respective district. Mr. Jones has no secrets; all he knows he is willing to tell; and whatever he can do, he is ready to show to all comers. During our brief stay, parties came from various quarters—one a distance of 40 miles—to see the Beeton apiaries, and learn something about practical bee-keeping. All their questions were frankly answered; difficulties explained; transferring and other processes performed before their eyes; and wise advice given them as to the essentials to success. Mr. Jones is doing a good work for the country as well as for himself. Long may he live to carry it on, and hasten the time when the vast crop of honey that is annually wasted shall be gathered by busy bees, and the proceeds of it be poured into the national coffers.

A BILIOUS YANKEE ON OUR GREAT NORTH-WEST.

An occasional correspondent of the *N. Y. Tribune* writes a splenetic letter to that journal on the rush of population to Manitoba the present season. He says "This singular hegira" is due, in great part, to the natural growth and overflow of the Canadian population, which, with palpable ignorance, or wilful misrepresentation, he says "is hemmed in upon a narrow strip of land between the vast northern forests and Lakes Erie and Ontario." It is also partly caused by "the rather hard conditions of life for small farmers and labourers in the old communities of the Province." But the "extraordinary size and suddenness" of this movement is attributed to "provincial patriotism" and the jealousy of provincial statesmen and editors of the growing power and absorptive tendencies of the United States. After trying in vain to prevent people from going to the States for prairie farms, and seeking fruitlessly to persuade them, instead of so doing, to "carve fresh farms out of the forest by dint of ten years' axe-swinging and brush-burning," the statesmen and editors aforesaid had recourse to another dodge to prevent the depopulation of their country—"They began to praise Manitoba, as though it were a new-found Eden." This device proved successful, to the evident chagrin of the *Tribune's* "occasional correspondent." He says, "a popular enthusiasm for taking possession of this supposed agricultural paradise broke out, and thousands of people gathered up their implements and household gear, and poured across the boundary at Port Huron and Detroit, ticketed through over American railways to the far-off prairie province of the Dominion."

With all his reluctance to say anything in praise of Manitoba, this "occasional correspondent" admits that "the arable portions of it" are very similar to Western Minnesota and Eastern Dakota, "with the difference that the climate is more rigorous, the springs later in opening, and the ground wetter because lower down the stream, not as well drained, more subject to overflow, and not as soon benefited by the hot rays of the summer's sun." He admits that the country is "worth settling," but it would not have been thought of until "down the dark future, for long generations," had not those abominable Canadian politicians and editors gone to work and "stimulated the present emigration movement." Still there is a crumb or two of consolation left for this unhappy "occasional correspondent." All the emigrants, except "a few who go by steamboats to the head of Lake Superior, pay toll to the railroads of the U. S." Moreover, the prairie province "will inevitably be tributary in a commercial sense to St. Paul and Chicago." And as the certain result of "the natural ties of business interest," Manitoba will soon want to be annexed to the United States. The whole Dominion, in fact, will ere long be anxious to become part of the Great Republic. But this new Canadian province will doubtless be the first to grow restless under the bonds of colonial dependence upon Great Britain, and the first to desire admission to the Union."

We quote this letter because it is a pretty fair sample of the Anglo-phobic spirit which dominates the average American. Here and there a few broad-minded citizens of the U. S. may be found, who take a less narrow and selfish view of things, but to the great mass of the people on the other side, "manifest destiny" dictates the certain and speedy annexation of this whole dominion to the U. S. We are a pitiable set of monarchy-cursed dependents of the British crown. Our older provinces are but a narrow strip of overcrowded territory, on the wrong side of the frontier line. We are poverty-stricken and discontented. We can hardly keep body and soul together in the maintenance of our natural life. We are only aching for the opportunity of casting ourselves into the lap of the Great Republic. The great bulk of Americans are ignorant of the fact that we have a domain larger than the whole United States. They do not know that, while cultivating a friendly feeling toward our neighbours, we are unspeakably thankful that the twin curses of universal suffrage and an elective judiciary have never cast their blight over our fair land. They make no account of those mighty sentiments of loyalty and patriotism which bind us to Great Britain, and which were never stronger than they are to-day. They never permit themselves to think that we have all the freedom the Great Republic enjoys without its attendant evils. They conveniently forget that our growth has been in spite of every obstacle which a none too friendly neighbour could throw in our way; that they have refused us reciprocity, placarded our country with flaming advertisements of their western lands, and sent an unsurpulous irruption of bummers into every township to seduce away our young farmers to their imaginary Edens, and that hordes of speculators have beset every train that has carried our emigrants westward. Yet, notwithstanding these and other drawbacks, our older provinces have prospered, we have poured a mighty tide of settlers into our North-west, and

"they are coming, Father Abraham," from England, Ireland, Scotland, and the countries of Europe, hundreds of thousands strong, to build up a great northern nation of sister provinces, that stretching hand in hand from the Atlantic to the Pacific, shall vie with one another to establish Anglo-Saxon civilization and British institutions throughout a vast area, unsurpassed by any other in the world as a home of a free and mighty people.

THE JERSEY FEVER.

From a brief paragraph which appears among our "Rural Notes" in the present issue, it will be seen that a sort of mania is being wrought up on behalf of the Jerseys. The cow Princess 2nd, which has recently attained notoriety by being sold for the large sum of $4,800 in New York, was one of a herd of Jerseys imported by Mr. E. P. P. Fowler in January, 1879. At an auction sale in Philadelphia during the same month, she was knocked down to Mr. J. P. Hutchinson, of Georgetown, N. J., for $150. Some time afterward, Mr. S. M. Burnham, a Connecticut Jersey fancier, tempted the owner of this cow with an offer of $600, and she passed into his hands. On the 10th of May last, this animal was one of Mr. Burnham's contributions to the combination sale in New York, at which, after some lively bidding, she was knocked down to Mr. Shoemaker, of Baltimore, Md., for $4,800.

The result of the *furore* gotten up in New York already shows itself in the high prices asked and obtained elsewhere. Mr. G. W. Farlee, of Trenton, N. J., has since sold one Jersey cow for $2,000; another for $1,750; a third for $1,000; and a fourth for $500. His asking price for his best cow, with a record of 19¼ pounds of butter per week, is $5,000. He and others are permitted, through the columns of the *Country Gentleman* and elsewhere, to trumpet forth the praises of their choice animals, and there is every appearance of a first-class excitement raging for a time.

Are these cows intrinsically worth the extravagant figures at which they are now quoted? And is it the part of wisdom for editors and others to aid in this kind of inflation? We are compelled to answer these queries in the negative. It is admitted by all candid and impartial judges, that the Shorthorns have been damaged by the fancy prices that have ruled for fashionable strains, and that it would have been better if calmer judgment had reigned in place of the reckless and speculative spirit which has so long dominated the interests of this valuable breed. The Jersey craze will do similar injury to the rising prospects of this tribe of cattle. It is a species of stock gambling which creates fictitious values, and will, sooner or later, bring heavy losses to the hindmost. We are glad to see the real merits of the Jerseys appreciated, and have hailed their introduction to this country, in the hope that they would improve our dairy herds, and so promote the prosperity of one of our most important and promising rural industries. But the certain effect of Jerseys being held at such figures as $5,000 a piece will be, that dairymen will let them severely alone, and go on multiplying scrub cows and cheap bulls. A few of the class of whom it is proverbial that they and their money are soon parted, will invest in these fancy creatures, and, in the end, somebody will be hurt. The Jersey is an excellent butter cow, but there are plenty of animals to be had for $50 or $60 that will give a far larger yield of milk, and when their usefulness is past for dairy purposes, bring their first cost and more for meat. Black points, fawn shades, and diminutive size do not count for much where butter and beef are the standards of value, and the man who puts the money that would buy a farm into a live cow hide, will not figure in history on the honour list of practical farmers, nor transmit his name to posterity as one of the benefactors of the human race.

SALES OF IMPROVED STOCK.

According to the Oshawa *Vindicator* of the 12th ult., the sales of Shropshire and Southdown sheep and Durham cattle have been pretty extensive in the county of Ontario this spring. It says:—

"Within the last two weeks our county has been visited by some of the leading American stock breeders, who have bought a large number of our very choice animals, for which they had high prices. From Mr. John Dryden, M.P.P., they bought seven Shorthorns, also twenty-five Cotswolds, and all his Shropshires, eight in number. From H. H. Spencer, of Brooklin, the well-known Southdown breeder, the same gentleman bought twenty-one head of Shropshires and Southdowns, all very choice animals. The majority of them were bred by Mr. Spencer, the remainder were imported by him last summer, as were the Shropshires they bought of Mr. Dryden. The amount of stock bought by our American friends from the above named gentlemen on this occasion filled three cars to overflowing—in fact one car had to be double-decked. We feel safe in saying three better car loads of stock never left the country on any single occasion. This seems to us a fitting opportunity to draw our readers' attention to the rapid advance made by the Down sheep in public favour within the last five years. Especially is this the case with the Shropshires. A few years ago Downs were but little noticed in Ontario Province; very few bred them. Mr. Spencer, of Brooklin, Mr. Stone, of Guelph, and Mr. Marsh, of Richmond Hill, were almost the only breeders of any note; of these, Mr. Spencer has for many years taken the lead in the show rings of this Province. His show record dates back to 1850. For many years these gentlemen found it difficult to sell their surplus stock for breeding purposes at anything like the prices obtained by the long-wool breeders for their stock, but this state of affairs is rapidly changing. Within the last six months Mr. Spencer has sold upwards of eighty head of "Downs" for breeding purposes. Every lamb (but two which he reserved) of last year's crop, and nearly all of his large importation of 1881 are now gone; in fact Mr. Spencer told us recently that many he had intended to keep in his own flock are now sold. This change in the demand is no doubt due to several causes, the first being the increased demand for a finer class of wool for home manufactures, something which our home manufacturers have been calling for many years; and the recent impetus given to the woolen manufacturing industry has greatly increased this demand. Also the live meat trade with Britain has had a strong tendency to bring the Downs into public favour. It is a well-known fact their mutton sells in the best English markets for several cents more a pound than that obtained for long-wool mutton, and it will doubtless sell more readily in our larger cities and towns. This discrimination will be more obvious as our trade grows with England and our country grows more thickly settled, instead of getting less it will gather strength with years as the Downs become better known. From carefully made experiments at the Ontario Experimental Farm, the Downs have been found more than twice as profitable as the long-wools. Professor Brown in his report says from his experiments such a striking evidence is obtained in favour of the short and medium wooled sheep, that in view of the present export trade no one need hesitate. In England the Downs stand pre-eminently above all competitors; they have long been the favourite sheep among the masses."

PRIZES FOR THE JERSEYS.

All fair-minded men will be glad to see encouragement given to those, who, like Mr. V. E. Fuller, of Hamilton, are doing what they can to introduce a meritorious representation of Jerseys into this country. They have their place and their merits. The fact that some people are giving way to a Jersey "craze," is no reason why better-poised minds should not accord them justice. As a butter breed, and as "family cows," they are unrivalled. Let them have a "fair show," and a just proportion of the prize money at our exhibitions, by all means.

SKETCHES OF CANADIAN WILD BIRDS.

By W. L. Kells, Listowel, Ont.

THE THRUSHES.

Some of the finest and most continuous of our song birds belong to this interesting genus. The robin, one of our harbingers of spring; the brown, or song thrush, which, by its soul-enlivening lays, gives such an additional charm to the natural attractions of our wild woods; and the mocking-bird, which so often deceives the hunter, and delights the students of nature;—all belong to this genus, some species of which are to be found in all the temperate countries of the world. Though exhibiting much variation in plumage and in voice, yet in their form, feeding, and nesting habits, there is close resemblance. They are all migratory—at least those that visit this country—and in their spring and autumn movements some species are gregarious. The beautiful and familiar blue bird is closely allied to this interesting group.

THE BROWN, OR SONG THRUSH.

This species is, of all Canadian birds, pre-eminent as a songster. Its charming notes are first heard in our wild woods about the middle of April, if the weather is mild, and its gladsome lays continue about three months. But after the middle of July, though the bird itself remains in its forest home until the changeful autumn, with its night frosts and chilly winds, has painted the woodland foliage with many a lovely hue, its tuneful notes are seldom heard. It is on a morning in June that the most delightful lays of this bird are poured forth. Long before the orb of day can be seen in the eastern horizon, while the grey twilight still struggles with the morning mist, and many of the twinkling stars are still visible in the blue vault of heaven—while the air is yet cool, and the night dew lies heavy on the verdant grass, or drops down from the emerald foliage of the trees upon the withered leaves, and the woods and fields are beginning to resound with the varied warblings of other members of the feathered race, it is then that the musical talents of this woodland songster are displayed to the best advantage. Perched among the middle branches of some tree, he pours forth his charming notes in strains of delightful melody, to the astonishment of the rude backwoodsman, and the delight of the student of nature, who may be abroad at that early hour. Often in his hurried morning walk is the hardy pioneer made to pause and listen to the enrapturing lays of this wild wood-musician. Sometimes he suddenly stops his usual song, and utters a strange wild melody, somewhat resembling the ringing of a small bell, but these notes are generally repeated in the latter part of summer, when his habitual song is about to cease. During the warm part of the day the song of this bird ceases, that period

being devoted to procuring food and other duties; but as the shades of evening gather in the silent woods, and the sun is sinking in the western sky, a farewell is sung to its departing rays. Through the hours of darkness he is silent, but again begins his song at the first dawn of the morning. The length of this bird is about nine inches; its colour on the upper parts is cinnamon-brown, beneath it is white, the breast being beautifully spotted with black. It feeds on insects, small berries, and occasionally on grain. The female builds her nest on a branch of a tree, or in the fork of an underbrush, generally not high off the ground. The outside is formed of dry leaves and stalks of weeds, plastered with mud, and lined with fine roots. The eggs are four in number, and of a light green colour. This bird is found in the woods of most parts of Ontario, but delights in deep, shady hardwood districts. It is a shy bird, and rather shuns than approaches the habitations of the pioneer, and is seldom seen in the open fields. It is a very affectionate bird, strongly attached to its nest and young, and should any danger menace them, will expose itself, and exert all the arts with which nature has endowed it in assiduous endeavours to protect them.

THE GROUND THRUSH.

In form and plumage this species is like the song thrush, but in size it is smaller, and its notes and nesting habits are different. It is seven inches in length, including beak and tail, the latter consisting of twelve feathers. The bill is of medium length, and tapering, the upper mandible being longer than the lower, and slightly hooked at the point. Its nest is placed on or near the ground, sometimes in the root of a fallen tree, or suspended among low bushes. It is formed of dry leaves and long strips of bark, and lined with small roots. The eggs, sometimes five in number, are of a light blue colour. It has no song. Its common notes are peculiar to its species, and it sometimes utters a call resembling the bleating of a young fawn. It feeds upon insects, and is more commonly met with in the low swampy woods than any other of its tribe. It arrives in this Province in May, and departs in September.

THE DEPARTMENT OF AGRICULTURE, MANITOBA.

We understand that under the provisions of the Act passed at the recent session of the Legislative Assembly, it is the intention of the Provincial Governmentt o at once organize a Bureau of Agriculture and Statistics, and to make it a live department of the Government. In addition to the collection of statistical information of an authentic and authoritative nature, the want of which hitherto has been much felt, the work of carrying out the provisi ns of a large number of important acts will also fall upon this Department, which, in this, the premier agricultural province of the Dominion, will doubtless soon become one of the most important branches of the Governmental machinery. As previously mentioned, the posi tion of Deputy Minister of Agriculture and Statistics has been offered to Mr. Acton Burrows, who will at once enter on the discharge of his official duties, and proceed with the organization of the Department. Mr. Burrows is an old and experienced journalist, and possesses just the qualities to fit him for the position.—*Winnipeg Daily Time.*

THERE is always increased risk in curing the meat of extremely heavy hogs—risk of tainting, in the hams and shoulders, as it is hard to get the animal heat out of carcases of the kind; but even if it would cure easily, few parties desire these extremely large hams or shoulders.

SHEEP AND SWINE.

YOUNG PIGS.

The first three months of a pig's existence is the most critical and, to its owner, important period of its life, for it is during this time that its constitution is either established, weakened, or destroyed. Every impediment to the growth and strength of the pig tells upon the future hog. Cold, damp, uncomfortable quarters at any time is a detriment, and is especially so while the pig is as sensitive as it necessarily must be at time of farrowing. Clean, comfortable bedding should replace that which may be damp and hard. It is the practice of good breeders to clean out the pen about every second day or so after the sow has farrowed, and put in new and clean bedding, increasing the quantity, for the pigs evidently enjoy snugging up in the fresh litter. At no stage in the life of the animal, as above intimated, will good care yield better returns. That perfect comfort is the highest profit is well understood by every successful raiser of swine. If straw is used for bedding (and nothing is much better), it is best to pass it through a cutting-box; it is then much better than leaves, or anything else that we know of. If used the natural length, there is some risk that the pigs may get entangled, and be laid upon by the mother. If the sow has a warm, comfortable bed, she will lie quiet until she gets hungry. She should have all the food she wants, right along, so that she can supply her pigs with an abundance of milk. As during the first few weeks of the life of her offspring her milk is their only food, it is of course important that she shall supply it in ample quantity, and of a quality suitable to their digestion. She should have generous feed not less than three times a day. Slops of ground feed, grass or clover, as well as corn, together with roots sufficient to keep her digestion complete, will enable her to supply her young with sufficient food; but this point should be emphasized, and we repeat, that she must be well fed and cared for if she is expected to give an abundance of milk and keep up her own condition. It is far easier to do this than to build her up after being run down by the tax upon her, when not well fed, in suckling her young. Another thing: a hungry sow will eat any kind of slop or other food, however unwholesome, but she cannot consume such food and supply pure wholesome milk. On this point an intelligent writer and swine-breeder says:—"In seasons when millers are grinding poor and sprouted wheat we do not find mill feed safe or profitable. Mill feed at all seasons, and especially such seasons, is of uncertain quality, and we prefer to know what we feed if we expect to secure good results; consequently we have found our best results from mixing clean, sound corn two parts; clean, sound oats three parts; and having them ground very fine, and adding wheat, bran, and oilcake meal, according to the season. If we have no grass or roots, we supply more bran and oilcake meal. They are our regulators. Slop thus made and fed sweet has proven most satisfactory to us. After the pigs get to be three or four weeks old we arrange troughs and feed for them, where they may eat and not be disturbed by the sow, and so that they will not be teasing the mother for supplies, which she cannot always afford, be she ever so willing. The little fellows enjoy such a side table, and if they have a trough of milk, the better they like it. Milk for pigs, after four or five weeks old, until they are as many months old, will make a pound of pork for every gallon of milk consumed. And then to this value we may add the unknown but immense gain in improved condition of the pigs."

The sow should have grass, if possible, and while she is enclosed cut and feed it to her. In a few days, if she can have the run of a good pasture, it will be what she needs, in addition to her other fare. Thus cared for, your sow will keep in condition herself, and meet your wishes and reasonable expectations in rearing a thrifty, vigorous litter of pigs.—*Prairie Farmer.*

BELLS AS A PROTECTION FROM DOGS.

A correspondent of one of our southern exchanges answers the question, "How shall I protect my flock from sheep-killing dogs?" as follows:—"After much experimenting, the following has proven the most beneficial in protecting sheep from dogs. For a flock of from 20 to 100 and 150 head, put on from 14 to 16 bells of various sizes and tone, from the common little sheep bell up to a large cow bell. It is the variety of tone and sound that terrifies the sheep-killing dog. The flock should always be so situated that they can approach the house of the landlord through a lane gate or a gap in the fence, and if occasionally salted near the house will invariably approach it at night to sleep, particularly if disturbed by dog or person. No dog, I care not how much practice he may have had in killing sheep, can be induced, even under the most trying conditions, to attack a flock having from 14 to 16 bells of different sizes and tone. A dog severely pressed of hunger may be influenced to attack a flock while lying down at rest, or silently grazing; but the moment that doleful sound of 16 bells of different size and tone reaches his ear, his tail will be seen to tuck between his legs, and he is off for other quarters in a moment. Not one dog in one hundred can catch and hold a strong sheep in a run of 400 to 600 yards; hence the advantage of having a flock so situated that the sheep can at all times approach the house, which they will invariably do when opportunity admits.

"For over 20 years I have kept a flock of from 120 to 200 head, and although there are many worthless sheep-killing dogs around me in the neighbourhood, I have not had one killed by dogs. The tenants and help residing on my farm, within 100 yards of my residence (who are prone to be dear lovers of worthless curs), often have from two to three dogs each, from ten to fifteen dogs, upon an average, on the farm, and many of them known to be notorious for sheep-killing, though strange to say, yet true, they have never killed one sheep known to myself."

HOW TO DRESS A SHEEP.

As soon as life is extinct, skin the hind legs up to the hamstrings; then gambrel and hoist it up; make an incision, high up in the belly, about an inch and a half in length, then insert the stem of a big funnel into the incision, and pour into it one or two gallons of cold water, the colder the better. The application of cold water cools the intestines and the flesh, thereby preventing any contact of the parts, and at the same time cooling every part completely. It also drives out the gases at the incision, so that there is no possibility of the meat becoming affected in any reasonable length of time, which gives the operator time to dress the meat properly. This is done by ripping from hough to hough, skinning downward without further ripping, thereby preventing the wool or any outside filth from coming in contact with the flesh. This, of course, I do as quickly as possible. Then remove the intestines carefully, so as not to break any of them. By this mode of treatment you will find the tallow on the intestines and on the inside of the animal perfectly cool and rigid.

BEES AND POULTRY.

FLYING BEES INDOORS.

A correspondent of the *American Bee Journal*, writing from Frankfort, Mich., says that he had read that when bees were released in a room they would not return to their hives, but, as some of his bees were suffering from dysentery, he determined to give it a trial. He selected a small bedroom, in the south part of the house, through which passed a stove-pipe. The room had only one window, and that looked to the south. He removed the furniture and protected the carpet and walls with newspapers. The temperature of the room ranged from 60° to 80°. Towards noon he carried a hive up, placed it upon the floor, about three feet from and fronting the window, opened the entrance and removed the covering from the frames. During the warmest part of the day the buzzing of the bees, as they flew about the room, could be heard in all parts of the house. Upon going into the room towards sunset he found the bees nearly all in the hive, and the few that remained clustered about the window were easily brushed off and returned to the hive. He afterwards discovered that if brushed from the window upon the floor they would return to the hive themselves. By this method he gave all of his bees a "fly" with results that were entirely satisfactory. I have never tried either of these plans, but if ever again I have bees attacked by dysentery, I shall try giving them a flight in the house.

Of course these flights give only a temporary relief, for, unless the producing causes are removed, another period of long confinement would bring on another attack. If the trouble arises from a poor quality of food, then the bees should be given combs of early-gathered and well-ripened honey, in exchange for their soiled and unwholesome ones; or if the beekeeper has none of these, a frame or two filled with candy, made from granulated sugar, and placed in the centre of the cluster, might help to remedy the trouble. When bees are dying almost universally, with dysentery, the reports from those that are being wintered upon stores of granulated sugar are always favourable; in fact, I have yet to hear of a colony dying of dysentery, whose food consisted entirely of a syrup made from the best granulated sugar. That bees can be kept entirely free from dysentery, by complying with the proper conditions, is proved by the fact that L. C. Root & Bro., and several others, have wintered their bees successfully for several winters, by placing them in their winter repository upon the approach or advent of cold weather, and not removing them until the soft maples blossomed in the spring.—*Country Gentleman.*

ADVANTAGES OF EARLY HATCHED CHICKENS.

Whether they are intended for sale as breeders, or for marketing—if they can be successfully brought up, the advantage of the early-hatched bird is apparent. Chickens that "see the light" late in February, or during the first three weeks in March, make admirable broilers by the middle of May or first of June, if well fed and properly protected against the inclement spring weather.

The poultry raiser who wishes to reap the greatest profit from his fowl knows that spring chickens and winter-laid eggs bring the highest prices. To obtain these figures early chickens must be raised. The cocks must be marketed in June and July, at prices which ought to tempt any one into the business. The pullets are kept, and arrive at maturity in the fall in season to take the place of the hens (yearlings and two-year-olds) which, being fat at the time, are marketed. These pullets furnish a supply of eggs in the early winter months, when the prices are greater than at any other season of the year. Do not neglect, therefore, on any account, to set as many hens as possible early in the season; for, although it is a little more trouble to care for the chicks in the early spring, it pays far better in the end than any other arrangement. In New England, New York, and all the northern States, it is considered that chickens hatched the last week in February or during the first three weeks in March are early. In New Jersey, Maryland, and Virginia, a month earlier in the season corresponds to the more tardy climate of New England.

The note of preparation has been observed around us for some weeks past, and the prospect is—if the eggs that were being incubated proved ordinarily fertile—that there have been a great many "early chicks" brought out by the first to the middle of March.—*Poultry World.*

MILK FOR FOWLS.

There is no doubt but on many farms and suburban places a great deal of milk could be given to the fowl stock with good results, if farmers would become more interested in the cultivation of good poultry. But as long as this class of our people entertains the erroneous idea that it is more remunerative and satisfactory to feed it to the pigs, there is little hope of seeing poultry take its place with other farm stock.

Fowls are very fond of milk, and young chickens will thrive wondrously upon it. A pound of poultry to sell will always command double the price that a pound of pork will bring. Milk fresh from the cow contains all the elements required for the maintenance and growth of animal life. The albumen of the milk is easily changed into that of the egg by the laying hen; if fed to growing chickens will aid them materially in the process of development.

Too much value cannot be placed on milk for developing chicks; as a drink or as a fluid, when scalded, with which cornmeal and bran may be mixed for their early diet, it can scarcely be overestimated. And when it can be cheaply and handily obtained, we can recommend it in any form as a most excellent and nourishing article of food. Milk contains everything essential to promote the growth of flesh, bone, muscles, feathers, and in fact every part of the whole organism of the fowl. For whatever use chickens are grown, whether intended for marketing, for future breeders, or as fancy stock birds, milk in any form will be found especially useful and healthy. —*Poultry Monthly.*

THE STRENGTH OF INSECTS.

Insects are apparently such insignificant creatures that little folk—and big folk, too, for that matter—will be surprised to learn the results of a number of experiments conducted by a scientific Frenchman with a view to test the muscular power of insects. By harnessing some small waggons filled with tiny weights to cockchafers, and also attaching weights to certain swift-flying insects, he was led to the conclusion that the smallest of these animals were able to display the greatest effective force. He then found that a cockchafer was 21 times stronger than a horse, and a bee 30 times stronger; for, whereas a horse is unable to exert a stress beyond the 67th of his weight, a cockchafer can easily draw a load 14 times its own weight, and a bee secured to a wagon 20 times heavier than itself can put it in motion with little trouble. That is to say, a cockchafer can draw with ease 14, and a bee 20, of its like.

HELPING OUT A CHICKEN.

Picking off the shell to help the imprisoned chick is always a more or less hazardous proceeding, and should never be had recourse to unless the egg has been what is termed "billed" for a long time, in which case the chick is probably a weakly one and may need a little help, which must be given with the greatest caution, in order that the tender membranes of the skin shall not be lacerated. A little help should be given at a time, every two or three hours; but if any blood is perceived stop at once, as it is a proof that the chick is not quite ready to be liberated. If, on the contrary, the minute blood-vessels which are spread all over the interior of the shell are bloodless, then you may be sure the chick is in some way stuck to the shell by its feathers, or is too weakly to get out of its prison-house.

ANTIRRHINUMS AND BEES.

It is stated recently by naturalists that bumble-bees prefer obtaining honey from Antirrhinums, in preference to any other flowers, in which they have a monopoly over other bees, by a curious provision in the tubes of the corollas. They sit on and cling to the lower lip of the blossom, which bends down by the weight of the bee and makes an opening through which the insect thrusts its head and takes possession of the honey. The honey-bee and other insects are not heavy enough to open the entrance. The bumble-bee appears to be aware of this advantage, and flies at once to the Antirrhinums, to the neglect of other flowers which other insects may have previously visited. A writer in the *Garden* says that the old flowers open more easily than young ones, and that while he had found that a weight of twenty grains was required to open the flowers, only three or four grains would bend the lower lip of some older ones.

IN THE POULTRY YARD.

The young chicks will thrive best when kept clean and dry. Those hatched this month, if of the best breeds, usually begin to lay early in the fall, and if kept warm and well fed, will give a supply of eggs through the winter. If the coops are placed in, or adjoining the garden, to allow the chicks to wander freely through it, they will do little harm, until large enough to scratch up the beds, and nibble at the plants, while they will destroy many insects. Let them have an abundance of pure water and wholesome food; these, with good housing from the wet and cold, will secure health and a profitable growth.—*American Agriculturist for May.*

A box of dry gravel should be at hand, which the birds will peck from constantly, for they need this to aid the process of digesting their food, precisely as at any other time.

A young hen lays a larger litter than the old hen. It is probable that the first and second years of a hen's life are the most productive of eggs. How unprofitable, then, to kill off the young fowls and leave the aged fowls.

James Black, carpenter, of Aberfoyle, has a Rouen duck which laid a curious egg the other day. The egg is medium-sized, with the form of a snake coiled inside in two distinct circles, with a well-formed head on the large end of the egg, and looks as if the snake had crawled half out of the egg, then coiled itself around it. The same laid another egg which measured 8 by 8½ inches. The duck was bred by C. Quirk, of Puslinch, and the eggs may be seen at Mr. Black's residence.

THE DAIRY.

MILK AS A REMEDY.

Considerable has been lately said in medical journals concerning the value of milk as a remedial agent in certain diseases. An interesting article on this subject lately appeared in the London *Milk Journal*, in which it is stated, on the authority of Dr. Benjamin Clarke, that in the East Indies warm milk is used to a great extent as a specific for diarrhœa. A pint every four hours will check the most violent diarrhœa, stomach-ache, incipient cholera, and dysentery. The milk should never be boiled, but only heated sufficiently to be agreeably warm, not too hot to drink. Milk which has been boiled is unfit for use. This writer gives several instances in arresting the disease, among which is the following: The writer says: "It has never failed in curing in six or twelve hours, and I have tried it, I should think, fifty times."

"I have also given it to a dying man who has been subject to dysentery eight months, latterly accompanied by one continual diarrhœa, and it acted on him like a charm. In two days his diarrhœa was gone; in three weeks he became a hale, hearty man; and now nothing that may hereafter occur will ever shake his faith in hot milk. A writer also communicates to the *Medical Times and Gazette* a statement of the value of milk in twenty-six cases of typhoid fever, in every one of which its great value was apparent. It checks diarrhœa, and nourishes and cools the body. People suffering from disease need food quite as much as those in health, and much more so in certain diseases where there is rapid waste of the system. Frequently all ordinary food in certain diseases is rejected by the stomach, and even loathed by the patient; but nature, ever beneficent, has furnished a food that in all diseases is beneficial—in some directly curative. Such food is milk.

The writer in the journal last quoted, Dr. Alexander Yale, after giving particular observations upon the point above mentioned—its action in checking diarrhœa, its nourishing properties, and its action in cooling the body, says: "We believe that milk nourishes in fever, promotes sleep, wards off delirium, soothes the intestines, and, in fine, is the *sine qua non* in typhoid fever." We have lately tested the value of milk in scarlet fever, and learn that it is now recommended by the medical faculty in all cases of this often very distressing children's disease. Give all the milk the patient will take, even during the period of greatest fever. It keeps up the strength of the patient, acts well upon the stomach, and is in every way a blessed thing in this sickness.

CREAMERIES.

Last year the net returns to the patrons of cheese factories making whole milk cheese, and to those making both butter and cheese, showed a considerable balance in favour of the latter. This is principally due to two causes. one is the relatively higher price for butter than for cheese during the past year, and the other is the advance which has been made in the manufacture of skim-cheese. A part of this improvement is due to the sweeter and better condition of the skim-milk under the improved process of cold setting, and the rest may be credited to a better skill in adapting the mode of manufacture to the conditions of the milk. A mild, soft, fairly palatable and fairly wholesome cheese is now made in many of the modern creameries out of milk which would, a few years ago, have turned out nothing but "white oak." The success of the creameries and the present high price of butter is causing the erection of a great many new creameries this spring, and the cheese factories which are adapted to manufacturing either butter or cheese are, many of them, preparing for skimming, the first part of the season at least. Dairymen are constantly oscillating to and from the manufacture of butter or cheese.

The current this spring seems to be all one way, and the change may possibly be so great as to cause a reaction in the relative prices of butter and cheese. Butter is now much the most profitable. Cheese at thirteen cents, and butter at thirty cents, gives the equal profit from the milk. But, just now, cheese does not sell as readily at thirteen cents as butter does at forty-five cents. Fifteen cents extra profit on the milk for a pound of butter is a great difference when applied to the milk of a whole factory, and it is not strange that dairymen should be anxious to avail themselves of it.—*National Live Stock Journal.*

FEEDING COWS.

At a recent meeting of the Vermont Dairymen's Association, Mr. Mead, of Rutland, stated that he kept sixteen cows, all natives, from whose milk product he made fifteen pounds of butter per week, selling the same to regular customers in Providence, R. I., at forty cents per pound, put up in ten-pound packages. He feeds his cows on corn cob-meal and barley, one bushel of each, adding to one bushel of this mixture five bushels bran, and feeding four quarts of the mixture to each of his cows per day. When he has corn stalks he cuts them, and mixes the bran and meal with them, wetting the mixture. When he has no stalks on hand, he wets the mixture a little with warm water and feeds it alone, giving the cows plenty of good hay. He waters the animals twice a day, sets his milk in deep cans, churns his cream in an oscillating churn at a temperature of sixty degrees, washes his butter, and works in his salt at the rate of one ounce to the pound of butter.

YIELD OF CANADIAN JERSEYS.

I have seen no tests of Jersey cows from Canada, and send reports of three: Pearl of St. Lambert 5,257, six years old, gave a total in seven days of 245¼ pounds of milk. From this we churned fourteen pounds two ounces of butter. Clematis of St. Lambert 5,478, six years old, gave in seven days 285 pounds. From this we churned fourteen pounds three ounces of butter. This cow has since given as much as forty-seven pounds of milk in one day, and milks up to within three weeks of calving. Mary Ann of St. Lambert 9,770, three years old, gave in seven days 221 pounds of milk. From this we churned fourteen pounds eight ounces of very yellow butter. These cows were not fed higher than any good farmer can afford to feed, being fed on clover hay all they would eat up clean, with peas and oats chopped, and a little bran. I intend testing them again as soon as the grass gets good. These were all tested personally, and can be sworn to.—*W. R., Markham, Ont., in Country Gentleman.*

TO RELIEVE CHOKING.

To relieve a cow choked by a turnip or potato, take a grape vine about as thick as a man's finger and five or six feet long; round both ends like an egg, smooth and peel it; then make a little groove one-eighth inch deep and two inches from one end: put on it two or three plies of rag, and cover with a piece of cotton cloth, turning it back and wrapping it with strong thread or wax-end at the groove; then grease the wad with lard. The obstruction can be pushed into the cow's rumen with this instrument, the wad end to be put into her gullet, and a strong but steady pressure used until it reaches the stomach, which will be instantly known to the operator. This simple substitute for an expensive probang such as I have seen used in the old country I have found to answer the purpose just as well, and it can be made in five minutes. The object of the wad is that the cow's throat may not be injured; it should be tied on securely.—*Joshua Franklin, Gloucester Co., Va.*

THE WANTON CALF: A FABLE.

A Calf, full of Wantonness and Play, seeing an Ox at the Plough, could not forbear insulting him. "What a sorry, poor Drudge are you," said he, "to bear that heavy Yoke, and go turning up the Ground for a Master!" "See what a happy life I lead!" he added, when at evening the Ox, unyoked and going to take his rest, saw him, hung with Garlands, being led away by the Flamen, a venerable man with a fondness for Veal Pot-Pie. MORAL.—This Fable teaches us that Young People had better Stick to the Farm, and not Study for a Learned Profession unless they are fully aware of what it means.—*Harper's Magazine.*

"HE was gored by an angry bull," wrote a reporter, in describing the death of a farmer. "Don't be tautological," said the editor; "strike out the word 'angry;' of course a good-natured bull wouldn't do such a thing."

ENGLISH advices report that the cheese makers of Wiltshire, Dorsetshire and Somersetshire, England, made cheese last winter, and this supplied the demand for fresh, early stock which has usually been supplied by American early cheese.

A FRENCH chemist reports that water made slightly salt, and to which, when boiling, bran in proportion of one quart to every gallon has been added, has been found in a series of experiments to increase the yield of milk twenty-five per cent. if given to the cows as their ordinary drink.—*Mark Lane Express.*

WHILE it would be of no use for the Jersey, Ayrshire, or Holstein breeders to try to take a sweepstake over Shorthorns or Herefords, at the fat stock show, with steers of their favourite breed, still the exhibition of such steers at the show would be productive of great good, both to themselves and to the American public generally. It would prove that not only are the leading dairy breeds valuable for dairy purposes, but they make a very nice quality of meat, which, although inferior to the beef of exclusively beef breeds, is still of good flavour, and will sell at a fair price.

MAJOR W. C. J. HALL told the recently organized Western New York Dairymen's Association that he had seen the two halves of the same cheese of our manufacture sold side by side in England, one as American the other as Cheshire, for about four cents a pound difference in favour of the latter. He cited other interesting and amusing instances of a similar kind, illustrating British prejudice and gullibility, and he thinks our products will never be marketed abroad on their merits, and so bring their just value, until they are consigned to American agents sent to foreign countries by associations of producers. At present our beef is largely sold as "home grown," and butter and cheese from the United States is repacked to resemble that of English make. The latter deception is a regular industry, and the men engaged in it are known as "galvanizers."

WHEN a gentlemanly agent calls and offers you a hay fork for nothing and a commission of $5 for every one you sell, don't sign any documents until you have examined them thoroughly, and not then if you don't understand them.

HOME CIRCLE.

THE SLAVERY OF THE JEWS.

Whatever ground the popes had left untouched, was covered by the councils of the different countries; they forbade, for example, that a Christian should let or sell a house to a Jew, or buy wine of him. In addition to all this came the oft-renewed orders to burn all copies of the Talmud and its commentaries—*i.e.*, by far the largest part of the Jewish literature—on account of the passages hostile to Christianity that were said to be found therein. And then came again tortures, persecutions, and imprisonments in abundance. It seemed as if the mighty of the earth had only stones instead of bread for the afflicted people, and were disposed to give no answer to their entreaties and inquiries other than that which the ancestors of the Jews once gave to the tyrant Herod, viz., when he asked what, then, he should do for them, they replied, to hang himself.

The new theory of the slavery of the Jews was now adopted and elaborated by the theologians and canonical writers. Thomas of Aquinas, whose views passed as unimpeachable in the whole church, decided that the princes could dispose of the property of these men, who were condemned to perpetual bondage, just as they would of their own goods. A long series of writers on the canon law built upon the same foundation the assertion that princes and lords could forcibly disposses the Jews of their sons and daughters and cause them to be baptized. That a baptized child of a Jew should not be allowed to remain with its father was universally taught, and still is a demand of the church. The princes, in the meantime, had greedily adopted the papal doctrine of the divinely ordained slavery of the Jews, and the Emperor Frederick II. based thereupon the claim that all Jews were his property as the emperor, according to the then prevailing logic, that the master's rights over them had been transmitted from the old Roman emperors to him as their successor. His son, Conrad IV., already used the expression, "servants of our chamber," and the Schwabenspiegel professed to know that "King Titus had given them over to be the property of the imperial chamber." King Albrecht demanded from King Philip of France, that the French Jews be handed over to him, and later the Jews themselves said, in a memorial to the Council of Ratisbon, that "they belonged to the emperor, in order that he might preserve them from entire destruction at the hands of the Christians, and keep them as a memorial of the sufferings of Christ."

After the fourteenth century, this servitude to the exchequer came to be understood and applied as a complete slavery: "You belong," says the Emperor Charles IV., in a document addressed to the Jews, "to us and the empire, with your lives and possessions: we can order, do, and act with these as we like, and as seems good to us." In fact, the Jews frequently went, like an article of merchandise, from one hand into another; the emperor declared, now here, now there, that their claims for the payment of debts were annulled, and caused a large sum of money, generally thirty per cent., to be paid by the debtors into his own treasury.—*Popular Science Monthly.*

COMETS AND THE EARTH.

Prof. Simon Newcombe, LL.D., in his "Popular Astronomy," thus speaks of the probable effect of a comet's striking the earth:

The question is frequently asked, "What would be the effect if a comet should strike the earth?" This would depend upon what sort of a comet it was, and what part of the comet came in contact with our planet. The latter might pass through the tail of the largest comet without the slightest effect being produced, the tail being so thin and airy that a million miles' thickness of it looks only like gauze in the sunlight. It is not at all unlikely that such a thing may have happened without ever being noticed. A passage through a telescopic comet would be accompanied by a brilliant meteoric shower, probably a far more brilliant one than has ever been recorded. No more serious danger would be encountered than that arising from a probable fall of meteorites. But a collision between the nucleus of a large comet and the earth might be a serious matter. If, as Prof. Pierce supposes, the nucleus is a solid body of metallic density, many miles in diameter, the effect where the comet struck would be terrible beyond conception. At the first contact in the upper regions of the atmosphere, the whole heavens would be illuminated with a resplendence beyond that of a thousand suns, the sky radiating a light which would blind every eye that beheld it, and a heat which would melt the hardest rocks. A few seconds of this, while the huge body was passing through the atmosphere, and a collision at the earth's surface would in an instant reduce everything there existing to fiery vapour, and bury it miles deep in the solid earth. Happily, the chances of such a calamity are so minute that they need not cause the slightest uneasiness. There is hardly a possible form of death which is not a thousand times more probable than this. So small is the earth in comparison with the celestial spaces that, if one should shut his eyes and fire a gun at random in the air, the chance of bringing down a bird would be better than that of a comet of any kind striking the earth.

STAND UP STRAIGHT.

God fitted the great vital organs in your bodies to an erect spine. Do your shoulders ever stoop forward? If they do, so do the lungs, heart, liver, and stomach fall down out of their natural places. Of course they can't do their work well. To show you how this is, I will tell you that when you bend forward you can only take about half as much air into the lungs as you can when you stand up straight. As I have said, God has so arranged the great organs in the body that they can't do their duty well except when the body is straight. Oh, how it distresses me to see the dear children, whom I love so much, bending over their school desks, and walking with their head and shoulders drooping! My dear children, if you would have a strong spine and vigorous lungs, heart, liver, and stomach, you must, now while you are young, learn to walk erect.

If one of my children were about to leave this country for Japan, never to return, and were to come to me and ask for rules to preserve his health, I should say: "I am glad to see you, and will give give you four rules, which, carefully observed, will be pretty sure to preserve your health." He might say to me: "Four are a good many; give me one, but the most important one, and I promise not to forget it." I should reply: "Well, my dear child, if I give you but one, it is this: Keep yourself straight, that is, sit up straight; walk up straight, and when in bed at night, don't put two or three pillows under your head as though intent on watching your toes all night;" and I believe that in this I should give the most important rule which can be given for the preservation of health and long life.—*Dr. Dio Lewis.*

SPRING FLOWERS.

We rambled through the woodlands
In the early springtide hours,
And searched the sunny places
To find the first wild flowers.

Across the emerald hillside
And newly budding trees,
The winter winds were hast'ning
To kiss the summer breeze.

Around the mossy wood-paths
The sun his glory shed,
While bluebirds and the robins
Were twitt'ring overhead.

Beside a fallen tree trunk
Where scarce had left the snow,
The pink arbutus blossoms
Were nestling sweet and low.

Anemones and violets
Swayed their dainty bells,
While saxifrage's flowerets
Whitened the woody dells.

We gathered them in garlands,
Many as we could hold,
And garnished them with blossoms
Of bright marsh-marigold.

Down by the chatt'ring brookside
In a dewy, sheltered spot,
We found the blue-eyed beauty,
The wild forget-me-not.

We saw in soft spring beauties
And their gay sister flowers,
That Nature owns her Maker
In all her childhood hours.

And through the April sunshine,
In that sweet, dreamy spot,
We heard the Saviour's whisper,
"Children, forget-me-not."

DON'T WHINE.

There is a class of people in this world, by no means small, whose prominent peculiarity is whining. They whine because they are so poor, or if rich, because they have no health with which to enjoy riches. They whine because they have no luck, and others' prosperity exceeds theirs; they whine because some friends have died and they are still living; they whine because they have aches and pains, and they have these *because* they whine so much. They whine, no one knows why. Now, a word to these whining people. First, stop whining; it is of no use complaining, fretting, fault-finding, and whining. Do you know that it is a well settled principle of physiology and common sense that these habits are more exhausting to nervous vitality than almost any other violation of physical law? And do you not know that life is pretty much as you make it? You can make it bright and sunshiny, or you can make it dark and shadowy. This life is meant only to discipline us—to fit us for a higher and purer state of being. For your own sake and for humanity's sake stop your whining and fretting and go on your way rejoicing.

SLEEPING-ROOMS.

One-third of all our lives is passed in our sleeping-rooms, and yet many people think that any room is good enough to sleep in. The sleeping-room should be large, airy, dry, and pleasant. An eastern exposure is the best, so that the morning sun may shine into the room. It should be well ventilated. A good arrangement for ventilation at the window is to have the upper sash dropped about six inches, and a piece of board fitted into the space at the top. The fresh air can come in between the two sashes, without making a draft upon anyone in the room. An open fire-place in a bed-room is a good aid to ventilation. Plenty of fresh air gives health, strength and elasticity to the body. Another thing: all the clothing worn during the day should be removed at night and aired, while other garments are substituted for the night.

DO YOUR BEST.

A gentleman once said to a physician. "I should think, doctor, that at night you would feel so worried over the work of the day, that you would not be able to sleep."

"My head hardly touches the pillow till I fall asleep," replied the physican. "I made up my mind," he continued, "at the commencement of my professional career, to do my best under all circumstances, and so doing, I am not troubled by any misgivings."

A good rule for us all to follow. Too many are disposed to say: "No matter how I do this work now; next time I'll do better." The practice is as bad as the reasoning: "No matter how I learn this lesson in the primary class; when I get into a higher department, then I'll study." As well might the mother in knitting stockings say: "No matter how the tip is done; even if I do drop a stitch now and then, I'll do better when I get further along." What kind of a stocking would that be?

As well might the builder say: "I don't care how I make the foundation of this house; anything will do here, wait till I get to the top, then I'll do good work."

Said Sir Joshua Reynolds once to Doctor Samuel Johnson: "Pray tell me, sir, by what means have you attained such extraordinary accuracy and flow of language in the expression of your ideas?"

"I laid it down as a fixed rule," replied the doctor, "to do my best on every occasion, and in every company to impart what I know in the most forcible language I can put it."

IMPORTANCE OF THE COMMA.

Lindley Murray laid down twenty rules to govern the use of a comma, and Wilson, in his "Treatise on Punctuation," gives nineteen. No wonder that with so many rules people get confused as to the proper use of this, the smallest grammatical division in written or printed matter. Many illustrations might be given to indicate the important character of the errors that arise from its omission or improper use; but the following will suffice:

In the Imperial Dictionary, the word "Tarn" is thus defined: "A small mountain, lake or pool." The improper use of the comma after mountain, makes tarn signify three things: first, a mountain; second, a lake; and third, a pool, instead of simply a mountain lake, or pool.

At a public dinner this toast was given: "Woman—without her, man is a brute." A reporter had it printed: "Woman without her man, is a brute."

A printer, meddling with the verdict of a coroner's jury, by inserting a comma after "drinking" instead of "apoplexy," made it read thus: "Deceased came to his death by excessive drinking, causing apoplexy in the minds of the jury."

BIRTHDAY OF ROME.

It may not be generally known that Rome keeps her birthdays, but so it is. The twenty-first of April is the day which for ages past has been held to have seen the birth of this wonderful city. Old traditions (more legendary, of course, than historical), handed down through the centuries, fix the twenty-first of April as the day on which Romulus traced out with a ploughshare the lines of the first foundations of Rome, on the Palatine Hill. The modern Romans keep the day with much festivity, and, as if to emphasize the ever-springing youth of the city which they proudly style "Eternal," they give the children a prominent place in the day's celebration. It is the great day for public inspections of schools and distributions of prizes. In the great hall of the Collegio Romano there is always a mighty gathering of little ones, for thither come the King and Queen to note and reward in person the progress made by the pupils of the principal schools, male and female. There are recitations and vocal exercises, and marching and gymnastics, and scenes from comedies—in short, a little of everything.

DURING the month of May there arrived in New York from abroad over 90,000 immigrants, the largest number reported in any month since a record has been kept.

STRONG influence is brought to bear upon the Post Office Department at Washington to secure Sunday deliveries of mail matters in cities where the carrier system prevails.

THE disturbance in the west coast of Africa continues, and some sanguinary encounters have taken place between the natives of New Calabar and Bonny.

THE Princeton College Library contains 55,000 volumes and 12,000 pamphlets. The hall libraries number upwards *of 16,000 volumes, making a total of 83,000.*

A TELEGRAM from Madrid states that the revolutionary band in Catalonia, finding no sympathy in the country, dissolved within a few hours after assembling.

OF all the unlikely places for a bird's nest, the most unlikely is that selected by a robin in Fitchburg, Mass., who has built hers close by a circular saw in a mill, and has laid four eggs in it.

THE rumour is once more revived that Mr. Gladstone may be expected to resign the Chancellorship of the Exchequer shortly. The names of Mr. Goschen and Mr. Childers are mentioned as likely to succeed him in the post.

LIEUTENANT DANNENHOWER has been ordered by the Navy Department to prepare a full report of his experience in the Arctic regions, after the separation from Melville. He is now in Washington, and will be permitted to rest until his sight shall have improved before commencing this work.

SERIOUS riots have occurred at Goviatuno, near Vellore, between Mahommedans and Hindoos, owing to the celebration by the latter of a feast in which they adopted disguises used by Mahommedans at the Mohurram. The mosque was set set on fire, and in the great disorder which prevailed some lives were lost.

IN raising the vessel "La Province," which sank in the *Bosphorous, the telephone was added to the diver's dress,* thus greatly facilitating the communications. One of the glasses of the helmet is replaced by a copper plate, in which a telephone is inserted, so that the diver has only to turn his head slightly in order to receive his instructions, and report what he sees. Besides, in case of danger or accident, lives may now be saved which would otherwise have been sacrificed.

YOUNG CANADA.

PROMPTING THE HEN.

"It's well I ran into the garden,"
Said Eddie, his face all aglow:
"For what do you think, mamma, happened?
You never will guess it, I know.

"The little brown hen was there clucking;
'Cut-cut!' She'd say, quick as a wink,
Then 'cut-cut' again, only slower;
And then she would stop short and think.

"And then she would say it all over,
She *did* look so mad and so vexed;
For mamma, do you know, she'd forgotten
The word that she ought to cluck next.

"So *I* said, 'Ca-*daw*-cut,' 'Ca-*daw*-cut,'
As loud and as strong as I could;
And she looked round at me very thankful,
I tell you, it made her feel good.

"Then she flapped, and said, 'Cut-cut-ca-*daw*-cut;'
She remembered just how it went then.
But it's well I ran into the garden—
She might never have clucked right again!"

—*St. Nicholas.*

WHERE COAL COMES FROM.

The coal fire in the grate sparkled and crackled and sent its sharp-pointed flames up through the dark mass, giving even the smoke a lurid hue.

We all sat gazing into the fire, making fancies and thinking our own thoughts, when Uncle John interrupted the silence by saying:

"And so, at last, this coal fulfils its mission."

"What do you mean, uncle?" interrupted Julia, who sat on her low stool, leaning her face on Uncle John's knee, and smoothing the tabby cat's pretty fur.

"Why, I mean that after so many long years, this coal has at last become an agent for the use and comfort of man. Perhaps you do not know how coal is formed?"

We all drew our chairs nearer as Julia exclaimed, "Do tell us."

"Well," began Uncle John, stroking his long white beard, "many thousand years ago—in fact, more years than any of you can count even in a whole life-time—there grew a vast forest. There were no North and South American continents, nor even an Eastern or Western world. An exceedingly small portion of the globe was land, the rest was a wide sea. In many places the ocean was shallow, and as years went by the sand and drift matter filled up the shallow places, until they became great swamps. In these swamps grew great forests.

"The great amount of carbonic acid gas that mingled with the air, and the high degree of warmth, along with the constant moisture, caused these forests to grow very rapidly. The pine tree grew to immense size; ferns grew as high as trees; and a sort of club moss, that in our forests never grows over three feet high, in those forests grew eighty and ninety feet high.

"Along the damp, warm valley of the Amazon, in South America and in the tropics, grow our richest and most profuse vegetation, but even that is nothing compared to the ancient forests that grew from the swamps.

"In these forests the trees and vegetation grew so rapidly that they crowded upon each other. Being too much crowded, much of the vegetation died as rapidly as it had grown. Thus year after year, the old forest died down, and above it grew the new, until one forest was piled upon another.

"After thousands of years, gradually, the whole surface of the land began to sink, until the sea once more flowed over the places where forests had grown.

"And, again, after more thousands of years, the drift matter and sand again filled up the shallow places, and other forests grew in new swamps.

"As years went by, they too were submerged in the sea.

"This continued for numberless years. Between each layer of decayed forests there was a layer of sand and mud and shells and drift matter that finally hardened into rock, forming the limestone or sandstone that is found in our coal mines.

"Miners can tell just how many times the coal-beds have been submerged by the number of layers of sandstone or limestone.

"Most of the trees of that ancient forest were pine trees.

"Pine contains tar and pitch and a great deal of resinous matter. Coal also contains tar and pitch and rosin, which it received from the decayed pine. Coal is pure carbon, and is black because carbon is black. All plants contain a great deal of carbonic acid. When plants breathe or decay they give off large quantities of carbonic acid gas, hence this carbon became a part of the coal.

"The constant pressure above, and the water, caused this decaying vegetation to take first the form of peat.

"Peat is a soft, spongy sort of coal, and is much used by the poor yeomanry of England and Ireland for their fires.

"After the peat has lain many thousands of years under great pressure and deeply buried in the dark bosom of the earth, it gradually and slowly hardens into the coal we use in our grate.

"Sometimes, in splitting open a block of coal, you can plainly see the impress of beautiful and perfectly formed leaves, branches and twigs and vines. Our coal is really, then, nothing but a decayed forest. It has only been within the last few years that coal has come into extensive use in Europe and the United States. Not until the timber of the forests was fast disappearing did coal come into demand, and yet it has been stored away in measureless abundance generations before we were born."

We were all gazing into the blazing fire that burned so brightly as to pain the eyes. Julia said it seemed to be trying to make as much light as possible, in order to make up for having been so long in the dark.—*N. Y. Tribune.*

THE FAITHFUL ELEPHANT.

There is a beautiful story told of an old elephant who was engaged in battle on the plains of India. He was a standard-bearer, and carried on his huge back the royal ensign, the rallying point of the Poonah host. At the beginning of the fight he lost his master. The mahout, or driver, had just given him the word to halt, when he received a fatal wound, and fell to the ground, where he lay with a heap of slain. The obedient elephant stood still, while the battle closed round him and the standard he carried. He never stirred a foot, refusing either to advance or retire, as the conflict became hotter and fiercer, until the Mahrattas, seeing the standard flying steadily in its place, refused to believe that they were being beaten, and rallied again and again around the colours. And all this while, amid the din of battle, the patient animal stood straining its ears to catch the sound of that voice it would never hear again.

At length the tide of conquest left the field deserted. The Mahrattas swept on in pursuit of the flying foe, but the elephant, like a rock, stood there with the dead and dying around, and the ensign waving in its place.

For three days and nights it remained where its master had given the command to halt. Neither bribes nor threats could move it.

Then they sent to a village one hundred miles away, and brought the mahout's little son. The noble animal seemed then to remember how its driver had sometimes given his authority to his little child, and immediately, with all his shattered trappings clanging as he went, paced slowly and quietly away.

What a lesson of fidelity is taught us by the faithfulness of this dumb creature to his master!

MY FIRST CIGAR.

'Twas just behind the woodshed,
One glorious summer day;
Far o'er the hills the sinking sun
Pursued its westward way.

And in my lone seclusion,
Safely removed afar,
From all of earth's confusion,
I smoked my first cigar.

Ah! bright the boyish fancies
Wrapped in wreaths of blue;
My eyes grew dim, my head was light,
The woodshed round me flew.

Dark night closed in around me,
Rayless, without a star;
Grim death I thought had found me,
And spoiled my first cigar.

Ah! pallid was my noble brow;
The waning night was late;
My startled mother cried in fear,
"My child, what have you ate?"

She tucked me in my little bed,
As I still sicker grew,
And there I lay, when all at once
I took an awful spew.

I puked until I thought I'd burst,
My groanings sounded far;
I made a firm resolve my *first*
Should be my *last* cigar.

—*Burdette.*

A CUSTOMER went into a store one day, and found the proprietor out, and only a small boy for a clerk. Winking very slyly to the boy, he says: "Johnnie, give me extra measure to-day; your master is not in." Johnnie, looking solemnly into the man's face, said, "My Master is always in, sir." Johnnie's Master was the All-seeing God.

A MILLER was waked up by his camel trying to get its nose into the tent. "It's cold out here," said the camel; "I only want to put my nose in." The miller made no objection. After awhile the camel asked leave to have his neck in, then his fore feet; and so, little by little, it crowded in its whole body. The miller bitterly complained. "If you don't like it, you may go," answered the camel. "As for me, I've got possession, and I shall stay. You can't get rid of me now." Do you know what the camel is like? Bad habits.

Scientific and Useful.

TO CLEAN MARBLE.—A paste made of whiting and benzine will clean marble, and one made of chloride of soda, spread and left to dry (in the sun, if possible), will remove the spots.

PAPERING WHITEWASHED WALLS.—To make wall paper stay on whitewashed walls, use one pound of glue, one-fourth bar of soap, dissolved in six quarts of scalding water. Let it stand until blood warm, and apply with a whitewash brush; let it dry thoroughly, and paper.

RICE FRITTERS.—Boil three tablespoonfuls of rice until it has fully swelled, then drain it quite dry, and mix with it four well-beaten eggs, a quarter of a pound of currants and a little grated lemon peel; nutmeg and sugar to taste. Stir in as much flour as will thicken it, and fry in hot lard.

BAKED CUSTARDS.—These require but three eggs to a quart of milk. To prevent the curd and whey from separating, the milk should be boiled and cooled before the eggs are added, and the oven should have a slow heat. As soon as it jellies, it should be taken out. All custards are better eaten cold.

BROWNED POTATO.—Mash your potatoes with milk, butter, and salt; heap as irregularly as possible in a dish, and hold a red-hot shovel close to them. They will brown more quickly if you glaze them with butter so soon as a crust is formed by the hot shovel; then heat it again and repeat the browning.

MUSTARD DRESSING FOR LETTUCE.—We find in an exchange the following: Take two tablespoonfuls of mustard; one tablespoonful of flour; mix them well while dry; and take half a cup of strong vinegar; fill the cup with water; stir the mustard and flour into it; cook it as you would boiled custard. When thick enough, take it from the fire and add one tablespoonful of sugar.

POTTED HAM.—To make potted ham, take lean and very tender boiled ham, chop it fine and beat to a paste in a mortar—an old-fashioned wooden one is recommended for the purpose—adding butter if needed to make the particles stick together, and a little mixed mustard, if desired. This is excellent for travellers' lunches, and also "handy to have in the house."

A COMMON and good way to obtain a regular supply of cider vinegar, says the "Country Gentleman," is to fill the barrel nearly full of good, sharp cider vinegar, and then draw away every few days a few quarts at a time, supplying its place with an equal amount of cider which has not yet changed. The larger quantity of sharp vinegar in the barrel will change the smaller quantity added, before the next draft is made.

BLACK COFFEE.—To make coffee good it should never be boiled, but boiling water should be poured on it just the same as for tea. A great deal of the aroma of coffee is lost unless it has been freshly roasted, and one reason why Germans and French excel in their coffee is simply because they roast each day sufficient for the day's needs. It should never be ground until it is wanted for use. To make excellent strong black coffee allow one and a-half ounces coffee for each person, and to every ounce of coffee allow one-third of a pint of boiling water.

APPLES AS FOOD.—A raw, mellow apple is digested in an hour and a half, while boiled cabbage requires five hours. The most healthy dessert that can be placed on a table is a baked apple. If eaten frequently at breakfast with coarse bread and butter, without meat or flesh of any kind, it has an admirable effect upon the general system, often removing constipation, correcting acidities, and cooling off febrile conditions more effectually than the most approved medicines. If families could be induced to substitute them for pies, cakes and sweetmeats, with which their children are frequently stuffed, there would be a diminution in the total sum of doctors' bills in a single year sufficient to lay in a stock of this delicious fruit for the whole season's use.

DESSERT.—What shall we have for dessert? is the question which is agitating the country housewife just now, before strawberries come. An orange shortcake will answer the question once or twice at least. Make a crust as for strawberry shortcake, only roll it out a little thinner. While it is baking, cut up a liberal allowance of oranges and scatter sugar over them. When the shortcake is done, cut in layers and put the oranges between. Canned pine-apple, chopped fine, may be used for the filling, and even dried apples thoroughly soaked and cooked. Mash the apples, and to one quart of apples allow one full cup of black raspberries. They colour and flavour the apple, and if you have never eaten it you will be pleased to note how good this simple dish tastes.

TORONTO WHOLESALE MARKETS.

OFFICE RURAL CANADIAN,
Toronto, June 10th, 1882.

CATTLE.—The receipts are not equal to the demand, and prices are higher than for many years. Good butchers' cattle, averaging 1,000 to 1,100 lbs., sold at 6½c. to 7c. per lb.; ordinary, 5½c. to 6c., and inferior at 4c. to 4½c. Choice steers for shipment are worth 6¾c. to 7c. *Sheep* are scarce and firm at 5¼c per lb. live weight, and *spring lambs* bring $3.50 to $5 a head. First-class *calves* sell at $10 to $12 a head, and medium at $6 to $7. *Hogs* are in small offer and firm at 7c. live weight.

FLOUR AND MEAL.—*Flour.*—Stocks in store 2,400 bbls. against 2,750 last week, and 3,900 bbls. like date last year. There was a little movement in superior extra last week at $5.85 to $5.90, old standard, but the demand has since fallen off. A few lots offered on Tuesday and Wednesday at $5.90, not taken. Extra is quiet at about $5.75, and spring extra nominal at $5 60 to $5.70. *Bran* is steady, with sales of car lots at $13.50 to $14 on track. *Oatmeal* is also steady, cars being worth $4.85 to $4 95, and small lots $5 to $5.25. *Cornmeal* dull, business confined to small lots at $4 to $4.15.

GRAIN.—With the exception of wheat, prices show a decline during the past week. The amount of business continues small, the demand being light and receipts limited. In Chicago wheat has advanced considerably since Monday, while the English markets have been rather easier in anticipation of a large home yield. *Fall Wheat.*—Stocks in store, 149,151 bushels, as compared with 171,863 bush. last week and 96,724 bush. at a like date in 1881. The demand has been but moderate, and prices have been sustained on small offerings. A few cars as well as two cargoes of No. 2 sold during the week at $1.30, and the market closes at that price bid. *Spring Wheat.*—Stocks in store, 66,688 bush. against 61,667 bush. last week and 68,122 bush. last year; demand fair from millers, with sales of one to three car lots. No. 1 Spring sold at $1.37 f.o.c. and at $1.36 on track. No. 2, choice, at $1.35 on track and No. 2 at $1.34 f.o.c. *Barley.*—The season is over until the next crop. Stocks are smaller than usual, there being 6,311 bush. in store against 23,887 bush. at a like date in 1881. *Oats* have offered more freely and are slightly easier. Sales of western have been made at 48c. and 47½c. on track. Stocks in store 9,613 bush. against 10,273 bush. last week and 16,549 bush. last year. *Peas* dull, with few offering; the only sale reported a car of No. 2 on Tuesday at 82c. to arrive. No. 1 are worth about 85c. *Rye.*—No demand, and prices lower in sympathy with New York; a car or two offered at 78c. *Corn* dull and nominal, at 88c. to 90c. on track.

PROVISIONS.—Trade moderate, the movement being restricted by small stocks and high prices. *Butter* comes forward slowly and is slightly firmer; sales of tub lots of choice, also large rolls in good condition, were made at 16c. to 17c.; inferior to medium lots sell to the city trade at 12c. to 15c. Pound rolls bring 18c. to 20c. on the open market. *Cheese* is in moderate demand and firm, with sales at 11c. to 11½c. In Liverpool the price is now 58s. *Eggs* are in good demand and firm; there were sales daily at 17c. per dozen in case lots. *Beans* scarce and firm, with a sale of a car on Tuesday on p.t.; prices rule at $3.10 to $3.25 per bushel. *Bacon* has been in demand at 12c. to 12½c. for round lots of long clear, but holders ask 12½c., and jobbing lots sold at 12¾c. to 13c.; C.C. is also firm at 11½c. to 11¾c. in a jobbing way. Rolls very scarce and firm at 13½c. *Hams* are firm at 13c. for sweet pickled, 14½c. for smoked and 15c. for canvassed. *Mess Pork* in small stock, and held at $23. *Lard* is in fair demand and firm at last week's prices; *Dressed Hogs* firm, with a few sales to butchers at $10 to $10.25.

WOOL.—New fleece has been offering slowly, but the demand not being active prices are easy at 19c. to 21c. There has been a fair business in fine class wools, with sales of pulled supers at 27c. to 27½c., and of extra at 33½c. to 34c.

HIDES AND SKINS.—*Hides* are in small supply and steady; all green offering are taken freely at 7½c. for cows and 8¾c. for steers. A car of cured sold at 8¾c. on Monday. *Calfskins* are in moderate supply and steady at 13c. for green and 15c. for cured. *Pelts* are beginning to offer and bring 25c., while *Lambskins* are firmer at 30c. *Tallow* in good demand and firm, with sales of rendered at 8¼c. to 8½c., dealers pay 4c. for rough.