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RURAL NOTES.

The *Prairie Farmer* mentions the sale of a Holstein cow named "Duchess of Flanders 2nd," by Dr. A. W. Pratt, of Elgin, Ill., to J. O. Chase, of Fairmount, Neb., for \$525.

POTATOES from Scotland and Ireland, and cabbages from Holland, have made their appearance in the Chicago markets, under the stimulus of the high prices that have been ruling during the past few weeks.

DURING the second week of March the steamer *Circassian* landed a hundred packages of Holstein butter at the port of New York. This makes commands the top price in the European markets, and has come to compete with the American "gilt-edged" product.

MANY who are annoyed with unsightly stumps would be glad to find a cheap and easy method of getting rid of them. Here is one reported by the *Rural Messenger*—

General Colquitt, of Georgia, in a recent address, said: To remove stumps, all that is necessary is to have one or more sheet-iron chimneys some four or five feet high. Set fire to the stump, and place the chimney over it so as to get the requisite draft at the bottom. It will draw like a stove. With several such chimneys, of different sizes, the removal of stumps may be accomplished at merely nominal labour and expense.

A RECENT number of *Peck's Sun* contains the following advice:—

Farmers should be careful about setting old straw stacks on fire. A New Jersey farmer burned a straw stack, and just as the flames were becoming torrid, six tramps crawled out of the stack, their hair singed and smoke oozing out of their collars and places where the clothing was torn. They upbraided the farmer for his carelessness and threatened to sue him for damages. A straw stack burned near Racine on Monday night, and human bones have been found in the ashes. Somebody is short one tramp. The best way to do, before burning a straw stack, is to take a pitchfork and run it into the stack all around, when, if no smothered profanity is heard, you can conclude that the tramps have got into the barn or hog pen.

"HONEST farmer" is getting to be what Artemus Ward used to call "a sarcasism." Even in New England we read of "tricks that are mean" being perpetrated by unsophisticated agriculturists. Barrels of apples "deaconed;" half-boiled sap sold for pure maple syrup; six-and-a-half feet of wood piled so as to pass for a cord; a load of poor hay plated over a foot thick with timothy; frozen turkeys marketed, each of which contained a lump of ice weighing a pound or more; a stone snugly ensconced in a tub of butter, are among the cheating devices at which country bumpkins have been detected in "the land of steady habits." But of course none of these things are ever done in "this Canada of ours."

The number of women who are pursuing agriculture as an occupation in the United States is

increasing. The *Prairie Farmer* says, it is stated that 2,252 women are engaged in farming in the State of Indiana. It has not been reported how successful they are, but it is hardly to be expected that if the first thousand had failed, that the second thousand would have gone into the business. That there are so many women engaged in the various departments of farming now, not only in Indiana, but throughout the country, is probably due, in part at least, to the fact that nearly every State has its agricultural college, and a large majority of these colleges admit the daughters as well as the sons of the land.

A LIVELY controversy is going on in the *Weekly Globe* about the "irrepressible thistle." Apparently intelligent farmers contend that summer fallowing is the only effectual method of dealing with this vegetable pest. One fair trial of clovering would convince them of their mistake. It is estimated that there are not less than a million acres of summer fallowing in Canada every year. Each acre will cost, at a low estimate, at least two days' work per annum. Two million days' work thrown away, and at a low calculation a million tons of clover hay lost, may thus be charged against the practice of summer fallowing. It is a huge bill of costs, equivalent to about \$10,000,000 of direct taxation, by which nobody is enriched a solitary cent!

A CORRESPONDENT of the *London Graphic* takes up the cudgels in defence of "the misrepresented mole." In England farmers pay a premium on killed moles, and large numbers of them are trapped and slaughtered as a means of "turning an honest penny." But if this writer is correct, the English farmers are making a great mistake in trying to exterminate this burrower under ground. He denies that it ever injures grain fields or eats corn, and says he has examined the stomachs of scores without finding a single grain of any kind in one of them. Wire-worms are very destructive to seed-wheat. It is estimated that 60,000 bushels are annually destroyed in Great Britain by this voracious insect. The mole is a great enemy to the wire-worm, and therefore "this deponent sayeth," apparently with much truth and force, that it ought to be encouraged instead of being destroyed.

THE Executive Committee of the Montreal Horticultural Society and Fruit Growers' Association of the Province of Quebec have applied to the Council of Agriculture for the establishment of an experimental station at which the hardiness of fruit-trees may be tested. Importations of apple, pear, plum, and cherry trees have been made from Russia by the U. S. Government, the State of Iowa, and some private individuals.

From these, it is believed, specimens can be obtained at a trifling cost, with which to stock an experimental orchard in the Province of Quebec. Such an establishment would be specially valuable now that settlers are flocking into the North-West, many of whom will be desirous of trying the fruit-growing capabilities of that vast region. Only varieties hardy enough to deserve the name "iron-clad" can be expected to succeed in a country where the temperature descends to so low a point in winter. It is well, therefore, to find out what kinds, if any, have the character of extreme robustness.

It appears that all pictures at present in existence representing a horse in the action of full gallop are untruthful. They exhibit the animal at the moment when he is clear of the earth, with his fore and hind legs extended to their utmost stretch. But it has been demonstrated that, during the spring into the air, the horse's legs are gathered under him in a very miscellaneous and ungraceful fashion. The fullest extension of the legs takes place, with the off fore leg and the near hind leg on the ground. All this and much more has been ascertained by means of a series of photographs recently taken. A row of twenty-four cameras, placed one foot apart, was arranged beside a track, and a horse galloped past them. The cameras being highly sensitive, the exact position of the animal at each portion of his stride was obtained, and by comparing impressions in their regular order, the precise manner of his motion was incontestably shown. It is not the first time that even distinguished artists have produced pictures that conflict with facts.

A CORRESPONDENT of the *Country Gentleman*, discussing the wheat outlook, under date of March 9th, affirms that the "violent fluctuations" to which the price of that grain has been subjected have been caused entirely by "speculative reasons," and shows very conclusively that there is nothing in the real state of the market, or the crop prospects, to warrant a downward tendency in the price of wheat. He proves by official statistics that the quantity of wheat now on hand in the United States is unprecedentedly small for this time of year—so small, that it cannot begin to supply the foreign demand from now to harvest. Those who, like himself, have waded through the figures, will draw their own practical inferences, one of which is that for the next six months the tendency of wheat prices "will not legitimately be downward." This correspondent is a practical farmer in the State of Ohio, and in studying up this matter he has done what every farmer should be intelligent enough to do. When the great mass of farmers do this, they will be less at the mercy of speculators and middlemen.

FARM AND FIELD.

PERMANENT PASTURE.

The Seventh Annual Report of the Ontario Agricultural College and Experimental Farm, being for the year ending December 31, 1881, is replete with valuable information about various crops. That section which relates to pasturage is of special interest and importance. If the farmers of Ontario could only be induced to follow the guidance of its teachings, the result would be a large increase of individual and national wealth. The section referred to is as follows:—

We cannot too often impress upon the Province that, in connection with mixed farming, root cultivation and so much permanent pasture are the building up of our best agriculture—they are the surest foundation of our future success. A big chapter could be written on this subject, but all that can be looked for in this report is to abstract its important features, and hint at some of its advantages:

(1) IT GIVES SEVERAL CROPS PER ANNUM.

When a variety of grasses and clovers are established in association, the case is one much similar to what nature, under the best of circumstances, offers to animal life—a change every week from May to October. It is then a point to be studied in choosing the kinds, that they do not all, or even many of them, come during one month or leave off altogether at the same time of the year, but come, and mature, and go off, if possible, in regular succession from spring to autumn. Thus every week, or every month at least, is equal to a change of field, and secures the value so much desired through such conditions.

Beginning in 1878, we have had great satisfaction in handling nine grasses and five clovers in connection with this subject, as thus illustrated, showing the order in which they come, and their duration each season. Of course the red clover generally leaves us after two years, but it is well to have a little at the start in order to get all we possibly can.

GRASSES AND CLOVERS FOR PERMANENT PASTURE AS FOUND RELIABLE IN ONTARIO.

Lucerne: May, June, July, August, September, and October.

Red Clover: May, June, July, August, and September.

Rye Grasses: May, June, July, August, and September.

Meadow Fescue Grass: May, June, July, August, September, and October.

Yellow Clover: May, June, July, and August.

White Clover: June, July, August, and September.

Fan Oat Grass: June, July, August, and September.

Orchard Grass: June, July, August, September, and October.

Kentucky Blue Grass: June, July, August, and September.

Alsike Clover: June, July, August, and September.

Timothy Grass: June, July, August, September, and October.

Red-top Grass: June, July, August, and September.

Bent Grass: June, July, August, September, and October.

The quantity of each may be as follows:—

Grasses: Timothy, 7 lbs.; Orchard, 4 lbs.; Italian Rye, 2 lbs.; Perennial Rye, 2 lbs.; Fan Oat, 2 lbs.; Red-top, 2 lbs.; Meadow Fescue, 3 lbs.; Bent, 1 lb.; Kentucky Blue, 2 lbs. Total, 25 lbs.

Clovers: Lucerne, 4 lbs.; White, 3 lbs.; Red, 1 lb.; Alsike, 1 lb.; Yellow, 1 lb. Total, 10 lbs. Grasses, 25 lbs. Per acre, 35 lbs.

Note.—The Rye grasses will hold in the most favourable positions in Ontario, in association with others, but rarely alone. They are the best English fodder plants, and should be encouraged with us.

(2) IT OFFERS AN EARLIER AND LATER BITE THAN OTHER PASTURES.

It is a well-known fact in the growth of pastures where a number of different plants exist, that by such an association there is mutual support, nursing, and shelter, which give early and late growth. In our own experience we have much earlier offers, many of the grasses and clovers coming in at middle and end of May. The value of this early bite is something incalculable after a long, close winter, and, particularly, it meets the heavy "back-going" of which we see so much in ordinary practice among cattle and sheep. So, also, the rich "foggage" sends on deep into winter.

(3) ANIMALS ARE MORE HEALTHY AND LESS LIABLE TO DISEASE UPON IT.

All experience goes to show that browsing animals more than others require change of food often, not only in the form of soft succulent growth, but harder and woody matters at the same time. Some of the grasses and clovers are also directly medicinal to cattle and sheep, so that altogether, with a choice of ten or twelve throughout the season, health is better and diseases less frequent.

(4) IT CANNOT POSSIBLY BE DESTROYED BY DROUGHT OR FROST.

The immense importance of this needs little comment; it comes strongly home to us in this country. It is obvious that as association of plants and roots gives mutual support and protection with a close surface, there is necessarily much less risk of damage when rain is scarce and heat abundant—much less evaporation and less "cracking" of the surface. As crop after crop succeeds each other week by week and month by month, the soil is not exposed to the burning sun, and moisture is retained to nourish at all times. Then again, if winter or summer excesses do kill two or three kinds, there remains enough to make the pasture still of greater value than anything else. All through the very severe drought of this season our permanent pasture was never bare, never wanting a fresh bite, but so close and strong that we had to separate with the hand in order to view the surface soil.

(5) IT GIVES MORE DAIRY PRODUCE THAN ANY OTHER FORM OF FODDER.

During the last half century the best managed old pastures of England have stood at more value per acre than the richest arable land, partly because of their permanency of crops, and largely because of their being able to graze three cows per acre. There seems no reason why Ontario cannot do one-third as

well as this, and I am convinced it can be done. For three years in succession on our farm, on a small scale, on comparatively old permanent pasture, and on that of two years' standing, we have clearly proved that seven sheep per acre can be well done to. This is equivalent to one and one-quarter cow per acre. There is, then, no other form of fodder that can do the same thing.

(6) IT GIVES THREE TIMES MORE BEEF AND MUTTON PER ACRE THAN OUR ORDINARY ROTATION PASTURES.

The average timothy and clover pastures of the Province, in connection with mixed farming, just graze, on an average, one cattle beast to every three acres, taking from 1st May to 1st November on an average of years. This is substantially correct. But we have shown, in the preceding paragraph, that three and three-quarter cows can be kept on three acres of the permanent kind required, and as the proper stamp of two-year-old steers and heifers preparing for the butcher eat more than an ordinary milk cow, we shall say one beefing animal per acre. There are at the present time about 20,000,000 arable acres in Ontario, possessing practically no permanent pasture, but 3,500,000 acres of rotation pasture that do or should therefore maintain 1,190,000 head of, say beefing cattle. Were only one-tenth of this rotation pasture under the permanent form of it, the annual gain to the Province would exceed \$11,000,000. The magnitude and national value of a few acres, per farm, of first-class permanent pasture is thus apparent.

(7) IT CAN BE USED AS A SOILING CROP ANNUALLY.

When everything is most propitious and grass abundant, and where a number of bulls and calves are housed during summer, and a reliable cut of green fodder is most important, this can always be had from well-managed permanent pasture, early and late, at the rate of ten tons per acre, green weight, where no systematic soiling crops are upheld.

(8) IT IS LESS EXPENSIVE TO PRODUCE AND MAINTAIN THAN ANY OTHER CROP.

While it cannot be maintained that there is no trouble, time and expense incurred in establishing successfully all that we desire in this connection, nor that its permanency and value can be upheld without top-dressing materials, it is not difficult to see that once fairly afoot, permanent pasture costs a great deal less per acre per annum proportionately to produce received than any other crop can possibly do.

(9) IT IS A CONTINUAL SOURCE OF RELIANCE AND WEALTH.

Most other things may fail during a particular season; times may be bad, and decimate the farm, yet the permanent pasture will smile and invite a share of its wealth.

(10) IT IS PERMANENT.

The successful establishment and maintenance of permanent pasture implies:—

1. A soil free of dead water. 2. A rich surface, friable but firm. 3. Depth of soil to allow roots beyond reach of drought. 4. A retentive soil to resist drought and hold moisture. 5. Securing variety of grasses, and clovers, and thick seeding. 6. Easy pasturing for first two seasons. 7. Heavy stocking, to

keep down rougher plants. 8. Top-dressing at least every third year.

CHARACTERISTICS OF GRASSES NOW ESTABLISHED SUITABLE FOR PERMANENT PASTURE.

The past season has been one of the very best to test thoroughly the reliability of all pasture plants, and note their conduct in comparison with each other, particularly as regards endurance during drought, which stood very hard on 30th August, when the following observations were made:—

Red-top.—A good tough sod, about equal to Timothy, though presenting no bite.

Perennial Rye.—Looks fresher and better as pasture than Red-top and Timothy *Meadow Fescue*.—Stands drought better than Orchard or Timothy; is now close, rich green, and vigorous.

Italian Rye.—Not good; few plants; is good at re-seeding itself every season.

Kentucky Blue.—Wiry and dry, with a good sward.

Timothy.—Very good, but presents no bite for cattle; dry and somewhat withered; takes a fourth place.

Orchard.—Somewhat behind Meadow Fescue and Fan Oat, but not much.

Fan Oat.—About equal to Meadow Fescue, which is saying a great deal.

PEAS AND OATS TOGETHER.

The pea is very rich in muscle and bone-building elements; and oats are also superior to corn in this respect. The oats, also, assist in holding up the pea vine, so as to prevent early lodging, and thus cause it to retain its succulence longer. The crop should be sown in the proportion of two bushels of peas and one of oats per acre, and well covered. The drill puts them in best. The united crop should produce from forty to sixty bushels of grain to the acre. Now, the grain is only a part of the crop. The succulent pea vine is admirable food for pigs, and they should be turned in when the pea is just passing out of the milk. They will then devour the whole plant, and it contains as much nutriment as when fully ripe. The succulent stock contains from forty to fifty per cent. as much nutriment as the grain.

A YANKEE FARMER'S MAXIMS.

1. Keep up with improvements.
2. Think small things important.
3. Take pleasure in your work.
4. Don't ruin stock by low fencing, nor bad feeding.
5. Don't let gates sag and fall down.
6. Make all the manure possible.
7. Don't let fowls roost in trees.
8. Have your stock well sheltered.
9. Don't leave waggons, tools, and farm implements exposed to the weather.
10. Don't hang harnesses in the dust, nor forget to oil axles.
11. Never go to town without business.
12. Don't be stingy and penurious, but practise old-fashioned, honest and honourable economy.

MEN who change from farming to some petty public position are often delighted to change back again.

ASHES AS A FERTILIZER.

Unleached wood-ashes contain all the constituents of plant food that the ordinary or worn-out soil needs, except nitrogen. By their chemical action, they render much of the inert nitrogen in soils available, and in that way may be said to furnish nitrogen. This is true of lime, and on this power of making nitrogen available, the greatest value of lime, when applied as a fertilizer, depends. Ashes also have a good mechanical effect upon the soil, especially upon heavy clay soils, which are made lighter and more porous, so that air and water circulate more freely. Ashes do not suffer waste by being washed out, to the extent that is true of the more soluble and concentrated fertilizers sold in the markets—their effects are therefore more lasting.—*American Agriculturist*.

ENSILAGE.

There is a great conflict of public opinion on the ensilage question. Here are some examples in brief:—

It does appear that an ensilage man couldn't see the multiplication table if it were printed large enough to cover the whole of one side of the biggest barn in New Hampshire.—*Concord Monitor*. . . Northern farmers are beginning to crawl fish out of the new silos into the old barns.—*New Orleans Recayune*. . . While we do not believe that the ensilage system justifies one-half the extravagant praise lavished upon it by a few Eastern amateurs, it may yet prove a valuable aid to the farmer who feeds stock.—*Michigan Farmer*.

SETTING UNSEASONED POSTS.

I was taught that fence posts should be seasoned, but a trial of bar posts set green seemed to disprove it. Feeling encouraged in that direction, my brother, about June 1, 1845, sawed from thrifty white oak trees, posts for a fence in front of our house. They were 6 by 6 inches at butt, 3 by 6 inches at top, and were set at once, the fence being completed in July. The fence is now standing, and is in fair order, only two of the posts having been renewed in the thirty-six years. We have proved on this farm that chestnut posts are more durable if cut and peeled, and placed directly in the ground.—*Cor. Country Gentleman*.

Sow salt early in the spring, and the more the ground is stirred afterwards the better it will be.

THE farmer whose stock constantly deteriorates is not a good farmer; he should be a labourer instead of a farmer.

THE Maine Board of Agriculture, in recent session, unanimously advised "the average farmer" of the State "to await the results of experiments now in progress on the ensilage of corn and other forage crops, before adopting the system on a scale involving any considerable expense."

ROBERT COULSON, of Rockwood, has sold his farm of 200 acres to James Gray, Elora, for \$8,000. John Fielding has also sold his 100 acre farm, lot 13, con. 3, Eden, to James Webb, Ospringe.

CREAM.

A PASSING CLOUD.

A little cloud went slowly sailing
Across the sunny sky;
A woolly little wind went walling
Through the tree-tops high:
A sudden sunbeam danced across the shadows,
And so the shower went by.

A little frown came stealing after
A gusty little sigh;
A pearly tear-drop drowned the laughter
Of a merry eye;
A sudden smile danced in the baby dimples,
And so the shower went by.

—*Harper's Young Folks*.

THE busiest people are those who complain most of the waste of time. They alone learned to know its value.

GOD makes the earth bloom with roses that we may not be discontented with our sojourn here, He makes it bear thorns that we may look for something better beyond.—*Ludlow*.

A LADY called at a drug store where they also kept books, and inquired of one of the firm: "Have you 'Grote's Greece?'" "No, mum; but we've got some excellent bear's oil."

A GERMAN shoemaker, having made a pair of boots for a gentleman of whose financial integrity he had considerable doubt, made the following reply to him when he called for the articles: "Der poots ish not quite done, but der beel ish made oud."

LITTLE Alice was crying bitterly, and on being questioned, confessed to having received a slap from one of her playfellows. "You should have returned it," unwisely said the questioner. "O, I returned it before—boo-hoo!" wept the little girl.

A LECTURER was once in a dilemma which he will probably never forget. While talking about art, he ventured the assertion, "Art can never improve nature?" At that moment some one in the audience cried out in a gruff voice, "Can't he? Well then, how do you think you would look without your wig?"

"OH, I suppose he loves Sarah, and would be glad to marry her," she was saying to the woman in the post-office corridor, yesterday; "but I dunno." "Isn't he a nice young man?" asked the other. "Well, he's nice enough, but very reckless with his money. At Christmas time he made us a present of a French clock for the parlour, and there's not one of us in the house can speak a word of French!"

Two sons of Erin, shovelling on a hot day, stopped to rest, and exchanged views on the labour question:—"Pat, this is mighty hard work we're at." "It is, indade, Jemmy; but what kind of work is it you'd like, if you could get it?" "Well," said the other, leaning reflectively on his shovel, and wiping the perspiration from his brow with the back of his hand, "for a nice, aisy, clane business, I think I would like to be a bishop."

AT a dairy farm near Berlin, where there are one hundred cows, to the consternation of the owners the whole herd got drunk. For two days the cows were wholly intractable, attempting to gore the milkers and bellowing in concert. By some mistake the person watering the cows turned the faucet of a barrel of corn brandy, which happened to be placed near the water faucet, and the trough, instead of being filled with water, received brandy.

HORSES AND CATTLE.

THE SUFFOLK PUNCH.

Of the breeds of draught horses represented in Canada, the Suffolk Punch is one of the most promising.

Mr. Patteson speaks of the Suffolk as follows: "I think the chestnut Suffolk stallion would immensely improve our general purpose and agricultural stock, and possibly even our dray and heavy draught horses.

"The feet of the Clyde stallion are very inferior to those of the Suffolk; being either flat, or shelly, brittle, and split, whereas those of the Suffolk are as sound as a thoroughbred's—that is to say, their texture is very firm, close, elastic, and not liable to break. Again, a Suffolk has scarcely any more hair on his legs than a Cleveland Bay, and his weight is almost equal to that of the Clyde. There are Suffolk stallions quite as heavy as ordinary Clydes, but the general weight is less.

"I say that it would be wise not only to encourage the Suffolks as a breed, but for crossing purposes I value them much beyond the Clydes, for the reason that the latter crossed with a common mare gets a mongrel, because the cross is too sudden and violent, and the contrast too strong. On the other hand, the Suffolk does not present so severe a contrast to the ordinary mare as the Clyde, being naturally a much lighter timbered horse, of greater endurance, smoother shape, and without the cleft rump of the Clyde, and a cross with him would produce an animal good for agricultural, dray, or omnibus purposes, or in fact anything short of a hunter.

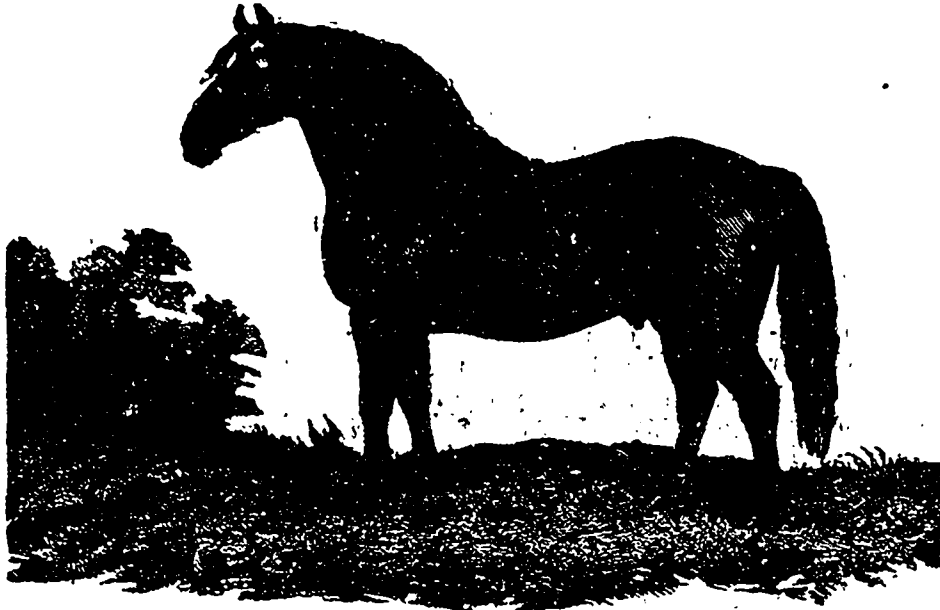
"I have seen many carriage horses bred by mating thoroughbred sires and Suffolk mares, and would not be surprised if that were the origin of the Cleveland Bay. A Suffolk horse of the proper kind is a chestnut resembling the Clyde in substance and contour, but has not the quantity of hair on the legs that the latter has, and which often serves to hide many imperfections and diseases. I should say the bone of the Suffolk is as big as that of the Clyde, but he is much like what a Clyde crossed twice with a Cleveland Bay would become. When I was last in England I saw great numbers of Suffolks in the county of that name, and in part of Norfolk. I hold not only that they are better horses for crossing purposes than the Clydes, but also that few fair specimens of the class have ever been imported into Ontario.

"A young Suffolk stallion can be bought in England for about 100 guineas (\$500 to \$600), much the same price as would be paid for a Cleveland Bay. Mr. Simon Beattie has imported some Suffolks, and thinks highly of them; but the most of his have been sold out of the Province. Mr. Beattie, with a pair of Suffolk mares, once took the Provincial prize over all comers in the class for heavy teams."—*Report Ontario Agricultural Commission.*

THE CHECK-REIN.

In riding last summer it was repeatedly observed that a horse after the first mile or two would swing his head restlessly at frequent intervals, as if wishing to look back. The idea was suggested that this might be the result of pain consequent on too high curbing. Thereafter the check-rein was loosened and no more trouble experienced. It is doubtless true that much distress is occasioned by improper use of this part of the harness. Dr. Dio Lewis takes the same view, and says in *The Golden Rule*:

"I have just been watching a stylish team. Both horses are busy trying to release their heads. The head goes to one side, and then to the other, then the nose is thrown up as high as possible several times. And so it goes on without cessation. The torture in the bent and constrained spine must be intense; their eyes show it. Unloose the check



SUFFOLK PUNCH.

in these high-headed animals, and they will hang their heads down almost to the ground; they will half close their eyes, in this and other ways they will show a sense of great relief. Try it yourself. Run a mile, holding your person and head erect. Try it again. Draw a loaded hand cart up a hill and hold yourself quite upright. You will never advocate a check-rein again."—*N. Y. Tribune.*

RAPID MOVEMENT IN BEEF.

So long as our surplus beef is sent abroad for market, European competition will fix a limit to the upward tendency of price. As population presses upon pasturage, and adds to the value of corn, the cost of beef-making will increase. Thus the margin for breeder and feeder is gradually narrowing. Will it render unprofitable the production of beef? Not at all. It will sharpen the wits of those engaged in the business, induce study of animal physiology, and teach a multitude of economies in the practice of feeding and management. There are instances of success in feeding on the sterile soils of New England, and at the same time failures in the country of broad prairies and cheap corn west of the Mississippi. There is quite as much in the man as in the land. It is a question whether the range of capacity for this business is not

equal to the whole breadth of physical and economic differences that modify its profit.

Whatever else may contribute to profit, as margin lessons, early maturity will be very prominent. Great Britain was first to learn this practical lesson. The Shorthorn is a result of it in English breeding, and it is enforced and emphasized in English feeding. American feeders are already learning it. They are finding out that good flesh can be taken on, not by spasmodic generosity of ration, but by continuous abundance. The flush succulence of summer diet does not harmonize well with an excess of harsh straw and coarse stover in winter. Good hay and sound grain may compensate for loss of vital heat in a pitiless storm, while it may not lay on an ounce of flesh. It has long since been learned that the coveted mixture of fat and fibre, the "marbling" of beef, is not obtained by alternate stuffing and starving. The loss in this country from periodical cessation of growth, in summer's drouth or winter's cold, is enormous.

There is another reason for early maturity. The cost of a pound of flesh is always greater during the second year than in the first; greater in increasing ratio the third than the fourth. This may be generally known, but is seldom fully realized. The Fat Stock Show in Chicago illustrated forcibly the fact. There were nine young animals exhibited, not Shorthorns but Herefords, from 193 to 365 days old, none of which had gained less than two pounds per day from birth, weighing from 400 to 880

pounds, and averaging 603 pounds. Their average daily gain was 2 57-100 pounds. Then there were nine grade Shorthorns about two years old, or from 620 to 960 days, all of which gained above two pounds daily, averaging scarcely 2 1-10 pounds. These were the only beef animals in the exhibition that came up to two-pound gain daily, or were less than two years old, though there were 133 all told, some of which had made less than a pound per day. One had lived 2,900 days, making but 92-100 pound per day. Another at 2,760 days showed a gain of 1 15-100 daily.

As a rule, the longer kept the smaller the rate of gain. One grade Shorthorn, only 679 days old, bred by H. C. Nelson, weighed 1,525 pounds, and J. D. Gillett's "Wild Bill" was tame enough to put on a weight of 1,935 pounds in 872 days. It is quite certain that these animals were fed at a profit. The superior advantage of early maturity, of steady and rapid growth, was one of the most obvious lessons of the fourth Fat Stock Show of Chicago.—*N. Y. Tribune.*

A KANSAS cattle dealer says he can ship two more polled steers in a car than of horned animals of the same size, and he "is now buying at a premium all the grade Gal-loway heifers he can hear of."

THE SHORTHORN STEER "DOMINION CHAMPION."

As an illustration of what may be done with a well-bred animal, the recent instance of the white Shorthorn steer "Dominion Champion" will be familiar to many who saw the steer at the late fall exhibitions. The Champion was bred by Mr. E. A. Bradshaw, of Oshawa. He was calved January 10th, 1876, his sire being Barrington Butterfly, owned by Mr. J. Wilson, of Green River, Ont., and his dam, Lily Dale, by Kentucky Baron, granddam Lady Jane Grey, by Romeo. While in possession of Mr. Bradshaw, he lived, that gentleman states, entirely on pasture in the summer and was moderately fed in winter. Mr. Bradshaw sold him to Mr. John Russell, of Pickering, who writes as follows.

"The steer was put up to feed at the age of two years and ten months. He then weighed 1,540 pounds, and when he left my place he weighed 2,840 pounds." The steer was ultimately bought by Mr. J. Holderness, of Toronto, and on the 15th of December, 1880, killed at the establishment of Mr. H. R. Frankland, of St. Lawrence Market. He was then 4 years 11 months old, and weighed 2,900 pounds. Immediately previous to slaughtering, the Champion was carefully measured by Mr. Samuel Wilmot, of Newcastle, Ontario, who gives the following as its exact dimensions.—

	Ft.	In.
Length of body from crown of head to tail...	7	6
Height from ground	5	2
Girth round neck	4	6
" " briskeet or chest	8	11
" " shoulders.....	9	6
" " bolly	10	4
" " loin or flank	9	7

His square measurements across the back were as follows:—

	Ft.	In.
Across rump	2	6
" hips	2	8
" middle.....	3	6
" shoulders	3	1
" neck.....	1	8

Mr. Wilmot adds: "His symmetry was perfect throughout—colour purely white. I notice he has taken, during 1879 and 1880, no less than eleven first prizes as best fat steer, at the Dominion, Provincial, and other leading agricultural shows."—*Report of Ontario Agricultural Commission.*

MANURE SAVING.

MR. EDITOR,—I write, not in the expectation of throwing any light upon a subject very important to farmers, but to keep the matter before them and to provoke discussion

on it. We should all try to find out the best plan of securing liquid manure.

The RURAL CANADIAN for 1st February contained a very simple device which secured the whole of the liquid manure, but which I thought would generate, both by its own nature and the fermentation which would likely take place, very impure and unwholesome air. That view I see confirmed by Mr. Geddes in the last number of the RURAL CANADIAN, and yet the plan which he suggests does not seem to be one which would secure all the liquid manure.

A water-tight tank outside the building, could any plan be found which at a moderate expense would collect and convey the liquid manure to it, would obviate the difficulty of impure air, but I know of no such plan.

To collect all the urine, not only the drop, but, in the case of fed oxen and horses, the

the agricultural press, and deservedly so. Various expedients are being suggested for preventing the terrible waste which is going on in most barnyards. A correspondent of the *Country Gentleman* puts this waste at the enormous figure of \$14,000,000 for the State of Ohio, and the worst of it is, appears to make out his case. This writer states in regard to his own practice, that he keeps his cows in stalls provided with absolutely water-tight floors and gutters. They are not only carefully planked, but the joints and cracks are filled with coal-tar, put on hot. The gutters are eight inches deep and two feet wide. They are kept amply provided with litter, which, as the liquid cannot escape, gradually absorbs it. The gutters are cleaned out about once in three days, and the manure, as fast as removed, is built up into a compost-heap, with alternate layers of muck. This muck

is thrown out of its bed, and weathered one year before being used in the compost-heap. This method is a great improvement on the usual way of doing, and, although it involves considerable trouble, pays well, the cost being about \$35 per season, and the value of the manure, estimated by the standard of one of the most approved commercial fertilizers, is no less than \$900. This writer answers the one objection to his plan as follows:

"It is so much less trouble," says one, "to use commercial manures." Well, my dear sir, it would be less trouble to throw your milk away and buy your butter.

There is "no excellence without labour," "no rose without a thorn," "no pains, no gains." Many a farmer who would get out of his wagon to pick up a cent lying in the road, will allow hundreds of dollars to slip through the cracks of his stable floor this winter, and buy superphosphate by the ton next fall.

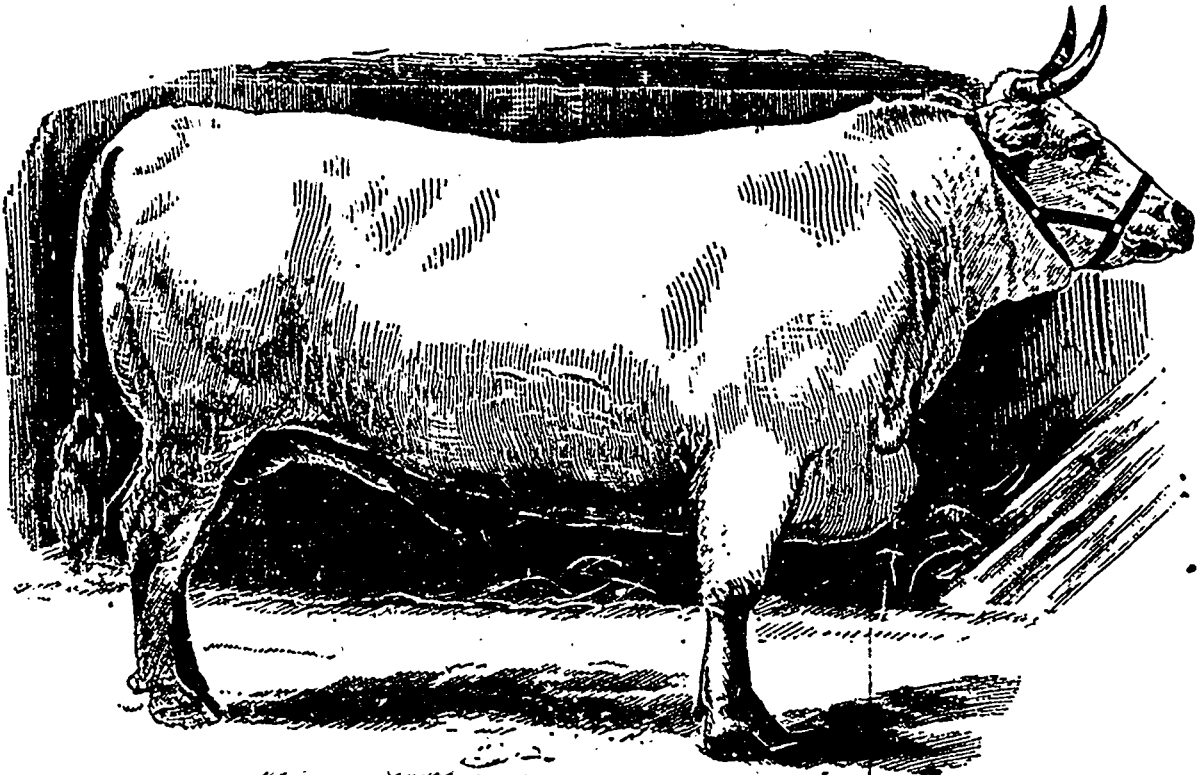
A Michigan correspondent of the *New York Tribune*, writing on this subject, says:—

"Give animals plenty of bedding; this will absorb all the manure, solid and liquid; draw out all the bedding that is wet either every day or every week or every month; if not drawn often the cows will stand uncomfortably, and it will be necessary to throw some of the solid excrement under their fore feet; but with plenty of bedding you can draw out manure at your own convenience; your cattle will be clean and kept dry; your stable will be perfectly sweet; there is no odour in a stable so kept; every particle of manure is saved, and at no expense; no floor is needed; no drain; no cistern. It proves to be the cheapest and the best way to build a barn. I would not put a floor in a basement barn for cattle under any circumstances."

We must frankly confess that this plan seems very slipshod and slovenly. Nor do we like the idea of cattle standing and lying all winter on a stratum of moist straw laid on an earth floor.

THE farmers of the Parry Sound district go into stock raising more extensively.

OVER 100 horses are said to have succumbed from pinkeye this winter on the Madawaska River.



"DOMINION CHAMPION" SHORTHORN STEER—WEIGHT 2,900 LBS.

stall must be water-tight, and though that were done by a good mechanic it would not likely continue long so; besides, the drop would not suit well for the passage of the urine to the tank, because solid manure would obstruct it. Now, what suggests itself to my mind—but it is merely a suggestion—is, that under the floor of the stalls of oxen and horses a water-tight floor of cement, either on the earth, or by boards laid in cement, or with brick be made, with an incline to a channel under the drop, which shall convey the liquid manure to the tank. In this case any ordinary floor would answer, and the drop or place where the dung falls may be so open that the liquid manure might pass, but none of the solid.

I am very young in experience in regard to farming, but I know that, in order to success, the closest attention to manure is necessary, both to make and collect it, and to have it in the best state for application to the land.

Hoping that the importance of the subject may bring out some one of experience to give us information on this matter, I am yours truly,

A NOVICE.

THIS matter of manure saving is attracting a large amount of attention just now from

SHEEP AND SWINE.

DOGS VERSUS SHEEP.

Few people realize the fact—for such it is—that the dog tax is one of the costliest that society pays. The weight of this tax does not come in the form of the \$1 or \$2 which each municipality charges for the privilege of keeping a dog, but in the expense of sustaining a vast amount of useless curs, the damage inflicted on the sheep and wool interests by them, and the loss of human life by hydrophobia. It is very difficult to secure anything like a calm consideration of this subject, because multitudes have a sort of instinctive fondness for dogs, and, under its influence, regard anything that is said against them as the offspring of weak prejudice. To disarm this feeling, let it be said at the outset, that it is not intended to dispute the usefulness of any really good dog that may serve as an intelligent companion by day, or a trusty guard by night. There are some such dogs, but they bear a very small proportion to the myriads of worthless animals that are in reality beasts of prey within the confines of civilization. The expense of keeping these mischievous brutes, and the sum total of the losses they occasion to flock-masters, amounts to sums, the aggregates of which few have any conception of. In an article headed "The Canine Curse," the *American Agriculturist* gives a few startling figures bearing on this subject. As long ago as 1868, the Commissioner of Agriculture estimated the loss to sheep owners in the United States from the ravages of dogs at a million dollars annually, and the indirect loss in preventing sheep husbandry at two millions more. This calculation was undoubtedly far below the mark. In 1878, Massachusetts was reported as having 114,000 dogs and 55,000 sheep, the latter gradually decreasing, while the former made a noticeable increase. In Ohio the statistics show that the number of sheep killed by dogs from 1867 to 1879 inclusive was 459,437, valued at \$1,296,398; and the number injured by dogs during that period was 309,682, estimated worth \$497,132. In Illinois, the value of sheep slaughtered by dogs in 1876 was \$30,578; in 1877, \$63,752; in 1878, \$43,885; for the year ending May, 1879, the loss was 27,338, with a valuation of \$2.40 per head—low enough certainly—amounting to \$65,384. The new State of Kansas had 74,696 dogs in 1875, according to the State census; in 1881, when the State census was taken again, there were 143,650. Yet it is suspected that in this State, as elsewhere, not more than half the dogs are reported, from fear of taxation. It is estimated that there were not far from 300,000 dogs in the new State of Kansas. If we suppose them to get an honest living, how much does it cost the State to keep them? Will \$1 a year maintain a dog? Will \$5 do it? In the year ending March, 1879, there were 8,025 sheep destroyed by dogs in Kansas, in the year ending March, 1880, 4,369; and in the year ending March, 1881, 5,361. In four counties, where a million sheep might easily be kept, the assessors this year found only 1,377 head, and there were 4,276 dogs to watch them, 3½ dogs to every sheep.

Read the following paragraph about Kansas. "Observing men are of opinion that an

ordinary dog—and he is always hungry—will eat and destroy in a twelvemonth the equivalent of that which, if given to a well-bred pig, would make him weigh at the expiration of that time 300 pounds gross, 286,000 such pigs would aggregate 85,800,000 pounds of pork, now worth at the home shipping station more than \$4,700,000, requiring to transport them, more than 2,360 cars, carrying fifteen tons each, or a train more than sixteen miles long. This would represent nearly \$1,600,500 more than the entire amount paid in the State for 1880, for school, township, and State taxes combined, it would build 9,400 school-houses and churches, worth \$500 each, or would pay the average wages of 14,000 school teachers—twice the number now employed. A condition of affairs, of which the above is but a poor outline, is at the bottom of what is each year becoming a greater and more irrepressible conflict between the wool-growers and the savage brutes that keep in jeopardy, or destroy the flocks that, protected, would enlarge and increase to the extent of producing the wool for which we now send so many millions across the seas. If the dogs are maintained as a luxury, they are a luxury we cannot afford, and should give way to something less expensive and less productive of loss and misery."

The *American Agriculturist* mentions an Iowa farmer who had \$300 worth of sheep killed by dogs in a single night, and of another \$250 worth, and adds: "Iowa would have to-day \$10,000,000 worth of property within her borders, that she does not have, only for dogs; and the farmers are the veriest fools in the world for allowing such a state of affairs." So they are. They are what John Bunyan calls "penny wise, and pound foolish." Or, to quote a Yankee maxim, "they save at the spigot, and waste at the bung-hole." Thousands of farmers are rich enough to keep a useless dog, but too poor to subscribe for an agricultural paper. Of all the preventable losses and leaks on the farm, is there one to compare with that caused by dogs? Add to the injury done to the sheep and wool interests, the damage inflicted on dairying by the chasing and worrying of cows, the loss by maiming and kill of pigs, the scaring of horses on the highway, and the destruction of human life caused directly and indirectly by dogs, and the *American Agriculturist* is amply justified in denominating it "The Canine Curse."

Of what earthly use are ninety-nine per cent. of the dogs that are permitted to exist? For one really serviceable canine that honestly earns his living, there are ninety-nine good-for-nothings that should be treated to a dose of strychnine. After reading this article, probably many a dog-fancier will pat his favourite, and say, "O, my good Pomp wouldn't eat a sheep would he?" Perhaps not, but your "good Pomp" may be an unmitigated nuisance for all that. You take him with you wherever you go. He rushes into people's houses at your heels, or more likely ahead of you, scares the family cat, knocks over the baby, pokes his nose into the frying pan, intrudes into the pantry, and commits all manner of misdemeanors which you expect will be condoned because forsooth, he is *your* dog. It is, "Love me, love my dog." Or, if you have

enough manners to make him stay outside, he improves the time while you are doing your business, or making your visit, by rushing frantically around the garden, and doing no end of mischief there. A dog in the garden in the spring of the year, when tender vegetables and flowers are just starting into vigour, is worse than a cow. He will spoil a whole bed in a twinkling. One might easily write a book detailing the depredations committed on society by dogs. We have books recording their sagacity, and exploits of one kind and another; it is time we had a volume giving the other side of the picture. Until we have some repressive legal measures, a gun to shoot prowling dogs with, and a deep well into which to drop their dead bodies, would be highly useful institutions on every farm.

HOW TO SAVE THE SHEEP.

The *New York Sun* says the farmers of Hunterdon and Somerset counties, New Jersey, used goats to protect their sheep. It is claimed that two goats can and will drive away a dozen dogs, and thus effectually protect the flock from their ravages. As soon as a dog enters the field at night, the goats attack him, and their butting propensities are too much for the canine, and he soon quits the field, limping and yelling. Formerly, when a dog entered a sheep field at night (says the *Sun*), the sheep would run wildly around and cry piteously. Since the goats have been used to guard them, they form in a line behind the goats and seem to enjoy the fun. The idea of utilizing goats in this way came from the West, where they are put in sheep pens to drive away wolves.

SPECIALTIES IN SHEEP.

M. Fayon, who made extended observations on sheep that are tended for their milk, finds that the production of wool is in an inverse proportion to the production of milk. In those sheep yielding most milk, and having four or six teats, the wool occupies but a small portion of the body. The neck, the head, the breast, the abdomen, and a great part of the legs are merely covered with short hairs.—*J. M. M.*

THE most essential point about the preservation of pork is to have it thoroughly cool before salting. Any man who neglects that precaution will suffer from it.

MOVABLE hurdles are very largely used in England, chiefly for stretching across fields of turnips, vetches, etc., so as to confine flocks of sheep to a portion at a time until eaten up, also for winter shelter of garden beds and frames. Sometimes they are made of wattled willow, like coarse basketware, but oftener of stouter shoots split and held together by a few clinched nails passed through the erect end pieces and the diagonal brace; they having five bars, more or less-crooked, and about two inches wide. Of course, these hurdles don't last long, but of late they have been rendered very durable as well as improved in appearance and handling by being dipped into heated tanks of tar. The gas-works, as lately stated, are now beginning to do this for the farmers and gardeners, to their great satisfaction.

BEES AND POULTRY.**SUCCESSFUL POULTRY RAISING.**

In raising poultry or stock of any kind, it should be the aim of every one to keep it healthy and improve it. You can do it very easily by adopting some systematic rules. These may be summed up in brief, as follows:

1. Construct your house good and warm, so as to avoid damp floors and afford a flood of sunlight. Sunshine is better than medicine.

2. Provide a dusting and scratching place where you can bury wheat and corn, and thus induce the fowls to take needful exercise.

3. Provide yourself with some good healthy chickens, none to be over three or four years old, giving one cock to every twelve hens.

4. Give plenty of fresh air at all times of the year, especially in summer.

5. Give plenty of fresh water daily, and never allow the fowls to go thirsty.

6. Feed them systematically two or three times a day, and scatter the food so they can't eat too fast or without proper exercise. Do not feed more than they will eat up clean, or they will get tired of that kind of feed.

7. Give them a variety of both dry and cooked food; a mixture of cooked meal and vegetables is an excellent thing for their morning meal.

8. Give soft feed in the morning, and the whole grain at night, except a little wheat or cracked corn placed in the scratching place to give them exercise during the day.

9. Above all things keep the hen-house clean and well ventilated.

10. Do not crowd too many in one house. If you do, look out for disease.

11. Use carbolic powder in the dusting bins occasionally to destroy lice.

12. Wash your roosts and bottom of laying nests, and whitewash once a week in summer, and once a month in winter.

13. Let the old and young have as large a range as possible—the larger the better.

14. Don't breed too many kinds of fowls at the same time, unless you are going into the business. Three or four will keep your hands full.

15. Introduce new blood into your stock every year or so, by either buying a cockerel or sittings of eggs from some reliable breeder.

16. In buying birds or eggs, go to some reliable breeder, who has his reputation at stake. You may have to pay a little more for birds, but you can depend on what you get. Culls are not cheap at any price.

17. Save the best birds for next year's breeding, and send the others to market. In shipping fancy poultry to market, send it dressed.—*From Circular of Chas. Lyman.*

A BEE'S ADVENTURE.

A certain restaurant in this city, apparently to proclaim the unlimited resources of its cuisine, has in its show-window a huge tank wherein glittering gold-fish, sullen horned pouts, dignified bull-frogs and sprawling turtles dwell together in a greater or less degree of amity. The other day a bee fell into the water and was solemnly gobbled by a goggle-eyed fish. Hardly had the bee been engulfed, however, when the fish was seen to be strangely excited. He leaped into the air, drew in

great volumes of water and blew them out again, and acted so insanely that the turtles scuttled away in hot haste, and the frogs tumbled off the rocks to right and left in sheer consternation. Meanwhile the bee reappeared and crawled out of the tank in safety, evidently congratulating itself, as it dried its wings, upon its possession of a sting, and the presence of mind necessary to use it to advantage in an emergency.—*Boston Journal.*

WATER FOR FOWL IN HOUSES.

Fanny Field writes to the *Prairie Farmer*: "At last I have found something that suits me, viz, a drop faucet. It is only a few minutes' work to fit the faucet to the cask or water reservoir. Set the cask on something that will raise it a few feet from the floor, set a flower-pot saucer and a block under the faucet, adjust the stem until the water drops just about as fast as the fowls drink it up and no faster. We fill the cask with hot water every morning, wrap old blankets around the cask, and the water keeps warm during the greater part of the day. This hot water constantly dropping into the cooler water in the saucer keeps my fowls supplied with fresh water that is just right—neither too hot nor too cold. In summer we fill the cask with cold water, wrap wet blankets around it, place it in the shade, and the drop faucet supplies the fowls with plenty of cool, fresh water. The cask and drop faucet arrangement is a much cheaper way of supplying warm water than the lamp and bucket fixture, for a faucet can be obtained for twenty-five cents, and one will last forever almost."

THE BEST BREED FOR WINTER LAYING.

Taking all things into consideration, I have never found anything that could beat the Partridge Cochins as winter layers, and if my sole object in keeping fowls were to produce eggs in winter, I should discard all other varieties and stock up with the best laying strain of Partridge Cochins. My second choice would be Plymouth Rocks, Dark Brahmas, Light Brahmas, and Black Cochins, in the order named. Leghorns, Hamburgs, Houdans, or any of the small, active, non-setting breeds, I wouldn't keep for winter layers unless I lived where the winters were mild and I could give my fowls room enough to scratch in. Room enough for an active, well-brought-up Leghorn or Hamburg hen to scratch in means just as much of creation as she can travel over between sunrise and sunset, and I assure you that if she attends strictly to business the afore-mentioned hen can travel over a mighty big piece in a day. If you have any doubts about the matter, just turn one Leghorn hen, only one, and you needn't pick out the most industrious hen that you have either, into your garden next spring, and she will give you a lesson in object teaching that will convince you that I speak the "words of wisdom and truth."

Sometimes we hear of a flock of Leghorns, or Houdans, as the case may be, that have proved extra winter layers, but in every case of the kind that I have taken pains to investigate—and I have looked into a good many of them—I have found that the owners of

the aforesaid flocks, with but few exceptions, lived where the winters were comparatively mild. The "exceptions" lived in the New England and the Middle Atlantic States, depended upon late hatched pullets, kept but few fowls in a flock, had extra comfortable houses, and big barn cellars. You see all the smaller breeds are naturally active; it is in their nature to wander around and scratch, and when they are deprived of the chance to take exercise in the way they like best, they worry and chafe, and spend the greater part of their time in trying to get out of their close quarters. A contented hen is generally a laying hen, but a hen who considers that unlimited scratching ground is necessary to her happiness will not be contented when confined in limited space with nothing under the sun to occupy her mind, and she will not lay, and I don't blame her a bit either.

The large breeds of fowls are naturally more inclined to be lazy than the smaller breeds, consequently they do better in confinement. Give a Brahma or Cochin pullet enough to eat, a comfortable place to roost in, and she don't care how low the mercury goes, or how much snow there is outside of her dwelling-place, she will swallow her food, lay her egg, and spend the rest of the day in meditating upon the foolishness of her Leghorn neighbours, who are out of doors trying to find a place where they can scratch.—*Fanny Field, in Prairie Farmer.*

CHARCOAL FOR FOWLS.

The benefit which fowls derive from eating charcoal is acknowledged. The method of putting it before them is, however, not well understood. Pounded charcoal is not in the shape in which they find their food, and consequently is not very enticing to them. Corn burnt on the cob, and the refuse—which consists almost entirely of the grains reduced to charcoal, and still retaining their perfect shape—placed before them, is greedily eaten by them, with a marked improvement in their health, as is shown by the brighter colour of their combs, and their sooner producing a greater average of eggs to the flock than before.

EVERY rural family that has a home should have a few hives of bees. Nothing of so little cost will yield so large a profit.

ITALIAN queens vary in price from \$1 to \$5. One dollar queens are not guaranteed pure. Pure imported Italian queens are from \$3 to \$5, according to quality. Cheap trash is dear at any price. If we wish to maintain the superiority of our bees and also improve them we must always breed them from the best. The best time to move bees is in the spring, after it becomes warm enough for them to fly out. Moving in winter will often start disease, but if they could get a warm day to have a purifying flight, it would not injure them much. Now, if circumstances force you to move them before spring, place them in a dark cellar with a temperature of about forty-five degrees, and when the first warm day comes set them out for a purifying flight, returning them in the evening to the cellar, and repeat the operation until warm weather in spring.—*D. A. Jones.*

GOOD PAY TO AGENTS.

Agents wanted in every village, town, and township, to make a thorough canvass for the RURAL CANADIAN. Liberal inducements. Work to commence at once. For full particulars address

C. BLACKETT ROBINSON,

5 Jordan Street, Toronto.

Publisher.

LETTERS on business should always be addressed to the PUBLISHER; while communications intended for insertion in the paper, or relating to the Editorial department, to ensure prompt attention, must be addressed to EDITOR RURAL CANADIAN.

The Rural Canadian.

EDITED BY W. F. CLARKE.

TORONTO, APRIL 1st, 1882.

AS OTHERS SEE US.

It is gratifying to know that the RURAL CANADIAN is everywhere received with no common favour. We have had words of commendation from farmers in Provinces as widely separated as Prince Edward Island and British Columbia. The fact is, this journal supplies a felt want, and its general circulation throughout the Dominion is only a question of time.

This is how Mr. N. Farlinger, an intelligent agriculturist in the Province of Quebec, writes of the paper:—

"I am pleased with the RURAL CANADIAN, it is so very practical. Every farmer should have one. As farmers, we cannot afford to do without a first-class agricultural paper. Often one suggestion made and put in practice by the farmer would pay for several copies."

We have heretofore refrained from giving "Opinions" of the Press, preferring to let the RURAL speak for itself; but from scores of very hearty notices from papers representing both sides of public opinion, our readers will pardon us for making room for the following:—

Gives a large amount of information specially interesting to the farming community, and contains a number of fine illustrations of stock, etc.—*Cannington Gleaner*.

The best paper of the kind published in Canada to-day.—*Durham News*.

It will compare favourably with the best American journals of its class.—*Sarnia Observer*.

Its typographical appearance is all in its favour—neat, clear, well printed from suitable type and first-class paper, while the literary side of the journal is well looked after. The editor is W. F. Clarke, the well-known agricultural writer, a gentleman whose name is known the Dominion over as that of one who thinks clearly, writes lucidly, and takes an earnest interest in his work. The RURAL CANADIAN fills a want in the market, and will no doubt receive the cordial reception it deserves—a prophecy we are justified in making on the strength of the success it has already achieved.—*London Advertiser*.

MANITOBA AGRICULTURE.

The first report of the Department of Agriculture for the Province of Manitoba is an unpretentious little blue-book of about 100 pages, replete with interesting information as to the products of that wonderful country toward which so many eyes are wistfully directed at the present time. It consists mainly of statistics furnished by farmers who have settled in various parts of the Great North-West, and who give the results of their experience in growing the different crops mentioned. About 120 furnish reports as to the yield of wheat per acre. They cover four years, and vary from twenty bushels or less to forty-five, which is the highest quantity obtained. A note states that where the yield is below twenty bushels per acre, the reason has been either some accident to the crop, or it has been sown on newly-broken land. There are enough of these exceptional cases to reduce the average very considerably, yet, notwithstanding this drawback, it stands 26½, 26½, 26½ and 29½ for the four years

reported. In comparison, the following average yields of some of the principal wheat-growing States of the American Union are given:—

Minnesota	17 bushels per acre.
Wisconsin	14 " " "
Pennsylvania.....	15 " " "
Massachusetts	16 " " "

The average yield for the Province of Ontario is not stated, but according to the report of the Agricultural Commission it is 18½ bushels of fall wheat, and 11½ bushels of spring wheat. In 1880, one county in Ontario, that of Bruce, gave an average of 25 bushels of fall wheat, and 15 of spring.

These official statistics of the Manitoba wheat crop are fruitful of suggestive remark. In the first place, they show that the yield popularly reported has been well spiced with exaggeration. The current representation is that forty to fifty bushels of wheat per acre is the usual crop. Only the other day we were shown a sample of Manitoba wheat, which was said to have yielded fifty bushels to the acre. It was nothing extra as to appearance, and, except in flinty hardness, did not at all surpass an ordinary sample of Ontario spring wheat. Among these reports, extending over four years, and furnished by some 120 witnesses, there are only two instances in which a yield of forty-five bushels per acre is reached, and but seventeen in which a yield of forty bushels is returned. There are sixty-six returns of twenty bushels and less per acre, the yield in several cases going as low as ten bushels, and even under that figure. From all which it is manifest, that Manitoba does not excel the yields of wheat given throughout the most fertile districts of Ontario, in those palmy days when the soil was not exhausted by successive grain-cropping.

Moreover, our best farmers throughout Ontario can show an average quite as good as the Manitoban. Their average is reduced by the meagre crops grown by poor farmers on worn-out land. The soil of the Prairie Province is now at its best, and will probably never show a higher average than at present.

So far, therefore, as the one feature of wheat-growing is concerned, those Ontario farmers who are aching to go to the North-West, but find themselves fixtured where they are, have no cause for discontent. The cheap lands of Manitoba furnish an excellent chance for young men and others of limited means to make a hopeful start, but the man who has a good farm in Ontario, and knows how to work it, need not fret himself miserable because he cannot hie away to those far-away wheat regions, in regard to which it may be said with truth,

"'Tis distance lends enchantment to the view."

Oats yield "big" in Manitoba. The average is about fifty-seven bushels per acre. Several returns are given of 100 bushels per acre, and in one case 125. In Ontario the average is 33½; in Minnesota, 37, in Iowa, 28; in Ohio, 23. Here, however, as well as in Manitoba, crops far in excess of the average are often obtained, and the records of the past give 75 to 100 bushels as having been sometimes raised. 50 to 60 bushels are by no means uncommon even in these degenerate days of extensive soil exhaustion.

The average barley crop in Manitoba is 39 bushels, as compared with 25 in Ontario and

Minnesota, 22 in Iowa, and 20 in Wisconsin. Peas average about 3½ bushels per acre in Manitoba. The soil is too rank for them, yielding an excess of vine. Ontario probably averages about 20 or 25 bushels of peas to the acre.

Corn has not yet been grown extensively in Manitoba, there are, however, some instances given of its successful culture. The prairie soil seems well adapted to the growth of potatoes. An average of 330 bushels per acre is reported. What a pity the troubled tenantry of Ireland could not be transferred to the North-West, and each family furnished with a homestead on which to raise

"—an Irishman's shanty,
With praties in plenty!"

Only the briefest mention is made of fruit culture, and that in reference to strawberries, currants, gooseberries, raspberries, and such like small fruits. There is reason to fear that the occasional descents of the thermometer far away below zero, together with the terrible "blizzards," will be fatal to the fruit buds of the apple, pear, plum, cherry, and grape. But there is a large class of farmers who do not care to raise these fruits where they can be grown, and therefore will not miss them if it should be found impossible to produce them in Manitoba.

The crowning advantage of this new region, as already stated, is the opportunity it offers to settlers of small means. A case like the following speaks volumes on this point. John A. Lee, of High Bluff, says: "I came to this country in 1873 with \$30 dollars in my pocket, \$10 of which I paid for my homestead entry. It is two years since I began to cultivate my present place, and I have 74 acres under cultivation, with a substantial house and other fixtures. If I wanted to sell, I could get more than \$3,000 for only one of the quarter sections of my farm. Everything I own I have taken out of the soil. A young man with \$300 can make a start and do well in this country."

While no well-fixed Ontario farmer need hanker after a Manitoba home, there are many unable to get a fair start here, who, gathering up their scanty resources, might, after a brief endurance of some privations, find themselves in a comfortable and even enviable position in the far North-West. To these Horace Greeley's advice is eminently applicable, "GO WEST, YOUNG MAN!"

A USEFUL PUBLICATION.

D. Appleton & Co., of New York, have done a good turn to agriculture by publishing the "Farmers' Annual Handbook for 1882." We do not know whether this is the first yearly issue of this work, but, if it has had any predecessors, we have not seen them. The plan of this annual is excellent. First there is a calendar; then about 120 pages are devoted to a diary; after which there is a synopsis of information for ready reference on such topics as the following:—Rates of postage; the metric system of weights and measures; rules for measuring grain in bins, corn in the crib, and hay in the mow; age of farm animals as shown by the teeth; emergencies and accidents—a very valuable chapter; instructions for disinfection; agricultural experiment stations; vitality of seeds; facts with regard to milk; register of

breeding cattle, periods of gestation of farm animals, manure estimates; composition of fertilizers, feeding of cattle—a chapter of itself worth twice the cost of the book, analysis and digestibility of feeding stuffs. All this for 50 cents, and in bulk not too large for the pocket. It will be a day of promise for agriculture when every farmer keeps and uses a *vade mecum* of this kind. If we were to suggest any additions and improvements to the annual, they would be such as the following.—A monthly cash account; blanks for a record of crop management; and memoranda for accounts with hired men and others. With the exception of the rates of postage, which refer only to the U. S., this publication is just as suitable for Canadian as for American farmers, and we hope that many of our readers will avail themselves of it. One of the greatest needs of agriculture is that it be conducted after a more business-like fashion, and this book is fitted to be a great help in that direction.

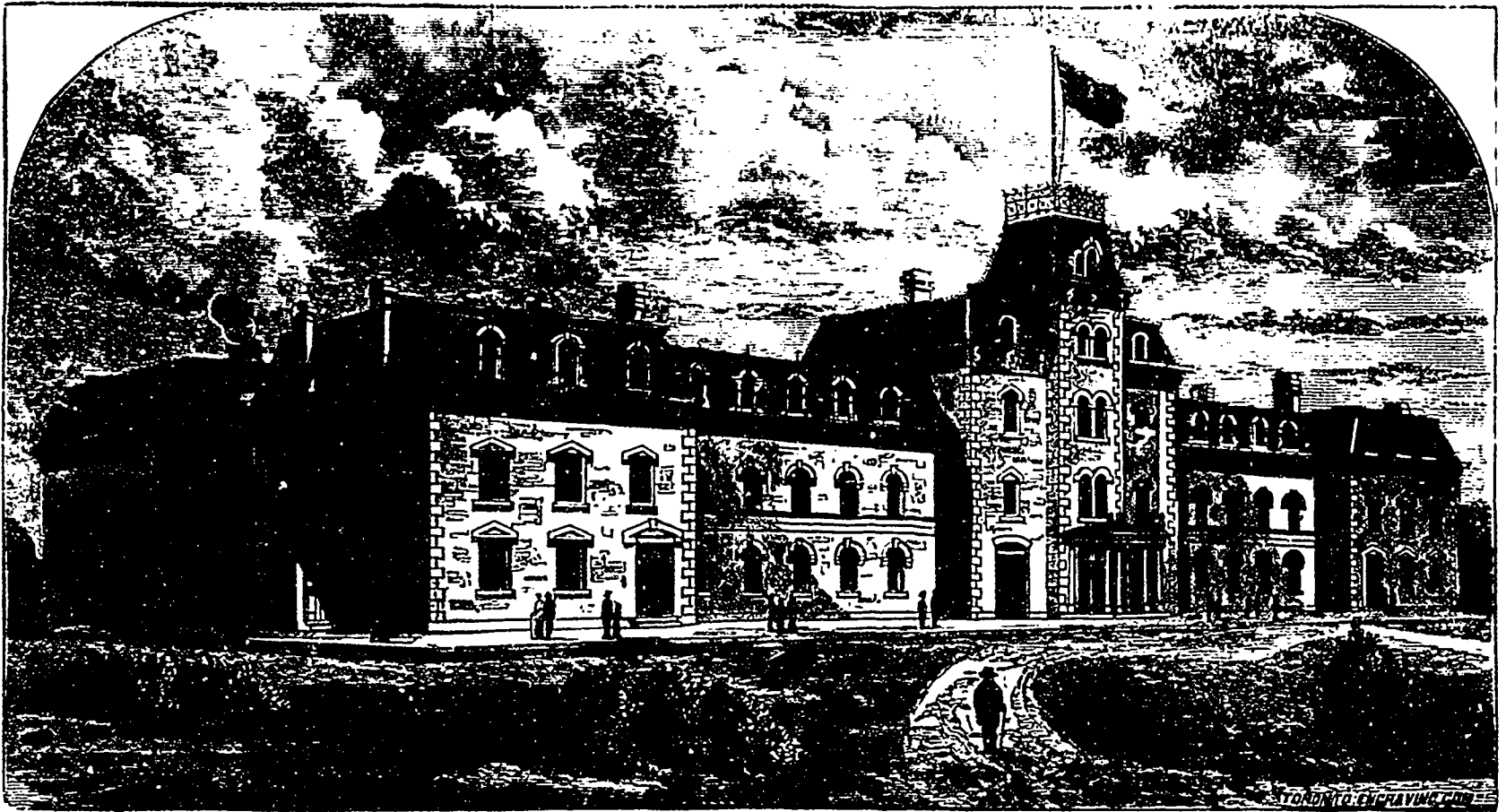
little, without any very definite idea of the shape it might ultimately assume. When the Government first bought land and determined to establish an agricultural college, the architect drew plans for a building which would have suited the purpose exactly, but the cost seemed too great, and the country was not prepared for it, consequently, it was decided seven years ago to commence work with a few students in Mr. Stone's farm house. Additions and alterations were made from time to time as the number of students increased, till the result is, the building which you see outlined—altogether different from what was originally intended; and though it is not what we would like, it nevertheless affords considerable accommodation, and serves the purpose very well.

"In the building, as it now stands, there are one hundred and twenty-two rooms. three class-rooms, a reading-room, a library, a room to be fitted up for a museum, a laboratory, two offices, a public reception room, sixty-two stu-

REPORT OF THE ONTARIO AGRICULTURAL COLLEGE.

The report of the above-named institution for 1881 contains a detailed account of the year's work, and furnishes ample evidence of the growing popularity and prosperity of the "People's College." Mr. Mills, the President, says:—

The year 1881 has not been marked by anything striking or unusual in the history of the college. It has rather been characterized by faithful work and substantial progress in the different departments of the institution. At the same time, it has not been altogether void of interest. I think I may safely say that the institution is growing in favour at home and abroad. The applications for admission at the commencement of each session are more than we can accommodate. Several delegations from the neighbouring Republic have lately examined and approved our methods; and the farmers of Ontario have begun to urge the importance of a liberal outlay for the purpose of building a laboratory,



ONTARIO AGRICULTURAL COLLEGE, GUELPH.

ONTARIO AGRICULTURAL COLLEGE, GUELPH.

Those of our readers who have never visited this institution will be able to form a good general idea of its external appearance from the illustration herewith presented. It occupies a commanding position on the crest of a hill, the land sloping away from it in all directions, leaving it conspicuously visible at a considerable distance. It stands well back from the public highway, and is approached by a wide, gravelled carriage road, which curves through a spacious lawn, in which evergreens, shrubs, flower-beds, and rustic seats combine to present a very inviting fore-ground. The following description, from the last Report of the institution, will be read with interest:—

The college building, as shown in the engraving, is a plain, substantial structure, without much claim to architectural beauty. Like the institution itself, it was built little by

little, without any very definite idea of the shape it might ultimately assume. When the Government first bought land and determined to establish an agricultural college, the architect drew plans for a building which would have suited the purpose exactly, but the cost seemed too great, and the country was not prepared for it, consequently, it was decided seven years ago to commence work with a few students in Mr. Stone's farm house. Additions and alterations were made from time to time as the number of students increased, till the result is, the building which you see outlined—altogether different from what was originally intended; and though it is not what we would like, it nevertheless affords considerable accommodation, and serves the purpose very well.

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A MOVEMENT is now being made at Picton to secure farm labourers from the Emigration Agent at Kingston for those who may desire them this spring.

constructing suitable green-houses, and otherwise making more satisfactory provision for the efficient working of the several departments.

The total attendance of students during the year has been 217. Of these 164 were from Ontario, 24 from Quebec, 11 from England, 6 from Nova Scotia, 3 each from New Brunswick, Scotland, and Wales, and 1 each from the United States, Bermuda, and Ireland. The number of Ontario counties represented is 31. York sent 11, Oxford 10, Wellington 10, Carleton 9, Lanark 8, and Huron 7. The city of Ottawa sent 14, Toronto 7, and Hamilton 4. Lectures commenced October 1st, and continued through three terms, closing June 30th. The summer term, ending August 31st, was devoted entirely to practical work in the out-door department. Full details of the course of instruction are given in the report, also samples of the method of teaching.

Visits by the Legislature, Cornell students,

and several excursions of farmers from various parts of the province, are chronicled, and the commendatory resolutions passed by these visitors recorded. The golden opinions expressed on these occasions are highly creditable to both officers and students.

The report mentions the following items of progress and improvement for the year:—

"A museum has been opened; large additions have been made to the library; an anemometer has been put up, and observations taken three times a day instead of twice, as formerly; pipes have been laid from the city water-works to the college; and a professor of horticulture has been appointed. We have a nice, cheerful reading-room, and a commodious library. The former is exactly suited to our wants; the latter is not quite large enough. Over 3,000 volumes of choice reading were transferred from the library of the Education Office to the shelves of this institution. Since that time we have been able to boast of a very handsome library—not extensive, but well selected. It now contains 3,639 volumes of reports, herd-books, books of reference, and general reading. We have also forty-two papers and magazines on file in the reading-room."

The amount expended for all purposes during 1881 was \$27,573.62, and the revenue from the farm \$7,384.16, making the net expenditure for the year \$20,189.46. A comparison of salaries paid at the Michigan State Agricultural College with those given at the Ontario Institution shows that the merit of economy, if such it be, is on our side. But, in our view, even the Michigan men are underpaid. There are still many wants, both inside and outside the college, which, it is to be hoped, will in due time be supplied. Of these, the report gives a detailed statement. The Legislature should see that these are attended to without delay. Such an institution ought not to go a-begging for anything likely to increase its efficiency. The copious accounts given by Prof. Brown of his crop-growing and stock-feeding experiments, cannot be briefly summarized in a notice like this. We shall enrich the columns of the RURAL CANADIAN from their treasures of "wit and wisdom." As a sample, we invite the special attention of our readers to the section on "Permanent Pasture," which will be found in the "Field and Farm" department of our present issue.

PUBLICATIONS RECEIVED.

BURPEE'S FARM ANNUAL.—This is a well-got-up catalogue of garden, farm, and flower seeds; also of "blooded stock," issued by W. Alice Burpee & Co., Philadelphia, Pa.

FARM TALK.—We are in receipt of a copy of the new work entitled Farm Talk, written by Geo. E. Brackett, of Belfast, Me. It contains 23 chapters and 144 pages, and, as its title implies, is a series of talks on various farming subjects, put in every-day talk style. Every person interested in farming matters will find it very readable. Printed on fine paper, with portrait.

REUBEN WEDGE, of Beverley—lot 12, 7th con.—who is well known for the fine stock he keeps, sold the other day to Archibald Carr, of Kansas City, a span of yearling Clyde fillies for \$350. The fillies weighed just 2,495 lbs., which is a pretty good heft for a pair of yearlings.

SKETCHES OF CANADIAN WILD BIRDS.

BY W. L. KELLS, LISTOWEL, ONT.

THE LARGE BLACK-BIRD.

This species, in its general habits, form, and plumage, closely resembles the crow, but it is, of course, much smaller. It is about fourteen inches in length; its colour is deep black, the neck of the male being of a glossy-green hue. It is migratory and gregarious, moving about before and after the breeding season in flocks, arriving in Ontario in April, and departing again in September. Soon after their arrival in the spring, the older birds separate in pairs, and commence to repair their old nests, or select places for the construction of new ones. When not disturbed, they will occupy the same places year after year.

The places generally selected for nesting purposes are hollows in trees, deserted nests of woodpeckers, among the thick branches of trees, and sometimes in clumps of willows and the tops of low evergreens. Their favourite *habitat* is low swampy lands in the vicinity of settlements, and along the margins of creeks and rivers near towns and villages, for they do not penetrate into the woods, but, on the contrary, seem to delight in the neighbourhood of cultivated fields and human habitations. The nest of the blackbird is formed of weeds, vines, grass, wool and horse-hair, cemented with mud, and lined with fine dry grass and strawberry vines. The eggs, four to six in number, are of a blue colour spotted with blackish-brown, and unless the first nest is destroyed, it does not breed more than once in the season. While incubation, which lasts two weeks, is being performed by the female, the male bird becomes very fierce and warlike, attacking every other bird that appears in the vicinity of the nest, not fearing to exhibit its pugnacity to the crow and the different species of hawks. In these contests, he often finds allies in the king bird and the oriole. Though jealous of other members of their own species, black-birds like to nest near each other, and two nests may sometimes be seen in the same tree. Should a common enemy intrude, all the black-birds will unite in endeavouring to expel it. In fact, during the breeding season, and until the young are able to fly, the vicinity of the black-bird's home is a scene of daily noise and contention. It is a very affectionate bird, and strongly attached to its nest, eggs, and young. When the latter emerge from the shell, both parents supply them with food, and when they show signs of leaving the nest, the old birds appear in great distress. This species sometimes feeds on various kinds of seeds and grain, but its principal food is insects, worms, crabs, clams, and small fish. It also devours the eggs and young of other birds. In order to procure its aquatic prey, it will often wade into shallow water, and turn over stones. These birds are numerous, and appear to frequent all parts of the country.

THE SONG BLACK-BIRD.

This species is smaller in size than the last mentioned bird, but its shape, plumage and common notes are similar. In its migratory and gregarious habits it also acts like the

larger species, but its *habitat* and its musical notes differ much.

It is the first on our list of song birds, as it begins to sing very early in spring, often before the ice and snow have vanished from the marshy willow-covered bottoms, where it spends the summer season. For about ten weeks it sings during the greater part of the day, but its song is most noticeable in the evening, or early morning hours. Both sexes are endowed with the powers of melody, but the male is the most constant songster. While the female is constructing her nest, and, during incubation, perched on the branches of the budding willows, his pleasing mellow notes are constantly warbled, and are all the more heartsome when contrasted with the monotonous croaking of the frogs in the stagnant waters beneath. Its chief places of resort are the margins of willow-sheltered brooks, low marshy ground, and beaver meadows. Its nest is placed in the thick branches of willows, or in a low balsam, and is composed of stalks of dry weeds, brambles, and mud, and lined with fine dry grass. The eggs, five or six in number, are of a blue colour mottled with dark spots; incubation occupies fourteen days. Both birds assist in providing the young with food, and no creature can show more affection for its young, or evince deeper distress if they are in danger. The great enemies of this species are the blue jay and cuckoo, who, in its absence, or in spite of its efforts to protect it, often discover and destroy its eggs. It feeds occasionally on seeds and berries, but its chief food consists of various kinds of insects which it finds in the vicinity of its *habitat*. It does not appear to nest more than once in the year. In autumn these birds collect in vast flocks, and the noise which they make when several hundred of them are collected among the willows, or in some tree-top, is like the sound of a distant storm. In October they take their final departure for the Southern States, where they remain during the winter season.

THE RED-WING BLACK-BIRD.

The musical powers of this dweller in the marsh claim little attention, but the beautiful vermilion or crimson patch with which the wings of the male are adorned, excites general admiration. In size it is smaller than the song black-bird, but its common notes and general habits are much the same, and in their migratory movements they are often seen in company. It arrives in April at its summer resort, and disappears again in October. When uttering its notes, its wings rise and fall in unison with its voice. This movement of the wings seems to be caused by some internal impulse over which it appears to have little control, but it evidently does not detract from its happiness, for during its summer stay, when flirting among the willows, hovering over the moist grass, or perching on the water-lilies, no bird appears to enjoy life more. With the exception of the mark upon its wings, the general colour of the male is black; that of the female has a dusty hue. Its nest is formed in a low bush, or tuft of marsh grass, and is constructed of dry grass, wool, and other fine materials. The eggs, three or four in number, are light blue, marked with brown blotches.

"The peaches are all right yet," says the *St. Catharines News*.

THE DAIRY.**HOW TO SELECT COWS.**

There are various rules by which experienced farmers and dairymen judge of the milking qualities of cows when it becomes necessary to buy them. A wedge-like shape of body, rich colour of skin, silky touch of hair, size and prominence of udder and milk veins, and the like, are popular tests of a good milker. But there is too much guesswork about these, and good judges are sometimes deceived. It is not so generally known as it should be, that a system known by the name of its originator, Francis Guenon, a French husbandman, has come largely into use, which is based on scientific principles, and in conjunction with such signs of a good milker as are generally relied upon, is a well-nigh infallible index to the milking qualities of a cow. On the hinder parts of all bovine animals, between the tail and the udder, there is a space, of greater or less extent, where the hair, instead of growing downward, lies in the opposite direction. This is called the "escutcheon," and in proportion to its size and shape, the cow is found to be possessed of milking qualities. This, in brief, is the Guenon system. It is now nearly half a century since it was given to the world in the form of a brief treatise, which attracted considerable attention throughout the European continent, but has only of late received much notice in America. Guenon, in the course of years, greatly elaborated his system, dividing the escutcheons of cows into ten classes, of which the first, called the Flanders, is most indicative of high milking tendencies. It is difficult, in the absence of diagrams accompanied by full explanatory notes, to give an intelligible idea of this matter. Happily, however, the whole subject has been brought within the reach of farmers and dairymen by the issue of a little work, costing only fifty cents in pamphlet form, or seventy-five cents in cloth. Its author, W. P. Hazard, of West Chester, Pa., was one of three experts appointed in 1878, by the Governor of Pennsylvania, as a "Guenon Commission," to test the system in question. They examined two hundred cows, jotting down their opinions of the yield, quality, and time of each of them, and afterwards printing them alongside of the reports of their owners. The result of their examinations was convincing to themselves and others as to the merits of the system, and of its great value to the practical farmer; so much so, that they were led to express the opinion that if generally followed for twenty years, the value of the neat cattle of the State would be vastly increased. Mr. Hazard's book contains the report of this Commission in full, gives the pith of M. Guenon's latest exposition of his system, contains nearly 100 illustrations, and quotes numerous expressions of approbatory criticism from high authorities among farmers, dairymen, and agricultural journals. Mr. Hazard's book is admitted on all hands to be a valuable contribution to dairy literature. A careful study of its 90 well-filled pages is all that is necessary to qualify an intelligent and observing mind to make practical use of the system it so thoroughly expounds. Dairymen especially should possess themselves of this book. "There's money in

it." Poor cows are the heaviest burden that presses on this important industry, and if the principles laid down by Guenon, and so clearly elucidated by Mr. Hazard, were generally understood, not only the selection but the breeding of profitable dairy cows would be the result.

THE DAIRY INTERESTS IN THE UNITED STATES.

At the meeting of North-Western dairymen recently held at Geneva Lake, Wis., a paper on the above subject was read by Col. R. M. Littler, of Davenport, Iowa, Secretary of the National Butter, Cheese, and Egg Association. It was replete with valuable information and statistics. He cited instance after instance where, since the introduction of organized dairying, the results were of the most satisfactory nature financially. They had asked the Agricultural College at Ames to make experiments in dairy processes, to elucidate certain questions which individuals could not accomplish.

In 1880 there were 35,877,791 horned cattle in the United States, estimated at \$25 a head; these would represent a value of \$796,943,775, an increase over the figures of 1870 of 50 per cent. The census showed that in 1880 there were 12,442,137 milch cows in the country, which will probably be increased in 1882 to 13,000,000. Calculating the value of the milk at \$40 per cow per year, it would be worth \$520,000,000. An increase of 10 per cent. during the next year means an addition of \$1,000,000 per week to the wealth of the country.

The dairy interest of Iowa, Illinois and Wisconsin has increased 66 per cent. during the last ten years, while the increase in New York State was but 6 per cent. The dairy interest of the States of Kansas, Nebraska, Dakota and Minnesota are also pushing forward with rapid strides. The present high price of butter—45 to 50 cents per pound—has a tendency to discourage exportation. Hence exports are constantly falling off, being in 1881 but 18,000,000 pounds. The foreign market for cheese was more favourable, the exports since May, 1881, amounting to 135,000,000. He thought 200,000,000 pounds would soon be too small a figure to measure the annual dairy export from the United States. When in England a short time ago, he was told by farmers that it cost them twelve cents to produce a gallon of milk. Illinois or Wisconsin or Iowa dairymen could export it to England, and place it on the consumer's table for less money than it would cost English dairymen to produce the milk from which it was made.

IOWA DAIRYMEN IN COUNCIL.

The sixth annual Convention of the Northern Iowa Butter, Cheese and Egg Association, held at Cedar Rapids, February 22-24, was largely attended. The topics discussed were live ones, and the discussions showed that the farmers of Iowa engaged in the dairy industry are wide awake and enthusiastic in their efforts to get as much legitimately out of the business as there is in it. Hon. R. D. Stephens, in his address of welcome on behalf of the Cedar Rapids Board of Trade, said "the last census shows that there are 12,000,000 cows in the United States, and Iowa has enough

good grass land to feed the whole lot, allowing three acres to each cow; that Iowa is pre-eminently the dairy State of the Union; its soil and climate cannot be surpassed."

The rapid growth of this industry in Iowa was referred to by C. H. Huston, Esq., of the Cedar Rapids Dairy Board of Trade; by Hon. H. D. Sherman, of Monticello, in responding for the Convention to the welcome accorded; and also by President Moran in his annual address. The latter contrasted the former system of farming, when wheat and corn were the principal crops of the State, and the present condition of things, where dairying has largely superseded these crops. He said: "More pasture land and less wheat, as many cows as the farm will feed, well selected, well housed, and well milked, and as many pigs as can be profitably kept—such seems to be the model farm of the future."

A call of the roll of counties represented showed that the aggregate number of creameries in such counties is over 150.

The cost per year of keeping cows, which was a prime factor in the cost of milk, was fully discussed, some claiming \$15 per year, others \$40. About \$30 was agreed upon as the average, and the cost of milk was graded on the value of land. On land worth \$25 to \$50 per acre, milk costs 40 cents per 100 lbs.; over \$50, 55 cents per 100; \$75, 65 cents; and \$100 per acre, 75 cents per 100 lbs.

The above is a brief synopsis of the first day's proceedings, and comprises all of the report which has yet come to hand in our Western exchanges. Any other matters of special interest to Canadian dairymen which may be embraced in the remaining reports will be duly chronicled in the RURAL CANADIAN.

HOW TO MILK.

Much harm has been done by the old injunction to "milk as rapidly as possible." Never attempt to hurry the operation; milk steadily, and keep the milk drawn as fast as it will flow naturally. Don't stop to talk or loiter about the milking, but do not grasp the teat as if you were going to crush it in your hand, or thrust your thumbs into the udder as if bearing your weight on them. I have seen those who claimed to be good milkers who would do this, and have seen thin skinned and soft flesh cows that would kick under the affliction until it was almost impossible to milk them, although ordinarily they were quiet when milked by those who had milked them previously. The operation of being milked should be a pleasant one to the cow, and it will be if it is done rightly. One other cause occasionally produces bloody milk, and that is allowing a cow to go too long before milking when she has a full flow of milk. The pressure and strain of the full milk vessels in the udder are too much for the delicate structure of that organ, but this cause is more apt to produce this trouble, or garget, in the spring, when the cows that are fresh in milk are first able to get a hearty feed of grass. For a cure, give one or two doses of saltpetre (about a tablespoonful as a dose), and not more than one dose a day; to relieve the garget, rub the udder with some soft grease, or with bacon rind (some people think the latter is best; they ascribe a penetrating power to the saltpetre in the bacon pickle, or to the smoke which has flavoured it), and take care to milk gently and quietly. Remove the cause, if you know it, and hope for better things in future.

GARDEN AND ORCHARD.**ORCHARD PLANTING.**

The superintendent of the grounds of the U. S. Department of Agriculture at Washington advises the following plan of setting fruit trees. He says:—

"It is a common observation that the outer rows of trees in established orchards are finer and more productive than the trees in the interior of the plantation. This superiority is all the more conspicuous if the orchard is bordered by cultivated fields, and it is fair to presume that the extra luxuriance is owing to the trees having a greater extent of unoccupied soil for the ramification of the roots. Something is undoubtedly due to the greater space available for the expansion and spread of the branches; but it is in accordance with all experience in the cultivation of plants that a rotation of crops is absolutely essential towards securing the best results of the fertility of the soil. Keeping these facts in view, it is suggested that an improvement upon the present method of planting two rows of trees from eighteen to twenty-five or more feet apart depending upon the nature of the trees, and alternating the plants in the rows. Then allowing a space varying in extent from 300 feet to any greater distance before planting another series of rows, and so increase the plantation as far as may be desired. The intervening spaces between these double rows of trees would be available for the cultivation of the ordinary crops of the farm. The roots of the trees would not only participate in the benefits of cultivation, but would also have, practically, unlimited room for extension before meeting with others of their kind. Immediately under the trees, and for a distance on each side of the rows, as the branches spread the surface could be kept in grass. If not sown down immediately after planting, which might not be desirable in all cases, it should be done after the trees attain a fruit-bearing size, or from five to seven years after setting out. The shelter which will be afforded to other crops by these orchard belts will be found valuable as protection from winds as in forwarding the crops. This method is particularly applicable to apple and pear trees."

THE PROPERTY OF TOMATO LEAVES.

One of our exchanges thus recommends tomato leaves as a banisher of insects. We give it with the statement that we planted tomatoes close to cucumbers, without success. Tomatoes grow so luxuriantly, however, that it will cost our readers nothing to try it:—

"I planted a peach orchard," writes M. Siroy, of the Society of Horticulture, "and the trees grew well and strongly. They had just commenced to bud, when they were invaded by the curculio (*pulyon*), which insects were followed, as frequently happens, by ants. Having cut some tomatoes, the idea occurred to me that, by placing some of the leaves around the trunks and branches of the peach trees, I might preserve them from the rays of the sun, which are very powerful. My surprise was great upon the following day to find the trees entirely free from their enemies, not one remaining, except here and there, where a curled

leaf prevented the tomato from exercising its influence. These leaves I carefully unrolled, placing upon them fresh ones from the tomato vine, with the result of banishing the last insect and enabling the trees to grow with luxuriance. Wishing to carry still further my experiment, I steeped in water some leaves of the tomato, and sprinkled with this infusion other plants, roses and oranges. In two days these were also free from the innumerable insects which covered them, and I felt sure that had I used the same means with my melon patch I should have met with the same result. I therefore deem it a duty I owe to the Society of Horticulture to make known this singular and useful property of the tomato leaves, which I discovered by the merest accident."—*South and West.*

POTATO VARIETIES.

Early Rose.—Early, productive, fine quality when the seed is pure, which is not always, and a very valuable potato every way, but somewhat less vigorous than it once was.

Early Vermont.—Much like the Early Rose, perhaps a little earlier. It is extremely hardy, very productive, and we would choose it at random above all other potatoes for general crop. It is superior in every way to the Early Rose.

Beauty of Hebron.—We have succeeded with this. It is new and clearer than either Vermont or Rose. Early as the Rose and firm as to quality, we like it for its delicacy, for our own use, better than any potato we ever tasted. It is an excellent keeper. Our crops were large.

Burbank's Seedling.—It is white-skinned and profitable; fine of flavour and delicate. It is very beautiful in appearance, being a blonde to the Beauty of Hebron's brunette.

Alpha.—Earlier than the Rose. It is good for an early market, but not for a general crop.

Early Ohio.—A good potato of the Rose kind, and a little earlier. Not so good as Vermont.

Early Snowflake.—A magnificent potato. Harris says he would not know whether to decide for one potato of fine quality between the Beauty of Hebron and the Snowflake. It is not early, but is good for a general crop. Now, we think that the difference is this:—The Snowflake is, without doubt, the finest potato for baking that was ever put into an oven. It is as white as snow, as dry as feathers, as mealy as the finest corn starch, and as delicate as can possibly be. When opened, it falls into light dry meal. The Beauty of Hebron is firmer, higher of flavour, and better adapted for boiling or frying. It is the best frying potato in the world, as the Snowflake is the best baker.

Mammoth Pearl is highly recommended by those who have tried it. It is not a regular-shaped potato, but it lives well in the hill, does not easily rot, and its tops are so strong that the bug does not injure it so much as some other varieties.

WHEN trees are transplanted the roots are always more or less injured, hence, it is best to cut back the tops to correspond with the roots left.

CURRENT NEWS ITEMS.

It is estimated that the grain crop of 1881 on St. Joseph's Island exceeded 20,000 bushels.

MR. DINNIN, of Lumley, has sold his farm to Mr. John Allison, of the Thames Road, for \$57 an acre.

THE Christie farm in Brantford, containing 525 acres, has been purchased by Captain Milloy, of Brantford, for \$36,000.

THROUGHOUT Kent the fall wheat is reported as looking remarkably well, and almost entirely free from the bad effects of changeable weather.

MR. ROBERT KYDD, of the 6th concession, Usborne, has sold his farm of fifty acres to Mr. Robert McDonald, of the Thames Road, for the sum of \$3,000.

A CONSIDERABLE portion of the present inhabitants of Berlin, says the *News*, are retired farmers who have moved into town to spend their declining years.

MR. GEORGE ARMSTRONG, of the Thames Road, has bought of Mr. James Armstrong, twenty acres belonging to lot 6, North Thames Road, for the sum of \$1,500.

THE enterprising farmers around Lansdowne have imported a very fine Percheron stallion at a cost of \$1,800. The horse arrived on the 20th ult., and is said to be a beauty.

THE bee-keepers of Hastings, Prince Edward and Northumberland met at Wooler on the 21st of March, to discuss the best means of developing their popular and important industry.

A FARMER in Dover Township set fire to an old straw stack to scare out a fox, and three tramps crawled out of the smoke and upbraided him for his carelessness in not first jabbing around with a pitchfork to see if anybody was there.

THE *Waterloo Chronicle* says: "The black-knot bids fair to destroy our cherry trees without mercy. It might be advisable to instruct the town constable to enforce the law strictly in this matter, though we doubt whether anything will save the trees now."

MR. SAMUEL SMITH brought to Sarnia on the 20th ult. two head of cattle of the Durham breed, that turned the scale at three thousand seven hundred and fifty pounds. They had been sold to a dealer for shipment, and were undoubtedly magnificent samples of what Lambton farmers can do in the cattle-raising line.

THE total crop raised by the Indian bands in Manitoba and the North-West is estimated by the Indian Commissioners as follows:—Wheat, 6,172 bushels; oats, 4,580; barley, 8,900; peas, 333; potatoes, 19,891; turnips, 24,855; carrots, 1,299. Total, 66,080 bushels, valued at \$118,854. Hay cut and stacked, 2,582 tons, valued at \$8 per ton, \$20,656. Land broken, 4,575 acres, at \$5 per acre, \$22,875. There were erected on the Indian reserves, including instructors' farms, 768 dwellings, and other buildings sufficient to make a total of 1,030. Total expenditure for Indians during the year is given at \$780,847, of which \$726,728 was in Manitoba and the North-West, and \$42,318 in British Columbia. There were sold of Indian lands 32,293 acres, which realized \$50,447. The quantity of lands still in the market is 538,000 acres.

HOME CIRCLE.

HITCHES AT THE ALTAR.

A recent hitch at the altar occurred at a fashionable English watering-place. A large party had assembled in one of the churches, there to witness the nuptials of the niece of a prominent citizen, when it was discovered at the last moment that the registrar, who had the license in his pocket, had not arrived. At the suggestion of the officiating clergyman, the ceremony was delayed for a short time, while one of the party went in search of the errant registrar. His office was the first place visited; but he had gone out, and nothing was known of his whereabouts. Then the messenger repaired in hot haste to his residence, which happened to be some distance out of town; and meanwhile, the party at the chapel becoming impatient, other scouts were despatched in various directions. At length it was ascertained that the worthy registrar had left town by an early train, and as it was impossible that he could return in time, the wedding had to be postponed till the following day. The hitch, it appeared, had occurred through the registrar having received no intimation of the day and hour of the intended marriage.

Fickleness on the part of both grooms and brides has been a fruitful source of hitches at the altar. There is a story told of a rustic swain, who, when asked whether he would take his partner to be his wedded wife, replied, with shameful indecision: "Yes, I'm willin'; but I'd a much sight rather have her sister." An equally remarkable instance, which must be authentic, is narrated by a Bathgate minister. In this case a hitch had occurred at the outset, through the absence of witnesses, and the bride herself had surmounted the difficulty by going for two friends, one of them being her cousin, a blooming lass, somewhat younger than herself. When, at length, the parties had been properly arranged, and the minister was about to proceed with the ceremony, the bridegroom suddenly said: "Wad ye bide a wee, sir?" "Oh, what is it now?" asked the exasperated clergyman. "Weel," replied the vacillating groom, "I was just gaun to say that if it wad be the same to you, I wad rather hae that one"—pointing to the bride-maid. "A most extraordinary statement to make at this stage. I'm afraid it's too late to talk of such a thing now." "Is it?" returned the bridegroom, in a tone of calm resignation to the inevitable. "Weel, then, sir, ye maun just gang on."

The gentleman who so inopportunistically declared his preference for the sister of his bride, is only one of many who have made similarly eccentric replies to the all-important question. One hasty individual, on being asked if he would take the lady by his side to be his wife, testily responded: "In course I will; that's what I came here for."

On a recent occasion an eccentric bridegroom, when interrogated in the usual fashion as to the acceptance of his bride, persisted in responding, to the confusion and bewilderment of the officiating clergyman: "Yes, for a fortnight;" a declaration which was the occasion of no little trouble and perplexity, though the difficulty was ultimately overcome.

We will conclude with a case in which a somewhat serious obstacle to the celebration of a marriage was removed at the eleventh hour by the intervention of a beneficent flash of clerical jealousy. In a western Scottish town one evening, there were so many marriages, that an unfortunate couple who had arranged to be united at the minister's house were unable to procure a cab to convey them thither till long past the hour appointed; and when at last they stood at the door of the manse and rang the bell, it was approaching midnight. A loud and somewhat indignant voice presently responded from a bedroom window upstairs, demanding to know who was there. The situation was briefly explained; but the voice—that of the Rev. Mr. W—, minister of the first charge of the Abbey Church—proved inexorable. "I can't help it," was the ultimatum received; "you must just go home and come back tomorrow." "Oh, Mr. W—, ye ken we canna gang hame without bein' married," struck in a female voice. "But what would you have me do? Call up the whole house because of your bungling?" "Could you no dae't ower the window, sir?" "Nonsense; it is impossible." "Oh, you nicht, sir; ye ken we attend the Abbey on your day, and no on Mr. B—'s." This final stroke of policy proved irresistible, for between Mr. W— and Mr. B—, minister of the second charge of the same church, there subsisted a good deal of professional jealousy. The window was put down, the gas lighted, the door opened, and the marriage of the triumphant diplomatists duly solemnized.

CLEARING OUT STUMPS AND ROCKS.

A writer in "The Country Gentleman" advocates the use of dynamite, considering its explosive force eight times greater than that of common blasting-powder, in the removal of stumps and rocks. When a stump is blasted by black powder, it is lifted from its place and split, but it is not thrown out of its bed, because the openings caused by the explosion are sufficient to permit the gases to escape, and there is no extra force exerted to throw the pieces asunder as when the dynamite is used. Upon this peculiarity depends very much the different effects, and the consequent varied management of these explosives; for while one hundred pounds of loose blasting-powder might be exploded upon the surface of a rock without producing any useful effect, five pounds of dynamite so exploded would break the rock into fragments, or break a large hole into its face by the sudden violence of its force. In fact, while powder exerts a lifting or spreading force only, dynamite exerts a force in every direction, downward as well as upward and sidewise. On this account powder must be tamped or confined closely to produce any tearing or breaking effect, while dynamite needs only the slightest covering, and in many cases no covering at all.

Another important difference is that powder is dissolved and spoiled by moisture, or is injured by damp even, and

cannot be used in wet ground without the use of waterproof cartridges, while dynamite is not affected by water, and water may be even poured into the hole and used instead of tamping, with great convenience and effect. Moreover, dynamite is only explosive by means of an explosive, such as a fulminating cap. A piece of dynamite cartridge may be placed in a stump, and a light touched to it will merely set it blazing and fizzing (just as a piece of saltpetre would do), but there is no explosion as with powder. It is therefore more safe to use than the powder, if only care is exercised when the cartridge is prepared for use, and the cap and fuse are attached. Dynamite is a preparation of nitro-glycerine made by mixing this fluid oil with twenty-five per cent. of its bulk of infusorial earth. This makes a sort of granular paste of it, much like moist brown sugar, but somewhat more adherent and plastic. Nitro-glycerine is made by pouring slowly glycerine (which is a clear, limpid fluid made from fat) into a mixture of equal parts of nitric and sulphuric acids.

This substance must be handled with great care, and is too dangerous for use alone, as it explodes by friction, concussion, by natural decomposition, and at a boiling heat. A blow from the heel of a boot will explode it and cause the person to be blown to fragments.

A SCARCE ARTICLE IN GIRL.

A work-a-day young girl,
A witty and gay young girl,
Although crispy and tart—
Not too awfully smart—
A saucy and chic young girl.

A heart-in-her-hand young girl,
A genteel and bland young girl,
Not given to flirt,
Her beau's feelings to hurt—
A constant and loving young girl.

A help-for-her-mother young girl,
A kind-to-her-brother young girl,
Who spends her nights home,
And cares not to roam—
A light-of-the-household young girl.

A fond-of-her-book young girl,
A know-how-to-cook young girl,
The piano can play,
Or do house work all day—
A preciously scarce young girl.

A cherry-face young girl,
A model-of-grace young girl,
With a heart like pure gold,
That never grows old—
A loving and sweet young girl.

A CAT'S MIND.

A certain household with which we had the best opportunity in the world to be familiar, was served by a very noisy milkman, who came rushing up the back steps to the veranda every morning, banged down his old tin pail, and shouted "Milk!" The pet cat of the establishment always received a saucer full of milk on his arrival, and soon connected breakfast with the noisy milkman. When the familiar step beat on the walk and the rattle and the shout were heard, the cat would spring to the door with tail in air and eyes sparkling. A mischievous boy, noticing this, conceived the brilliant idea of fooling the cat. He slipped out quietly one afternoon, ran noiselessly along the walk and up the steps, and shouted "Milk!" The cat was at the door in an instant, all agog with expectation, and savagely comprehended the meaning of things when the door opened and no milkman appeared. There was something so funny about making a fool of the cat that the experiment was tried from time to time with great success; but suddenly it failed. When the boy rushed up the steps and shouted "Milk!" the cat lay beside the stove and purred sedately. She had learned to detect the imposture. The experiment did not stop here. The boy was resolved not to be beaten by the cat, and after failing in several attempts to arouse her by the old method, he slyly took out with him a tin can, came rushing up the veranda, banged down the can with a great rattle and yelled "Milk!" The cat sprang for the door as if she had been touched with an electric battery.—*Buffalo Courier.*

WHAT MAKES YOU PALE!

Probably a lack of fresh air and exercise out of doors. Housework is exercise, of course, but it has not the invigorating quality that a brisk walk in the open air has. Try for a month the effect of a walk every day, in the morning, which is the vital, exhilarating, delightful part of the day.

But walking without an object is very stupid, you urge. That is true enough. Have an object. Do the marketing. Undertake some of the family errands. Go to see the poor and the sick, and people who are in trouble and weighed down with some infirmity. Carry the papers that you have read to Aunt Brown, who never sees a paper unless some one lends it to her. Ask to be included in the visiting committee of the Sunday-school, and look after absentees; or become a member of the Dorcas Society, and call on some poor family. That will give you an object.

Still, all the out-door exercise you can take will not make you bright and blooming, if you do not eat the right sort of food. Tea and toast, coffee and warm biscuit, rich cake and pastry—above all, the constant nibbling of sweets and candies, will keep you pallid. You must eat wholesome porridge, made of nutritious cereals; you must eat rare roast-beef and steak, and mutton chops, and plenty of fruit. And if you go to bed early, bathe in cold water once a day,

keep your mind busy, and your heart at rest, by leaving life and its orderings submissively with God—you will have what every woman needs if she would be useful and happy—good health and good looks.

A friend says, "Do tell the girls to rest and not to wear themselves out by too much pleasuring, too much studying, or, indeed, too much of anything."

And this is good advice, too. But the mothers need it quite as urgently as the daughters—possibly a great deal more.

COFFEE DRINKERS.

The Hollanders are the greatest coffee drinkers in the world, their annual consumption being about eighteen pounds per head of the whole population. The principal cause is the fact that Amsterdam has long been one of the great coffee marts in the world, and, being admitted free of duty, coffee is very cheap. Next comes Belgium and Denmark, in which the consumption per capita is about half that of Holland. Next comes the United States, in which the consumption per capita in 1880 was 8.8 lbs., in 1881 somewhat less, being 8.4 lbs. per head. By a calculation founded on the data furnished in Mr. Thurber's book, the present consumption of tea in the United States may be stated at a little over one pound per week for each family in the nation. In the use of tea and coffee the people of England and the United States present a most remarkable contrast. The annual consumption of the people of England is just about a pound of coffee per head, or about one-eighth of that of the people of the United States. Comparing the consumption of tea with that of coffee, it will be found that while the people of the United States use about five pounds of coffee to one pound of tea, the people of England use five pounds of tea to one pound of coffee.

CORAL REEF BUILDING.

Professor Joseph Le Conte, in a lecture on corals, corrected a wide-spread misunderstanding respecting corals and coral reefs. The popular idea is, says M. Le Conte, that these animals are little insects; that they build like ants and bees do, and when they are alarmed they disappear into their little burrows, and these reefs are accumulations of millions of these little insects in generation after generation. The fact is, the coral animal is a polyp belonging to the group of radiata; that it consists of limestone deposits in the shape of a hollow cylinder with top and bottom discs, surmounted with tentacles, containing a stomach and enveloped with gelatinous organic matter. The tentacles or arms are provided each with a mouth for the absorption of food. The coral is coralline limestone after the gelatinous organic envelope is decayed and removed. The animals which build reefs are not much larger than pin-heads. Reef-building corals will not grow at a depth of 100 to 120 feet. There have been reef-building corals found at a depth of 1,000 feet, but they were dead—drowned by being carried below their depth. This confines them to coast lines and submarine banks. Corals will not grow where the temperature is lower than sixty-eight degrees at any time—that is, the ocean, not the air. Therefore they are confined to the tropical regions. They will not grow except in clear salt water; hence there is always a break in reefs opposite the mouth of a river. Finally, they demand free exposure to the beating of the waves. The more violently the waves beat, the more rapidly the corals grow, because the agitation gives them ventilation. Corals will grow in the face of waves whose beatings would gradually wear away a wall of granite. The four kinds of coral reefs found in the Pacific Ocean are fringe reefs, barrier reefs, circular reefs, inclosing lagoons in the ocean, and small lagoonless coral islands.

"I'LL NO TRUST YE."

Two centuries ago, in the Highlands of Scotland, to ask for a receipt or promissory note was thought an insult. If parties had business matters to transact, they stepped into the air, fixed their eyes upon the heavens, and each repeated his obligation without mortal witness. A mark was then carved on some rock or tree near by as a remembrance of the compact. Such a thing as breach of contract was rarely met with, so highly did the people regard their honour.

When the march of improvement brought the new mode of doing business, they were often pained by those innovations. An anecdote is handed down of a farmer who had been to the Lowlands and learned worldly wisdom. On returning to his native parish he had need of a sum of money, and made bold to ask a loan from a gentleman of means named Stewart. This was kindly granted, and Mr. Stewart counted out the gold. This done, the farmer wrote a receipt and handed it to Mr. Stewart.

"What is this, man?" cried Mr. Stewart, eyeing the slip of paper.

"It is a receipt, sir, binding me to give ye back the gold at the right time," replied Sandy.

"Binding ye! Weel, my man, if ye canna trust yerself, I'm sure I'll no trust ye. Ye canna have my gold." And gathering it up, he put it back in his desk and turned the key on it.

"But, sir, I might die," replied the canny Scotchman, bringing up an argument in favour of his new wisdom, "and perhaps my sons might refuse it ye; but the bit of paper would compel them."

"Compel them to sustain a dead father's honour!" cried the Celt. "They'll need compelling to do right, if this is the road ye're leading them. I'll neither trust ye nor them. Ye can gang elsewhere for monee; but ye'll find none in the parish that'll put more faith in a bit o' paper than in a neighbour's word o' honour and his fear o' God."

MR. PROCTOR, the English astronomer who has excited the fears of some nervous people by predicting the falling of a comet into the sun, may perhaps relieve them by his more recent assertion that "the world is more likely to last 15,000,000 years than to be destroyed in fifteen."

YOUNG CANADA.

WHO ARE THEY?

A blustering fellow goes prowling about:
He tosses the snow with a scuffle and shout,
And pinches the toes,
The ears, and the nose
Of each little darling, wherever he goes.

The timid birds hear him and hide their wee heads,
And mooly cows shiver in barns and in sheds,
And sweet flowers say,
"At home we will stay
Until this noisy fellow gets out of the way."

A bright little maiden is soon on his track,
And gently, though firmly, she orders him back.
O, fair she appears,
In smiles and in tears;
She calls to the flowers, "Come up, pretty dears."

The birds hear her voice and they twitter with glee,
And pink little buds peep, the bright sky to see;
The grass twinkles out,
And lambs skip about,
And, O, the glad children so merrily about!

And who is this blustering chap? Can you tell?
And who is this maiden who robes hill and dell,
Whose whisper so arch
Wakes oak-tree and larch?—
Why, she is Miss April, and he Mister March.

BIRDIE AND HIS FRIENDS.

What a number of visitors birdie has today, and how kind and attentive they all seem to be to him. He appears to like it, too, for he picks playfully at their fingers, and sings his pretty little song over and over for them. They take great care of him, and make sure that the cat can never get near his cage. They never forget to give him water and seeds and sand, and they sometimes treat him to little bunches of fresh green weeds, just of the kind he likes best. Birdie knows nothing about the kind of life that wild birds live, and he does not pine for it. He has always lived in a cage, and would not fly away although he had a chance. His cage door is kept shut, not so much to keep him in as to keep his enemies out; and his cheerful notes seem intended to assure all within hearing that he is quite contented, and that, as another singer long since tried to get the world to understand, it takes something more than iron bars to make a prison.

ZIP COON.

Did you ever see a racoon? I am going to tell you about one that was sent from the South as a present to a lady whose name was Isabella. He was called Zip Coon, and a very wise coon he was. Zip had a long, low body, covered with a yellowish hair. His nose was pointed, and his eyes were bright as buttons. His paws were regular little hands, and he used them just like hands. He was very tame; he would climb up on Isabella's chair, and scramble to her shoulder. Then he would comb her hair with his fingers, pick at her ear-rings, and feel her collar and pin and buttons. Isabella's mother was quite ill, but

sometimes was able to sit in her chair and eat her dinner from a tray on her lap. She liked to have Zip in her room; but, if left alone with her, Zip would jump up on the chair behind her, and try to crowd her off. He would reach round, too, under her arms, and steal things from her tray. Once the cook in the kitchen heard a brisk rattling of tin pans in the pantry. She opened the door, and there on the shelf was Zip. There were two pans standing side by side. One had Indian meal in it, and the other nice sweet milk. In front of the pans stood Zippy. He had scooped the meal from one pan into the milk in the other pan, and was stirring up a pudding with all his might. He looked over his shoulder when he heard the cook coming up behind, and worked away all the faster, as if to get the pudding done before he was snatched up and put out of the pantry.

Zip was very neat and clean. He loved to have a bowl of water and piece of soap set down for his own use. He would take the soap in his hands, dip it into the water and rub it between his palms; then he would reach all round his body and wash himself.



It was very funny to see him reach away round and wash his back. One day, Isabella, not feeling well, was lying on her bed. Zippy was playing around her in his usual way. Pretty soon he ran under the bed, and was busy a long time reaching up, and pulling and picking at the slats over his head. By and bye he crawled out; and what do you think he had between his teeth? A pretty little red coral ear-ring that Isabella had lost several weeks before. Zip's bright eyes had spied it as he was playing round under the bed. So you see Zip Coon did some good that time. When Zip grew older, he became so cross and snappish that he had to be chained up in the woodshed in front of his little house. On the door of his house was printed in red letters, "Zip Coon; he bites."

A LAWN PARTY.

Not a man, woman, or child present, and yet it was a delightful party. Who gave the party? Duke. Who came? One dog! Two Irish setters of fine family. Duke could

run like a flash, and Flash looked like a duke. These dogs were of the best [dog] society in town. They would visit each other, but did not care much for other dogs. One day Flash concluded to call on Duke. Some sort of an invitation had been given him; an extra wag of the tail, or some sign, told Flash that Duke wanted to see him.

Off darts Flash, and hurries away to his friend's kennel. The two dogs have a great frolic on the lawn. They play "tag" as children would. They roll, and tumble, and pretend to be very angry with each other, but all the while they are full of fun.

At last they are as tired as children, and lie down, panting, on the green grass. They look into one another's faces and talk by winks, and blinks, and an occasional feeble wag of their bushy tails.

All at once Ethel, who is looking at them from her window, sees Duke get up, walk slowly to a corner of the garden, and dig with great haste. Up comes a choice bone which Duke had with admirable thoughtfulness and foresight saved from his breakfast and carefully hid there for his expected company.

Back trots the kind dog carrying the sweet bone. He lays it down at Flash's side. He then lies down himself and watches Flash as he devours it, wagging his tail all the while. He is glad to have his guest enjoy himself.

Flash eats his lunch, and then the two dogs, well rested, begin their frolic again. After a while Flash seems to remember that he ought to be at home. He gives one more wag, and then says good-bye. That was a party without any jealousy, or anger, or discontent. Flash will give

one in return some day soon.

THE GREAT PAPER.

Many pieces of old paper are worth their weight in gold. I will tell you of one that you could not buy for even so high a price as that. It is now in the British Museum in London. It is old and worn. It is more than six hundred and sixty-six years old.

A king wrote his name on this old paper, and though he had written his name on many other pieces of paper, and they are lost, this one was very carefully kept from harm, though once it fell into the hands of a tailor, who was about to cut it up for patterns, and at another time it was almost destroyed by fire.

Visitors go to look at it with great interest. They find it a shrivelled piece of paper, but they know that it stands for English liberty, and means that "Britons never shall be slaves." It is called the "Magna Charta," which means simply the "Great Paper." There have been other great papers, and other papers that have been called "charters," but this one is known the world over as the "Great Paper."

Scientific and Useful.

A NICE BREAKFAST DISH.—Take a pint of sifted cornmeal, an even-teaspoonful of salt, a pinch of soda and enough water to mix well; then pat into cakes (like codfish balls) and fry brown in hot fat.

HORSE RADISH SAUCE.—Grate the horse-radish, boil an egg hard, pound the yolk, and add to the above a little raw cream, mustard, and vinegar added the last thing. It must all be mixed cold, and then heated.

HOME ECONOMY.—A great deal of time may be saved if knee-pads are made for children who creep, or who, in playing, are upon their knees much. Take pieces of heavy cloth; cut them to fit the knee; make them as thick as you please; tie them on with tapes, or fasten them with rubber bands.

TENDERLOIN STEAK.—Take a large or double tenderloin steak and boil it; have some Parisienne potatoes, saute with butter, which put around the dish. Have some good butter melted, and a little parsley cut fine; add the juice of half a lemon, mix thoroughly, and pour over your steak.

GRAHAM BREAKFAST ROLLS.—Two lbs. of potatoes, boiled and pressed through a colander, one pint of water, one-half cup of sugar, one-half teaspoonful of salt, one-half cup of yeast; mix into a stiff dough with Graham flour, and let it rise overnight. In the morning mould into small cakes, and when light bake.

APPLE FRITTERS.—Make a batter, not very stiff, with one quart of milk, three eggs, and flour to bring it to a right consistence. Pare and core a dozen apples, and chop them to about the size of small pears, and mix them well in the batter. Fry them in lard, as you would doughnuts. Sprinkle powdered sugar over them.

TABLE LINEN.—Napkins of various tints, more properly called doilies, are used in serving fruits. For ordinary table use white table-cloths and white napkins are in vogue as they have been. There are cloths with narrow bands of scarlet or crimson along the edge, with napkins of the same description, that are very tasteful.

EXCELLENT COFFEE CAKE.—This is one of the best of plain cakes, and is very easily made. Take one cup of strong coffee infusion, one cup of molasses, one cup of sugar, one half cup of butter, one egg and one teaspoonful saleratus. Add spice and raisins to suit the taste, and enough flour to make a reasonably thick batter. Bake rather slowly in tin pans lined with buttered paper.

ORANGE SALAD.—Peel eight oranges with a sharp knife, so as to remove every vestige of skin from them; core them as you would core apples, and lay them either whole or cut in slices in a deep dish; stew over them plenty of powdered loaf sugar, then add four red bananas cut in small round slices, the juice of a lemon and a little more sugar. Keep the dish covered close till the time of serving.

MACARONI WITH CHEESE.—Macaroni prepared with cheese is a favourite dish with many people. Put the macaroni in boiling water after breaking it in pieces about two inches long; put plenty of salt in the water; let it boil for fifteen minutes, then drain off the water and pour in milk enough to cover the macaroni; let it boil in the milk till it is done; of course you must watch it carefully. When it is tender, put it in a pudding dish or in some dish in which it can be sent to the table. Put a layer of macaroni in the bottom, with little lumps of batter on it, then a layer of grated cheese, and so on alternately until the dish is full. Cover the top with bread or cracker crumbs, with little lumps of butter on the top; set in the oven till the top is brown, and it is all thoroughly heated.

THE BEST RICE PUDDING.—This rice pudding is beyond comparison the best ever made, in spite of the fact that it is the cheapest. The secret of its perfection is the long cooking it gets. For a five o'clock dinner the rice and milk should be put on the stove early in the forenoon. The best thing to cook it in is a double kettle. Add to a quart of milk two heaping tablespoonfuls of rice. Let it simmer on the back of the stove—it must never boil—until a couple of hours before dinner. It will then be a thick creamy substance. Then salt and sweeten it to taste, put it into a pudding dish, and bake in a moderate oven until it is of a jelly-like thickness and the top is slightly browned. It can be eaten either hot or cold. If the latter is preferred, the pudding may be made the day before if that is most convenient. If desired, a flavouring may be added. This is emphatically the perfect pudding of its kind.



Lamb Knitting Machine,
For Family or Manufacturers' use.
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TORONTO WHOLESALE MARKETS

OFFICE RURAL CANADIAN, Toronto, March 28th, 1882.

COUNTRY PRODUCE.—Apples.—There is little or no demand for car lots, but they are held at \$3 to \$3.25. Beans unchanged at \$2.50 to \$2.60 per bushel, with stocks very light. Eggs are in abundant supply, and the demand good, prices are easy at 13 1/2c. to 14c. for case lots. Hogs are in fair offer on the street, and prices steady at \$8 to \$8.25 for small lots. Car lots nominal. Hops are in the hands of a few holders, and prices are steady at 22c. to 25c. for choice lots in a jobbing way, and 18c. to 20c. for medium. Onions are dull and unchanged, at \$2 to \$2.25 per barrel. Potatoes are a little firmer and receipts small; car lots are worth \$1.10 per bag. Poultry are scarce and firm, with no boxed lots offering, chickens are worth 60c. to 85c. per pair, geese \$1 to \$1.25. Tallow is in demand, with sales of small lots at 8c.; dealers pay 4c. for rough and 7 1/2c. for rendered.

FLOUR AND MEAL.—Flour has been in better demand during the past week, and prices are firmer. Offerings continue small, holders seeming inclined to hold for higher figures. Sales have therefore been small. Superior Extra, old standard, would bring \$5.60 to-day, and Extra sold at \$5.50. New Standards are worth 10c. additional. The stock in store is 7,773 barrels against 7,718 barrels last week and 9,643 barrels the corresponding week of 1881. Bran is wanted at \$16 on track, but none offering at that price. Oatmeal quiet, with car lots of ordinary worth about \$4.50.

WHEAT.—The tone of this market is much stronger than for several weeks, in sympathy with Britain and the West. There has been a fair enquiry, but, like flour, transactions have been small, owing to the high prices asked by holders. A round lot of No. 2 Fall sold outside on Tuesday at equal to \$1.27, and \$1.28 was bid for 5,000 bushels May delivery. No. 3 Fall offered at \$1.28, without bids. No. 1 Spring is worth \$1.30 to \$1.31, and No. 2 Spring \$1.28 to \$1.29; a round lot of the latter was wanted yesterday at \$1.30 1/2 May delivery. The stock in store is 369,221 bushels against 352,985 bushels last week and 219,781 bushels the corresponding week of 1881. Wheat closes firm to-day with no sales.

COARSE GRAINS.—Barley—Trade has been fairly active during the week, and prices rule firm. Considerable enquiry has been heard from the States, with sales of round lots on p.t. Cars sold to dealers here the latter part of last week at 85c. for No. 1, at 83c. and 84c. for No. 2 choice, and at 81c. for No. 2. On Monday and Tuesday No. 1 sold at 86c., No. 2 choice at 84c., No. 2 at 82c., and No. 3 extra at 78c. Barley market firm to-day with a good demand, and sales of No. 1 at 87c. The stock in store is 225,243 bushels against 230,486 bushels last week and 266,719 bushels the corresponding week of 1881. Oats have been in moderate request and steady, with sales of Western almost daily at 40c. and 41c. on track. The stock in store is 6,488 bushels against 6,223 bushels last week and 700 bushels the corresponding week last year. Peas are in better enquiry, but few offer; a round lot outside sold on Monday at equal to 79c. The stock in store is 21,984 bushels against 89,866 bushels the corresponding week of last year. Rye steady, at 80c. on track. The stock in store is 17,474 bushels against 18,182 bushels the corresponding week of last year. Corn quiet, and nominally firm at 80c.

LIVE STOCK.—Cattle—The receipts of cattle have been greater than for several weeks, and prices a shade easier. There is a good demand for export, and choice steers weighing 1,200 to 1,400 lb command 5 1/2c. per lb. Good butchers' cattle are worth 4 1/2c. to 4 3/4c., medium 3 1/2c. to 4c., and inferior 3c. Sheep are in fair demand, with receipts light and prices firm at 4 1/2c. to 5c. per lb. Lambs are scarce and firm at 5c. to 5 1/2c. per lb. Hogs are unchanged, with sales of a few store lots at 6c. to 6 1/2c. Calves in moderate demand and unchanged at \$5 to \$7 for ordinary, and \$9 to \$15 per head for first class.

PROVISIONS.—Butter has been but quiet the past week, with the chief demand for choice selected tub lots at 19c. to 21c. Large rolls of good butter bring 14c. to 18c., and inferior lots 12c. to 13c. There is an absence of enquiry for export. Bacon has been quiet, the demand being restricted to small lots of long clear at 11 1/2c. to 11 3/4c. A car sold the latter part of the week at 11c. Cumberland cut unchanged at 10 1/2c. to 10 3/4c. Hams unchanged at 11c. to 11 1/2c. for pickled, and 13c. to 13 1/2c. for smoked. Miss Pork quiet and steady at \$21. Lard is also quiet and unchanged, at 14c. to 14 1/2c. for tubs and pails, and 15c. for American refined.

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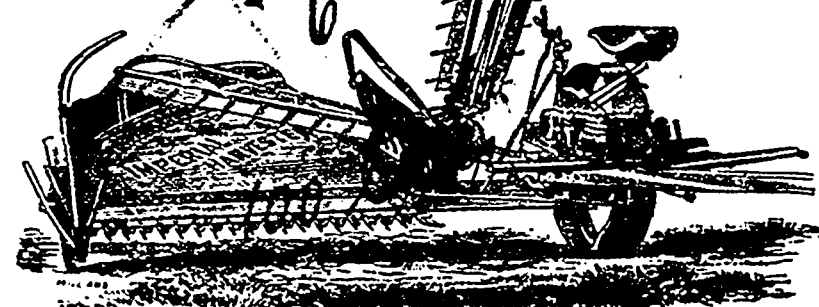
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