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RURAL NOTES.

GAMBLING in grain has reached an extravagant pitch. On February 11th, the transactions in wheat at Chicago amounted to 80,000,000 bushels, about double the actual supply in the United States.

The advocates of summer-fallowing are wont to urge that it is the only effectual way to rid land of the white grub, cut-worm, and other insect sneak-thieves. But a New Jersey farmer reports that a dressing of eight bushels per acre of salt to land badly infested with white grubs, enabled him to raise good crops of corn for three years past, which was impossible previous to this application. It should also be remembered that while salt is thus bad for insects, it is good for the soil.

HON. M. H. COCHRANE, of Hillhurst Farm, Crompton, Quebec, intends to sell at Dexter Park, Chicago, April 18th, about thirty head of short-horn cattle, comprising all the Duchesses, Wild Eyes, Kirklevingtons, and Barringtons in the herd at Hillhurst, together with the Eighth Duke of Hillhurst, and Thirty-fifth Duke of Oxford. We shall watch the sale with interest, as indicating the present value of the more fashionable Short-horns in the American market.

THE State of Connecticut, says the *N. Y. Tribune*, has over fifty village societies for rural improvement, and the excellent movement is fast spreading into other States, including California. Some of the good results are thus indicated:—

“The man who asks for the practical tests can be pointed to many towns where these associations have manifestly done great good in cultivating public spirit, quickening social and intellectual life, fraternizing the people, improving the sanitary conditions, enhancing the value of real estate, and increasing the charm and attractions of domestic life.”

THERE is a fashion in the shape of apple trees, and it is as irrational as most fashions are. It demands high, bare trunks, in opposition to the natural tendency to branch near the ground. Low-branching protects the trunks from high winds and “the sun’s meridian blaze;” it keeps the trees from leaning over under the force of the prevailing winds; the limbs are less liable to be broken by fierce blasts; the crops are more easily gathered; while borers, codling moths, and other insects are less likely to gain access, and do mischief.

EXCLUSIVE dependence on clover as a fertilizer is hardly to be commended, but there is a fact that speaks volumes in regard to the value of this much-neglected means of maintaining the productivity of land. The Hon. Geo. Geddes has a field to which no barn-yard manure has been applied for seventy years. It was formerly in an

impoverished condition, but, recuperated by the use of clover and plaster, it is now in a highly fertile state; so much so, that the late John Stanton Gould once spoke of its crop of timothy as the largest he ever saw.

BOY-LIFE on the farm is too often a ceaseless round of drudgery. According to the old proverb, “All work and no play, makes Jack a dull boy.” Sometimes it appears to have the effect of making him a bad boy. This is the purport of a “boy-convict’s” story which we find in the journal last mentioned:—

“He was reared by pious parents, who supposed that to lead a perfectly religious life they must banish everything in the shape of amusement from their doors. Their home had nothing about it to attract and interest the young, and this boy, unable to content himself longer, broke the fetters that bound him to his cold and cheerless parental roof, and launched out upon the world, where he soon fell into bad company, and then to the commission of crime.”

THE Secretary of the Elgin, Ill., Board of Trade challenges the statement that Little Falls, N. Y., is the largest dairy market in the world. He claims that Elgin leads in the number of cheeses, though not in aggregate of pounds; and that during 1881, Elgin sold 3,869,029 pounds of butter, while Little Falls only sold 1,402,122 pounds. The products at Elgin sold for \$2,209,600.04, while those at Little Falls were about “\$2,000,000.” Beside the cheese and butter there were shipped from the dairies around Elgin 150 cans of milk, each containing eight gallons, and 5,000 gallons of milk were condensed at the Elgin Condensing Factory.

MILK-PUNCH is a favourite stimulant with some ill-advised people. But, according to the *Medical Record*, hot milk is a stimulant minus the punch, which greatly lessens the cost, and entirely banishes the danger of the beverage:—

“Milk heated too much above 100° Fahr. loses for a time a degree of its sweetness and its density. No one who, fatigued by over-exertion of the body or mind, has experienced the reviving influence of a tumbler of this beverage, heated as hot as it can be sipped, will willingly forego a resort to it because of its being rendered less acceptable to the palate. The promptness with which its cordial influence is felt is indeed surprising. Some portion of it seems to be digested and appropriated almost immediately; and many who now fancy they need alcoholic stimulants when exhausted by fatigue, will find in this simple draught an equivalent that will be abundantly satisfying, and far more enduring in its effects.”

PROFESSOR ARNOLD, at the recent dairy convention in Woodstock, spoke of the desirableness of more exact estimates of the real feeding value of ensilage, as compared with its cost. Hon. H. C. Kelsey used much stronger language at a late meeting of the New Jersey Board of Agriculture, and pronounced the estimates given by the advocates of ensilage “extravagant and untrustworthy.” He added, that “a little more testi-

mony from the scales, and less rough guessing in this matter as well as others, would be beneficial to all concerned.” Yes: let us, by all means, have the facts and figures as they really are. The first step in every intelligent process is, to “prove all things;” and the next, to “hold fast that which is good.”

FIVE requirements have been laid down for street trees: hardiness, rapid growth, attractive appearance, umbrageousness, and adaptation. The sugar maple is the grandest of street trees, though it lacks the quality of rapid growth. In spite of this defect, however, it must and will take the lead. The linden, or basswood, has all the characteristics of a good street tree, including that of rapid growth, which the maple lacks. It is also peculiarly valuable because, next to the white clover, it is the best source of honey that we have in this country. If its excellent qualities were better known, it would be far more extensively planted. A good method would be to alternate it with the maple, and we suggest this plan to those who design to plant street trees during the coming spring.

LAND needs no rest except what it gets in the season of winter. True, the law of Moses provided periods of rest for land, but this was because agriculture was in a crude state of development in that age of the world. Even then, it was only rest from the hand of man that it got. A natural growth of herbage was produced, and this, by its decay, enriched the soil. Nature abhors a fallow, and will not have one unless compelled to do so by the meddlesomeness of the husbandman. It will be a great step in advance when clovering is made to take the place of fallowing. Clover is at once a crop and a manure, and strange though it may seem, while it occupies the soil the land both rests and works at one and the same time.

As the result of negotiations carried on by Mr. J. E. Fuller, of Oaklands Farm, Hamilton, Ont., the Minister of Agriculture has obtained the consent of the British authorities to the admission, under due precautions, of American cattle into Canada for breeding purposes. One or two quarantine stations are to be established at the western frontier, and there is to be careful veterinary inspection of imported animals. Mr. Fuller is interested in this matter as an importer of Jersey cattle. He has a choice herd of this breed, which has been selected with great care, of the best strains, and regardless of cost. He has recently purchased the bull “Welcome,” which took the first Guenon prize in the Island of Jersey last year. Mr. Fuller is a son of the Bishop of Niagara.

FARM AND FIELD.

DRAINAGE.

At a late meeting of the Western Michigan Farmers' Club, drainage was the subject of an essay by Hon. S. L. Fuller. The *Prairie Farmer* pertinently asks:—

"Who has ever seen the whole matter better presented than in the following formula, that Mr. Fuller placed upon the black-board for the consideration of members, and as a sort of text for his will-digested remarks:—

Late Ploughing, Poached Land, Crops drowned out, Difficult cultivating, Excess of weeds, Too wet to run reapers, Frosty.	} Too wet.
Hard ploughing, Baked land, Dried up crops.	

Hard ploughing, Baked land, Dried up crops.	} Too dry.
Clover thrown out, Wheat thrown out.	

Foresh—Malaria.
Insects—Slow growth.
Poor crops—Wasted manure.
Waste land—Dead furrows.
Wasted land—Water channels.

Effect of the above—Poverty.
Cure for the above—Drainage.

The speaker proceeded to elaborate the ideas here embodied. He said:

"To raise crops we must have sunlight, heat, air, moisture, and a soil containing elements conducive to the growth of plants. The seasons are not propitious, and under-draining only will remedy these evils. Too wet—under-drained land is never too wet for the growth of crops. Thorough under-draining will dry land to the depth of the drains in ordinary soils. Soil once ploughed after draining will remain loose and friable, and will not again become solid. If subsoiling is done it need never be repeated.

"Any culture to the depth of the drain, once made, will remain comparatively loose and friable. Why? Because before the loosened ground can become repacked, the water will commence filtering through it, and it will not pack while the filtering process goes on, and it will filter every rain. The effect of under-draining land is to make the surface of clay land like the surface of sandy land. The entire waterfall is absorbed until the earth is filled, then the surplus water finds the drains and flows away. The effect upon land is to make the soil act like a sponge; it will hold water and give it off. It will only hold so much. If you put a sponge in an earthen vessel it is like soil in a clay basin. It becomes filled, and the surplus goes to fill the basin.

"The season is too dry—Under-draining blows hot and blows cold. The water on a newly-drained piece of land is comparatively tardy in finding its way into the drains at first, but after each rainfall, as time goes on, the water flows more freely, because with new rains new channels are formed, and a channel once formed will not close, and the ultimate result of ditching is to deepen the soil fitted for plant food.

"Evaporation for the surface means 'cold.' To grow crops we don't want cold. When we say the land is cold and sour, we simply mean it is wet, because to add an alkali to the soil would not make it produce, but to drain it would. Usually the wet portions of

a farm are the lower portions, and usually the lower portions are the richest, so that, as a rule, under-draining improves the richest portion of the land.

"Why not plough earlier in the spring? The early-sown spring crop is the best. It is too wet. Under-draining will cure that. Ploughing can often be done weeks earlier when the land is under-drained.

"Land is poached by cattle roaming over the field because the land is wet. Confine the treading of cattle to a small compass, and brick could be made. The clay and the water are mixed, and it becomes sun-dried brick from surface evaporation. Under-draining will prevent this.

"The manure is uneven in its effects, simply because the land, more or less of the time, is too wet. From manure on wet land only partial benefit is derived.

"Soil cracks because of the wet, first, and then the drouth of the land. It ploughs up in clods, because it was too wet, and then dry, or moved when too wet. It may be said the land takes all the rain that falls, and it must do that anyway, that is true; but the under-drained land permits it to pass through, and does not compel the evaporation from the surface. To account for what may seem contradictory in these assertions, let us see the further effect of under-draining. I said we must have light, heat, moisture, and good soil; where too much water is, little sunlight reaches the soil; where too much water is, no heat can penetrate the soil; where there is a superabundance of water we have 'wet,' which is a step beyond moisture. When wet land is drained by taking away the water, you let in the sunlight, you let in the heat—you leave, then, moisture, the requisites to growth. Every channel through which the water has passed out, every interstice left open in the earth, is filled with air. The drains that carry the water down brings up air that permeates the entire drained land."

ONTARIO SILOISTS.

Until the receipt of the last number of the *Country Gentleman*, we were under the impression that there was but one siloist in this Province, and that, consequently, he was, in this respect, a soloist. But it would seem that there is at least a duet of them. Beside Squire Tillson, of Tillsouburg, who gave a very interesting account of his experiments at the Woodstock dairy meeting, there is a correspondent of the above-named paper—"T. B. S.," of Vanneck, Ont.—who has been experimenting with ensilage. He built a silo in May last, into which he first put twenty tons of millet, and afterwards about sixty-six tons of corn fodder. The mass was pressed down with six iron screws. The silo was opened November 1st. Both corn and millet were in good condition, except next to the stone wall, which, being uneven, admitted the air, causing a little mould at the edge. There was also mould at the bottom for a thickness of from two to four inches. "T. B. S." appears to be satisfied with his experiment, but gives no figures as to cost and feeding value. He thinks he can improve upon the construction of his silo, and intends to ensilage clover next year, which he finds it hard

to convert into good, sweet hay. Indeed, he says, "no amount of care can insure us good clover hay. We are at the mercy of the weather." This is rather strong language. It is difficult, but not impossible, to cure clover hay. They do it in England, with a climate more showery than ours. In this country we have not only rain to guard against, but a hot sun, which is nearly as detrimental to clover as wet. These difficulties can be overcome by means of the tedder and hay-caps, and where clover is largely raised (as it should be on every farm), it will pay to provide them. The sweetest clover hay we ever saw was grown by a Connecticut farmer, with the helps named. It was green, fragrant, and toothsome. We guarantee that no sensible cow would prefer the best ensilage to such clover hay. We incline to the opinion that the ensilaging process will be found chiefly valuable in the preservation of green fodder corn.

IRRIGATION.

Many farmers are favourably situated for trying the effects of irrigation. The testimony of one who has done so is given in the *New England Farmer*, as follows:—

"On the farm is a small pond, lying within a stone's throw of the farm buildings, which is fed by a small but durable brook, starting near the centre village of the town, with its 8,000 inhabitants, and in times of freshets or heavy summer showers, acting as a sewer for the entire village. So rich in fertility is the water of the stream, that a large mowing field of some thirty acres, which receives it through numerous ditches, has produced, for several years past, an annual yield of about three tons of hay per acre, at two cuttings, with no other fertilizer whatever being applied; and the soil appears to be improving rather than declining. The water is kept running upon some portion of the meadow nearly or quite the whole season, though being frequently changed in its course by the building or removal of small dams. So valuable has the water-flow proved during the past half-dozen years, that Mr. Hillman is contemplating its use upon nearly the whole of his 100-acre farm, having found by surveys that he can do so at a comparatively small cost. So much sediment is carried in the water and deposited on the surface of the mowing that the grass plants get a slight "hilling" up each year, which tends greatly to increase their vigour and prevent destruction after the mowing machine has laid the stubble bare and exposed to the burning rays of a July sun. Several barren knolls have been converted into the best of mowing land, by no other means than the conveyance of water over them. In the lower part of the meadow it has been found necessary to lay a number of blind drains, to take away the surplus flow in times of over-abundance."

SORGHUM CANE AND SUGAR.

In accordance with request of the Legislature of New Jersey, some experiments on the production of sorghum cane and sugar were carried on last year at the Experiment Station of that State. Out of fifteen varieties tested, only five matured before frost: these were Omeeseana Sorghum, Gooseneck, Early Am-

ber, and Early Golden. The extractable sugar per ton of stripped and topped cane ranged from seventy-six to one hundred and sixty-nine pounds. The several varieties in the above list stand in the order of richness in sugar in these tests, the first being the poorest, and the last the richest. Early Amber fell but little below Early Golden, however, with its one hundred and sixty-two pounds of sugar. The crop was harvested at the period of ripeness fixed upon by Dr. Collier as that corresponding to the largest proportion of cane sugar and the smallest proportion of glucose, or when the seeds are so hard that they cannot be split with the finger nail. Several experiments with different fertilizers on Amber cane were tried. Little dependence can be placed on the results of a single year's experiments in the field, however valuable these results may be as a part of a series extending over several years. With this qualification fully understood, Professor George H. Cook's conclusions from these experiments may be quoted:—Phosphoric acid did not hasten the maturity of the crop; chloride of potassium gave a larger yield of sugar per acre than the sulphate, although the product of crystallizable sugar may be smaller, and stable manure applied directly to the crop lessened the yield of crystallizable sugar without materially increasing the total; while if applied to corn a year previous on the same land, the effect on the sorghum following the corn is good—two results that are in accord with previous general experience. Professor Cook considers that, on the whole, the results of these experiments are highly encouraging, if due allowance is made for the severe drouth and other unfavourable conditions of the season.—*New York Tribune.*

GRASS HAY.

The *Orange County Farmer* has the following suggestion for next summer:—"Our finest and best flavoured butter is made from grass, and if a little corn-meal or bran be added the quantity will be increased. Our best cheese is made in June and September, provided our cows be running on rich aftermath the latter months. Even with these indisputable facts before our eyes, should we not the coming year make an effort to get our hay in the barn as near a grass condition as possible? and our stock will do enough better on it to pay us for the extra expense."

SURFACE MANURING.

Says Geo. E. Warring, jr.:—"Practice has gained a triumph over the old theory. Manure so spread (on surface) is subject to some waste; but what is not wasted is so much better incorporated with the soil by the rains that the effect produced is better than if the raw manure had been immediately ploughed under. Ammonia is formed only during decomposition, and as there is very little of this process going on in manure which is thinly spread upon the surface of the land, especially during cold weather, the loss from this cause is not great."

MR. WILLIAM TOWERS, of the 14th concession of McKillop, has purchased the farm of Mr. Hugh Davis, containing 100 acres, paying therefor the sum of \$6,000.

THE DAIRY.

GLENGARRY CHEESE CONVENTION.

An amateur dairy convention was held in Lancaster, on Friday, February 10th, and was largely attended, there having been, it is said, upwards of four hundred persons present. Several of the speakers who addressed the Belleville meeting, gave a second edition of their speeches to the Glengarry dairymen, who listened with the greatest interest. The Lancaster meeting was convened by Mr. D. M. McPherson, who has done so much for the dairy interest in his district, that he has come to be styled the "Glengarry Cheese King." Long may he reign!

FIRST YEAR'S GROWTH MOST IMPORTANT.

Let any large dairyman look through his herd, and he will find his most profitable cows to be those of the greatest digestive capacity; and the history of these will show that they were thrifty growers as calves. The first year is the critical period in the growth of the future cow. A respectable size cannot be obtained at two years old, without a vigorous growth the first year; besides, it should be remembered that it requires less food to produce a given weight the first year than the second. It will cost very little more food to produce 600 pounds growth the first year than 300 the second year. This law of growth has become familiar to the readers of the *Journal*, both from practice and example. It is therefore very bad economy to feed heifer calves sparingly, as the older they become, the more it will cost to put on the weight required. After many experiments and careful observation, the practice of having heifers come in at two years old is rapidly gaining ground, both in the United States and in all the dairying districts of Europe. It is a general observation that a heifer coming in at two years develops into a better cow at four than if she came in at three years; and this is attributed to the early development of the milking habit. It therefore becomes imperative that the heifer calf should have generous food and care the first summer. There can be no valid excuse for neglecting it. The patron of the cheese factory may raise very fine heifer calves upon whey by adding other food to it. He must not fear the cost of the small amount of other food required to balance the defects in the whey. The cost of this food will not present half the extra value of the calves from its use.—*National Live Stock Journal.*

HORNED COWS.

One serious objection to the Jerseys, in common with all horned cattle, is the risk of injury when kept in close quarters. Farmers engaged in mixed husbandry appreciate the advantage of keeping cattle closely yarded in winter when out of the stable, so as to make all the manure possible. It has been my custom to feed once a day, when the weather permits, long fodder in the barn-yard. I never knew a cow to eat her own, if another cow she could whip was within reach. She will leave the choicest morsel in the yard to drive off her neighbour and try hers. Generally she is not content until she has made

the round, and driven off in turn every cow she can whip. If one expects to keep but two or three cows, and can give them the best care and attention, I do not think he can improve on good Jerseys for cream and butter. But if he is to keep a dozen or more, with the care and food given by even the best farmers, unless stock is a specialty, my experience indicates they are not just the thing. Which breed is best for the purpose indicated I do not know, but of this I am confident, the coming cow—the cow to satisfy the requirements of the average farmer with mixed husbandry—must be a better milker than the Shorthorn, must be hardier and a better beef animal than the Jerseys, and must be hornless.—*Ex.*

FODDER FOR COWS.

Professor J. W. Sanborn says that seventy-five pounds of organic matter given with three pounds of corn-meal will feed a cow better than 100 pounds of hay; and sixty-five pounds of oat straw with three pounds of cotton-seed meal gave as good returns as 100 pounds of hay. By selling the hay thus saved and having pigs to eat the corn grown on the seventy-five pounds of corn fodder (less the three pounds taken by the cattle), he realized a profit both in the feeding and in the making of manure. Palatability is not to be lost sight of when judging of values in food. Farmers have condemned ripe hay because cattle do not give so much milk when fed upon it as when they have early cut hay; but they found that this is because they eat less, especially if changed frequently. If ripe hay is fed with its proper proportion of albuminoids, and the cattle kept upon it till they become accustomed to it, they will eat all they need and give as good returns as if fed green hay. As coarse foods fed with grain are found more palatable than hay, farmers will see that they can afford to raise more corn, oats and ploughland crops in place of grass. And yet Professor Sanborn has not the greatest faith in ensilage for the preservation of the corn fodder in a green state.

THE bull is half the herd. Thus a bull of the best milking strain of blood, used even in a small lot of dairy cows, greatly and at once improves each of his get. And the high-priced bull, though seemingly extravagant at the start, soon returns to his owners a heavy profit. Of late years the Jersey importations have been scattered widely over the land, and the butter dairies and creameries are realizing the profits from the gains produced by the breeding of the natives and grade cows of other bloods to the bulls, thus increasing the value of many herds.

MR. THOMAS RUSSELL, of the Thames Road, Usborne, has made another valuable addition to his already fine herd of shorthorns. He has recently purchased the famous cow "Lady Miller," with bull calf at her foot. The following pedigree of this magnificent animal speaks for itself: "Lady Miller," got by Lord York (26766); 1st dam Jane, by Bell Duke of Oxford [830] 6449; 2nd dam Mayflower, by Prince of Wales (18630); 3rd dam Bessie Bell, by Captain (11240); 4th dam imported Red Rose, by Baron of Kedsdale (11156); 5th dam Rose, by Remus (11987); 6th dam Old Rose, by Sir William (12102); 7th dam Kate, by Togstone (5487); 8th dam Catherine, by Emperor (1974)."

SHEEP AND SWINE.

THE LEICESTER BREED OF SHEEP.

Of the Leicesters there are three varieties, the original or Bakewell, the Border, and the Yorkshire. Of these the first has probably no direct representatives now in Ontario. Mr. Parkinson, of Eramosa, a very intelligent breeder of Leicesters, thus refers to the characteristics of the three varieties. He says:—

"The small, fine Leicester, which some people call the Bakewell, has been bred in-and-in with the object of obtaining fineness of quality, but it is too tender and too small a sheep for this country. But the Yorkshire Leicesters, for instance, in which breeders have largely retained the quality and symmetry of the Bakewells, and also their feeding qualities, early maturity, and an increased fleece of wool, are the class of Leicester sheep which I consider adapted to this country. The fine English Leicester is a good symmetrical sheep, but it is too small and tender to be a profitable sheep for this country.

"The same qualities which have been obtained to some extent by improving the Yorkshire Leicesters are found in the Border Leicesters, only perhaps the Border Leicester does not hold its wool so well, or carry so heavy a fleece as the Yorkshire Leicester; but they are both good mutton sheep, both come to a good size, and both are as hardy as any other long-wooled sheep, and they are as free from disease as the Cotswolds or the Lincolns, or any other long-wooled breed.

at, although there could be no doubt that they both had come from the Bakewell stock."

It matters not for any practical purpose whether selection only, or an infusion at some date, or even more than once, of Lincoln blood, may have made our Leicesters what they are. Either the Yorkshire or Border Leicesters have all the characteristics of a well-established breed. Mr. Parkinson's are the Yorkshire variety, which he thinks approximates more to the Lincoln than the Border Leicester. He describes the difference as follows:—

"The Yorkshire Leicesters are darker coloured on the head than the Border Leicesters; they are shorter in the neck, and they are better filled up in what we call the collar, that is, where the neck joins the shoulder, and the neck never rises so far above the body as it does in the Border Leicester; the neck is more on a line with the back. The Yorkshire Leicester is also, I think, a little fuller or more sprung in the fore ribs. Its fore legs should stand wide apart, and it should grow the wool nearly down to the knee. While the wool of the Yorkshire Leicester is not so thick set, they carry it closer up about their neck, and more underneath than the Border Leicesters."

In regard to wool, Mr. Parkinson says:—

"The reason why Leicesters do not keep up their wool so well as some other breeds, I think, is this, that mutton sheep are valued more highly in the old country than here, and it is generally found, by sheep men, that a sheep carrying a comparatively fine and light fleece will fatten faster than a sheep carrying a coarser and heavier fleece,

Mr. Iler, of Colchester (Essex), while stating that the Cotswolds and Leicesters have been the favourite breeds in that district, says that, to obtain a medium wool, the Southdown is now being used to cross the long-wooled sheep.

Mr. Andrew Elliott, of Galt, says:—"The Down and the Leicester make a remarkably good sheep to cross."

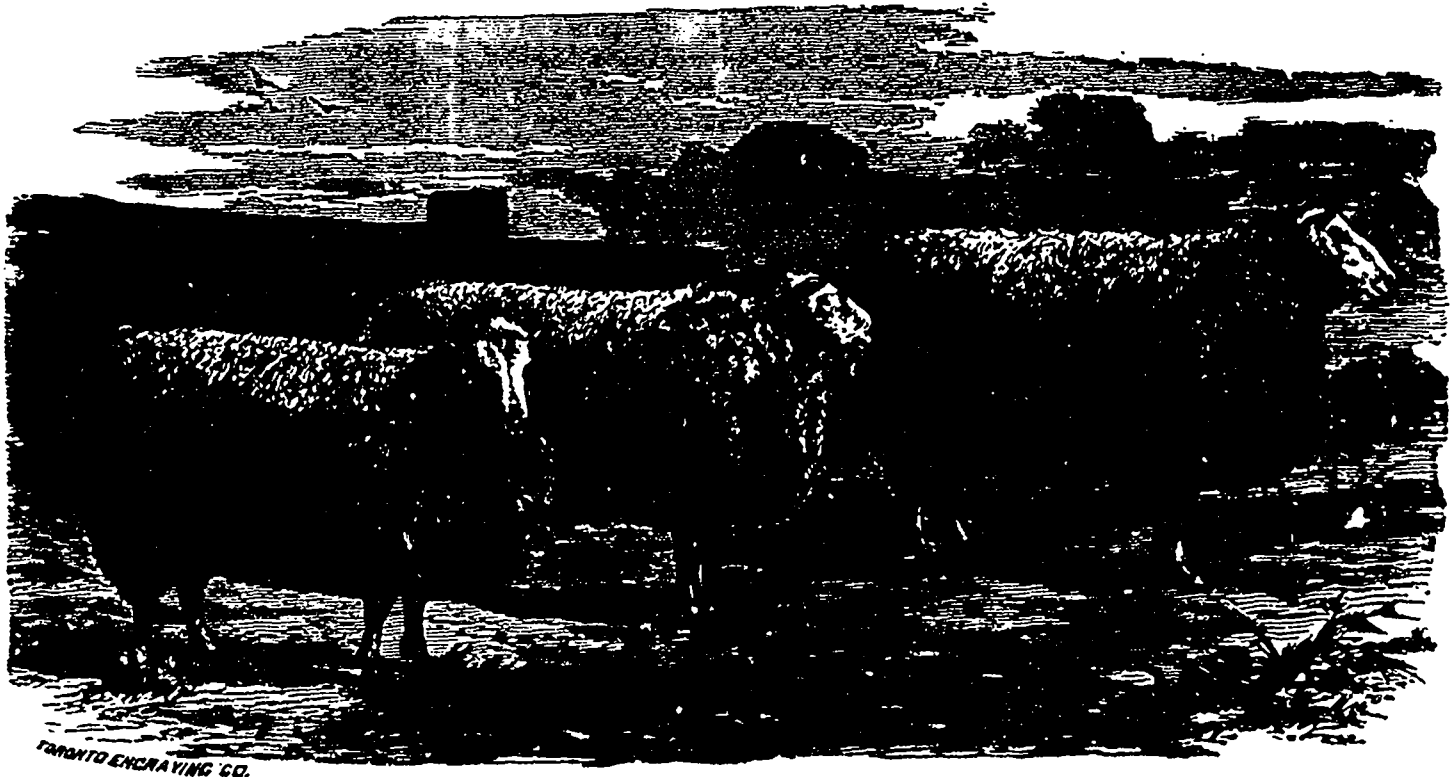
Mr. Douglass, of Blantyre (Grey), says of his experience with Leicesters:—

"Thoroughbred sheep are also being introduced, chiefly the Leicester, which is considered the best breed at the present time. I have been using the Leicesters for about twelve years. Before that I tried a cross with the Southdown. I put the Southdown to the common ewes. It seemed to do very well. I just used one for two years, and we thought they were getting too fine and small. I used common ewes for breeding purposes, and I am using a Leicester ram with those crosses. It was because there was a demand for long wool that made it desirable to have Leicesters. I find the Leicester is as hardy as the Southdown."—*Ontario Agricultural Commission.*

SHEEP ON THE FARM.

An exchange, in speaking of the raising of sheep and their value on a farm, says:—

"Upon lands fed by sheep the droppings



LEICESTERS.

"The Yorkshire and the Border Leicesters are about equal in size, and there is very little difference between them and the improved Lincoln, which has been improved by the use of Leicester blood—so much so, that a few years ago, when Professor Buckland was in England and was reporting for the press what he saw there, he testified that the difference between the improved Lincoln and the Leicester was so small as hardly to be distinguished; and according to Youatt's testimony, all the long-wooled sheep in England owe their improvement to the Bakewell Leicester."

The fine sheep of which the above plate is an illustration, are of the Border variety, and from the flock of Mr. Whitelaw of Guelph, one of the foremost sheep-breeders in Ontario.

Mr. Parkinson also mentions an incident referred to by a well-known author, showing how greatly judicious selection, independently of any out-crosses or new blood, may affect the race or breed. He says:—

"A man in in-breeding has certain objects that he aims at, and where he has material enough to select from, he is able in the course of a number of years, even by breeding from the same original flock, to produce quite a distinct character. Youatt gives an instance of two men who, there was no doubt, both bred from the Bakewell stock; one aimed at getting large size and a full fleece, and the other aimed at symmetry, which is generally accompanied by a small animal. Neither had any out-crosses, and each succeeded in giving the character to his flock which he aimed

and as there is more difference in the old country between the prices of wool and mutton than in this country, they have not regarded the loss of a little wool as being an offset to a sheep that would fatten quickly and come early to maturity. I think that the improvement in the Leicesters has been largely owing to the breeders pursuing a different object from what was followed immediately after Bakewell's time. Bakewell, who originated the Leicester breed of sheep in the middle of the last century, attempted to get a sheep that would mature early, without regard to size and weight of fleece, and breeders afterwards sought to obtain greater size, and, I think, used the Lincoln in doing so."

He goes on to say:—

"About two years ago my flock averaged a little over eight pounds of wool to the fleece; last year the average was between seven and eight pounds. If I made wethers of my ram lambs, and had as many shearlings as I had breeding ewes, it would increase the average weight of the wool, because shearlings—the lambs that come early, in the latter end of February or March—have more than a year's growth of wool, and being well fed, their wool keeps on growing. I don't think the wool of breeding ewes, after they have lambed, increases in weight, while the wool of young sheep does increase in weight. I have had shearlings that would average between eight and ten pounds a fleece. Between seven and eight pounds would be a general average."

Mr. Yuill, of Ramsay (Lanark), says:—

"I have been raising pure Leicester sheep for twelve years, generally wintering about thirty-five, but am now crossing them with the Lincoln as they were getting too fine in the wool and small in the body. I sell them for breeding purposes to neighbours. I can sell all I raise."

would be more evenly spread over the ground than they could be by any other domestic animal, and in particles so small as to be all, or nearly all, covered by the grasses and taken up by the soil, and not dried up by the sun and absorbed by the atmosphere, as is the case with the excrement of other cattle. The closeness with which sheep graze keeps down all weeds and bushes, and forms a close and firm turf. It is not uncommon, even now, to find some old sheep pastures which have been turned to meadows, and are among our most productive mowing lands. The amount of labour for working successfully a farm of any size is decidedly in favour of sheep. These animals require very little attention, except in the spring at shearing. They do not need stabling. Through the winter good comfortable sheds, with yards attached, where they can get plenty of fresh air, are all they require. In fact, most persons who keep sheep are apt to keep them too warm in winter. In the case of a large flock, shelter from the storm and wind is sufficient. Sheep will eat their

food cleaner and be healthier in the open air than in a barn cellar. The two most important requisites in the wintering of sheep are to keep them dry and give them plenty of fresh air.

"Every year we are becoming more a mutton-consuming people, and the demand for good mutton is increasing. In any of the eastern markets good lambs command prices which will almost pay for raising for that purpose alone. Perhaps it would be better in some localities to select such breeds as make the most mutton, rather than confine the industry exclusively to wool-growing animals. Except in some parts of Vermont, where the Merino is the prevailing breed, mutton-raising is receiving more attention than wool production alone in New England, and it is to be hoped that once more sheep will be the common stock of our hills and mountains.

ESSEX PIGS.

The Essex is one of the best among our smaller breeds of hogs; it feeds easily, matures early, produces pork that is well marbled, and is perhaps, all things considered, the best family pig in the market. Larger breeds are preferable for mess pork, but those who go in for prime table meat will choose the Essex or Suffolk varieties. Between these there is but little choice, except as to colour, the Essex being pure black, and the Suffolk pure white. The Suffolk, though its colour attracts the sun's rays less than the Essex, has a slight tendency to "sun-scald," from which the Essex is quite free. Some dislike a black hog, but its carcass cleans as white as any other. Mr. James Anderson, of Puslinch, an experienced breeder of Essex pigs, gives the following evidence before the Ontario Agricultural Commission:

"I have used the smaller breeds—Berkshires and Essex, and Mr. Brown's breed, the Windsor. . . . I have had both Berkshires and Essexes until recently, when I have given my whole attention to the Essexes. I think they are more profitable, for the amount of feed consumed, and come earlier to maturity. I can generally sell all I can spare. Prices are not so high as they were. I used to sell to the United States people a good deal, but lately Canada has been my chief market. I give the preference to the Essex for early maturity. If I were selling on the market, the Berkshire might be more profitable, but for family use I think the Essex is more profitable. I find the Essex to be as hardy and prolific as the Berkshire. When I had both Berkshires and Essexes I crossed the two breeds, and got a splendid cross. There are dozens of my neighbours bringing their Berkshire sows to my Essex boar, and they prefer the first cross to the pure-bred animal for feeding purposes."

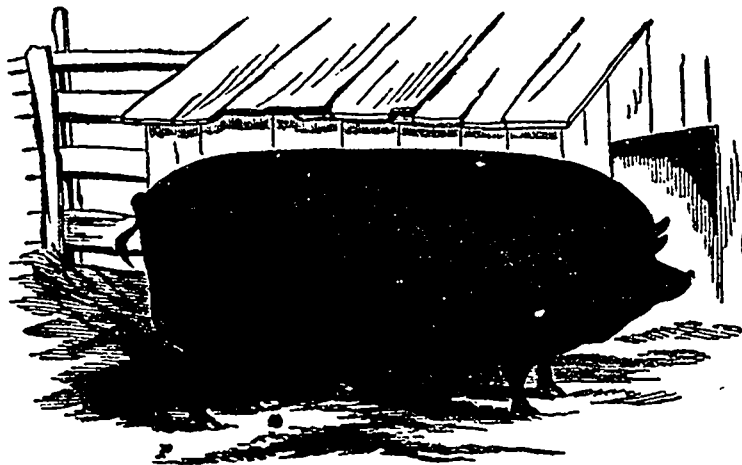
A PLAN FOR PROTECTING SHEEP FROM DOGS.

Tennessee has no dog law. A correspondent of the *Country Gentleman* in that State tells how he takes the law into his own hands, as follows: "For the benefit of sheep breeders, I give my plan of dealing with the worthless curs. My sheep were being killed at night, and I had no means of ascertaining where to find the guilty dog, and was not long in reaching the conclusion that unless something was speedily done my flock of fine Southdowns would all soon be killed. Therefore, I decided to build a pen with rails, commencing at the ground and gradually drawing in each additional course of rails, like a bird trap,

until sufficiently high to prevent a dog from jumping out; leaving the top open. I then put into this a sheep that had been killed. It will readily be seen that a dog could easily get on the top of the pen from the outside and jump in, but it was impossible for him to get out. My pen was a complete success, and so far I have not had a single sheep bitten outside of that pen by a dog. I will not say how many dogs I caught in my pen, for fear some of the readers of the *Country Gentleman* might be inclined to doubt my statement."

SWINE IN WINTER.

We have always maintained that hogs can be raised or fattened to good advantage during any winter season if the proper conditions and surroundings are kept strictly adhered to. Hogs, either old or young, where they are kept through the winter season to the best advantage, should never be allowed to drink anything colder than common spring water, and warm slops generally would be preferable even to that. Where hogs, or any other domestic animals, for that matter, are permitted to become very thirsty and then are



ESSEX BOAR.

allowed free access to ice-cold water, they invariably injure themselves and seriously check the natural thrift they would keep under a different course of treatment. Ice-cold water chills the blood and seriously deranges the whole digestive apparatus of such animals as are allowed to drink it freely. The sanitary condition in all respects should be kept up to just as high a standard with hogs that are being kept during the winter season as during any other time of the year.

PORK RAISING.

In regard to the pig business there are many points to consider. The great one is the financial point. Can we grow pigs and compete with the west? No. Why? you will ask. I will try and tell you. To make 100 pounds of pork takes 500 pounds of corn. Now it costs 20c. to ship 100 pounds from Illinois to New York; so 500 pounds of corn put into a pig costs 20c. to ship; but if we ship the corn and grow the pig here it costs five times as much for freight, viz. 100c.; or on a lot, in one case \$20, in the other \$100, which you see is quite a difference against us. So I think you will see that point as I do. Still, we do make money on pigs here. I will tell you how, but it is to a limited extent. Brewers and distillers use a large amount of

grain in making beer and whiskey. The refuse will not sell, but they get pigs that eat it up and get part of their growth at a small expense, and then finish with good feed. So with farmers who keep cows. The skim milk, etc., has no value, we can't sell it, but we give it to the pigs, it makes them grow, and then at the end we give them corn, and so can compete with the west to a limited extent. But it will not answer to keep more pigs than you do cows. If you do, you will come out at the little end of the horn.—*Cor. Farm and Home.*

DENTITION OF PIGS.

At British Agricultural Shows much reliance is placed on the decisions of veterinarians on the age of pigs, determined by examination of the teeth. Disqualifications are common. At the recent Smithfield Fat Stock Show, entries of widely-known breeders—men of high character—were disqualified. One exhibitor states positively his ability to prove by his books and by oaths of bailiffs and others that his pigs were but fourteen months old, although pronounced over eighteen by the veterinarian.

Where many hogs are kept, mistakes as to the age of a pig may easily be made, but it is altogether probable that there may be considerable variations in the stage of development of the teeth, owing to breed, mode of keeping, etc. The forcing process to which many show pigs are subjected, gives them a precocious development in size, weight, often in sexual character, and it may do so in the matter of dentition.—*Breeder's Gazette.*

AN Iowa farmer put up twenty one-year-old hogs for fattening, and for the first twenty days fed

them on shelled corn, of which they ate eighty-three bushels. During this period they gained 837 pounds, or upwards of ten pounds to the bushel of corn. He then fed the same hogs for fourteen days on dry cornmeal, during which time they consumed 47 bushels and gained 535 pounds, or 11½ pounds to the bushel. The same hogs next fed fourteen days on cornmeal and water mixed, consumed 54½ bushels of corn and gained 731 pounds, or 13½ pounds of pork to the bushel. He fed them fourteen days on cornmeal cooked, and after consuming forty-five bushels of the cooked meal the hogs gained 799 pounds, or very near 15 pounds of pork to the bushel of meal.

MR. JOHN NOTT is said to have purchased the Oke farm, near Welcome, county of Durham, for \$117 per acre.

THERE was a raffle up in Parry Sound the other evening for a horse. At the close of the proceedings it was discovered that the animal had been dead three days.

ANDREW SCHRAM, of Beverly, recently went to work in the woods at eleven o'clock in the forenoon and put up a cord and a quarter of wood before night. Considering that Mr. Schram is sixty-six years old, the performance was not a bad one.

HORSES AND CATTLE.

CARE OF CALVES.

A celebrated Irish farmer gives this advice to one young in the business:—As a breeder, you must be careful not to lose the calf flesh. If you do so by starving the animal at any time of his growth, you lose the cream—the covering of flesh so much prized by our retail butcher. Where do all the scraggy, bad-fleshed beasts come from that we see in our markets? and what is the cause of their scragginess? It is because they have been stinted and starved at some period of their growth. If the calf-flesh is once lost it can never be regained. A great deal of tallow may be got internally by high feeding, but the animal can never be made one that will be prized by the great retail butcher.

LIQUID MANURE TANKS UNDER CATTLE.

The Hon. Geo. Geddes, in a recent communication to the *N. Y. Tribune*, objects to the plan of saving liquid manure described in a recent number of this journal, and quotes from an intelligent German labourer who thinks "the way they did it in Germany" better. This is described as follows:—

"Dig a pit outside in the open yard, lay across it poles, throw on a little straw, and then pile on liquids and solids, and let the rain soak through it all." Mr. Geddes says: "The German's, by all odds, is the better way. Under no conceivable circumstances is a farmer who keeps twenty-five cows justified in stabling them over a manure pit to breathe the exhalations that must arise from decaying, fermenting, unfrozen urine, and such solids as will mix with it in the drops behind the cows."

But Mr. Geddes thinks there is another way which is best of all. It is to secure the liquids as they fall into the drops, and keep them with the solid parts of the manure. This he would do by cutting corn-stalks into lengths of an inch and a half or less, and feeding them to the cows in boxes or mangers. They will eat the finest parts, and the coarser leavings can be thrown into the drops to absorb the liquid manure. This he would spread at once on the land, believing that manure is never better than when first made.

The objection to liquid manure tanks under cattle is, no doubt, well taken. But a tank is no worse than ground saturated with urine, and this there will be even if cut corn-stalks are used as absorbents. For the urine will drain through cracks in the floor, and out of the drops, faster than it can be absorbed by the corn-stalks. The German plan of a pit outside the stables would be excellent provided the floors and drops were light, and pipes were laid from them to the pit. The cost of the pipes and the difficulty of keeping them open are objections to this method. What is wanted is a plan by which all the liquid manure will be saved, and pure air secured for the stabled animals. Mr. Geddes' method will only save a small percentage of the urine, while it leaves the ground underneath the stable floors reeking with filth. We have seen somewhere an account of a farmer, whose practice was to keep his cattle unfastened in a building without floor, in which the ma-

nure was left to accumulate all winter, fresh bedding being freely supplied, and the whole trodden into a compact mass. This might do for young stock, but cows and beef animals that are necessarily kept in stalls would require another system of management.

The subject is one of the greatest importance, and deserves the best attention of stockmen and farmers. It is generally conceded that the chief profit in connection with feeding beef animals is in the manure obtained. To allow any of it to go to waste, is to narrow the margin of profit. At the same time, whatever method of saving liquid manure is adopted, an eye should be kept to the necessity of preserving the atmosphere of the stable as free as possible from foul gases. The free use of gypsum and other deodorizers will be a help in this direction, whatever system of manure-saving may be adopted.

PROPOSED SCALE OF POINTS FOR CLYDEDALES.

Mr. E. A. Powell, an Illinois breeder of Clydes, submits the following scale of points for judging Clydes:—

ONE HUNDRED POINTS IN CLYDEDALES.

1. Pedigree—No horse being desirable as a sire unless well bred	8
2. Sizes—Medium and blocky most desirable	3
3. Symmetry—Perfection and form	7
4. Style and carriage	5
5. Action—Lofty, free, bold, square-gaited, and a rapid, elastic walker	7
6. Colour—Dark bay or brown, without objectionable marks	4
7. Head—Broad between the eyes, good brain, clear cut, not too large or too Roman	4
8. Eyes—Large, full, clear, bright, cheerful, spirited	5
9. Ears—Medium size, thin, clear cut, and shapely	8
10. Neck—Light and round near the head, good throats, tapering, arching, and well set on the shoulders	8
11. Chest—Broad, deep, full, denoting good lung power	2
12. Girth—Large and full about the heart	5
13. Barrel—Round, good length, and full at flank ..	5
14. Back and Loin—Short, broad, well coupled	7
15. Hip—Broad, long, with proper shape; tail well set	3
16. Stifle—Broad, deep, muscular	2
17. Gambrel—Broad, clean, cordy, not too straight ..	6
18. Limbs—Hard, smooth, clean, flat; broad bone, of fine quality, and fringed with silky hair on back, side to knee, and gambrel; broad knee, proper slope and elasticity to ankle	10
19. Feet—Solid, good depth, tough, solid shell, good frog, not flat	6
20. Temper—Docile, kind, cheerful, but spirited and resolute	5

100

SIX FORMS OF BLIND STAGGERS.

The name "blind staggers" is due to several different disorders, some of which are in no sense hereditary, while others are liable to be transmitted from parent to offspring. One form occurring in horses fed on ripe but uncured rye grass, or on the seeds of millet-Hungarian grass and several of the grains and vetches, is a mere congestion of the brain, due to the introduction of a poison, and is not at all likely to prove hereditary. Another occurring in rich bottom lands, or other damp localities, or in animals fed on musty fodder, appears to be essentially connected with poisoning of the nerve centres and dropsical effusion around them. This is a much more persistent affection than the first, but is not usually hereditary further than that an impaired constitution is liable to be conferred on the progeny, and there is less power of resistance to the same or to other causes of disease. A third form is due to the formation of tumours within the hemispheres of the brain. These are usually composed of a

peculiar fat, known as cholesterine, which is found in connection with the nervous tissue, and is thrown out of the system in the bile. A system, therefore, which is predisposed to liver disease, or to sluggish action of the liver, is more liable to the retention of such matter in the system, and even to the formation of tumours of the same. In this case there is a stronger probability of hereditary transmission, for the peculiarities and habits of the animal economy are unquestionably conferred upon the offspring, and when the parent is structurally and constitutionally liable to such a disease of nutrition, the progeny are likely to inherit a similar bias. The difference, it will be observed, is between a disease caused by a disturbing element introduced into the system from without, and one determined by faults inherent in the system-like structure and function, and constantly operating with greater or less force. A fourth form of so-called staggers occurs in young, vigorous horses in spring, and is manifestly connected with plethora and the general irritability connected with the sudden return of warm weather. This is not likely to prove permanent or hereditary, and may easily be corrected by quiet, darkness, and cold water to the head, with a dose of physic, and when the attack is past by a run at grass or a course of laxative diet. A fifth form is due to venous congestion of the head and brain, usually the result of a tight or badly-fitting collar, which presses on the jugular vein. This will occur, especially in ascending a hill, until the fault is corrected. A sixth form is due to a similar disturbance of the circulation in the brain, as the result of some structural disease in the heart. This will usually be manifested, not only by giddiness and blindness, but by the coldness and swelling of the limbs, and by an irregular or intermittent pulse. It is likely to be aggravated by active exertion or fatigue, and does not improve when the animal gets into better condition. The first, fourth, and fifth forms named are quite amenable to treatment, and the second somewhat less so, while the third and sixth are essentially incurable. —Prof. James Law, in *N. Y. Tribune*.

THE BALKY HORSE.

The London *Live Stock Journal* gives two methods of starting a balky horse: 1. Tire your steed out by remaining perfectly quiet until he starts of his own accord. 2. When a horse refuses to draw at all, put him in a cart in a shed, and keep him there until he walks out. In one instance the obstinate one was thirty-six hours in the shafts before he gave in.

WISER, of Prescott, is starting a \$100,000 acre cattle ranch near Fort McLeod. His son Harlow is going out to manage. 10,000 cattle go on at the start.

PROF. JOHNSTON, ex-Principal of Guelph Agricultural College, delivered an excellent and interesting address before the Dominion Grange, which met recently in Toronto. He made the statement that there are 720,000 heads of families engaged in farming in the Dominion, and the production of these workers is twelve times as much as that by all the others.

BEES AND POULTRY.**BEES AND FRUIT.**

The idea that bees injure fruit is entertained by many superficial observers, and has led to steps being taken to banish them from the neighbourhood of orchards and vineyards. At a recent meeting of Pennsylvania horticulturists very extravagant things were said by some of the members on this subject. So able a horticulturist as Mr. Meehan took the ground that bees injure vines when in blossom. The North-Eastern Bee-keepers' Association took the matter up at its recent annual meeting, and freely discussed it. It was the unanimous opinion of all present that honey bees *never*, under any circumstances, puncture the skin of the grape or any other fruit. Birds, black ants, and other enemies of fruit, do the puncturing, and the bees, from their gathering the sweetness that is going to waste, get the blame. The Association placed itself on record by adopting the following resolution:—

"Resolved,—After due investigation of well-known and numerous cases, the convention unanimously asserts that the honey-bee never punctures the skins of perfect grapes or any other fruits; but that the sucking of juices from fruits is only from that which has been punctured by other insects, birds, or natural causes."

It is a well-known fact in natural history that bees promote the fructification of plant blossoms, by mixing their pollen; and without their useful offices many kinds of useful fruit would not set at all. Not a few bee-keepers are also fruit-growers, and believe that there is a double advantage secured thereby. The fact is that multitudes of people are so afraid of bees that they do not study their habits, and form hasty conclusions about them which the facts, on being investigated, do not warrant.

HYBRID BEES.

As the name indicates, hybrid bees are the result of a cross between different races or varieties of bees. Most of the hybrid bees in this country are a mixture of the Italian and black or German varieties. If bees are pure Italian, the first three rings or bands of the abdomen are yellow; while if they are blacks, the whole abdomen is black. If a pure Italian queen mates with a black drone, the drones that she produces will be pure Italians, because the drone progeny of a queen is not influenced by her fertilization, but her workers will be hybrids, or half-bloods. A few of them may show the three yellow bands; others may show no yellow bands, being perfectly black; but the majority will, probably, show one or two yellow bands. If a pure black queen mates with an Italian drone, the results will be the same, at least so far as the marking of the bee is concerned.

As mentioned in a former article, hybrid workers show more strongly the characteristics of the race from which came the drone that fertilized their mother. In many instances the workers of an Italian queen that has met a black drone, will behave very much like black bees; while I have seen black queens that have mated with Italian drones, produce

bees that were nearly as easy to handle as Italians; but as a general thing, hybrids, let them be produced in either manner, seem to possess the courage and determination of the Italians combined with the irritability of the blacks. If a pure Italian queen mates with a black drone, and queens are reared from her eggs, they will, of course, be hybrids or half-bloods. The drone progeny of these hybrid queens will be hybrid or half-blood, while the appearance of their workers depends entirely upon whether these queens mate with black or with Italian drones. If they mate with Italian drones, their workers will be three-fourths Italian, while if they mate with black drones their workers will be three-fourths black. Queens reared from a black queen that has met an Italian drone will, of course, give the same results.

This matter of hybridization among bees, simple though it be, is really quite a puzzle to some people. Let such remember that crosses among bees produce the same results as crosses among animals, with the exception that the drones are always like their mother, let her mate with whatever drone she may. If a queen is pure Italian, so are her drones; if she is hybrid, her drones are also.

When Italians are introduced into a part of the country where black bees are plenty, hybrids of all grades will soon become plenty. It is almost impossible to own an Italian apiary in such a locality and keep it free from black blood. It can only be done by destroying the queens that mate with black drones, just as soon as they are discovered. If one keeps bees only for the honey that they gather—that is, if queens are not reared for sale—this mixture of black blood does no particular harm, except that it gives the bees a very irascible disposition. As a rule, hybrids are excellent workers, some of the largest yields of honey reported being gathered by hybrids.

In the fall, after the labours of the season are past, and the bees are preparing for their long winter's nap, their abdomens are shrunk up—that is, the rings are slid farther into each other—and the last ring not showing very distinctly, full-blooded Italians are, at such times, often mistaken for hybrids. I remember, one fall, of marking several hives as containing impurely mated queens, intending in the spring to replace them with purely mated ones; but when the warm weather returned and the bees began gathering honey, their abdomens seemed to lengthen out, and not a hybrid bee could be found in the whole apiary.—*W. Z. Hutchinson in Country Gentleman.*

POULTRY HABITS.

Of all stock, hens are the most easily taught. The education of hens can be commenced at any age, but best when young. They should be housed and shut in every night, and not be allowed to roost on sheds, well-sweeps, or trees. Even a neglect to shut the door on them for one night will cause the timid ones to seek a higher roost the next night, and that can only be found out of doors—a great nuisance, and constant loss from night enemies. At sunrise every morning call the hens around you, and scatter a full feed for them. Let this always be done on

the same spot of ground. Keep in a convenient place a reservoir of clean, fresh water, if you have no running stream. At certain and regular times in the day you will find the whole flock there. Throw no scraps of food around the dwelling, or you will teach them to become a house nuisance. Burn all the egg-shells, or you will teach the hens to eat the eggs in the nests. If you coop your chicks, take hen and brood to the hen-house as soon as the coop is dispensed with; otherwise, when winter sets in, you will have to spend hours every night for a week before they will house well. Protect hens while sitting by a light board or lattice cover to the nest, so that they shall not be annoyed by other hens wishing to lay with them. In fact, any bad habit, or any which does not suit your surroundings, may be entirely broken up and changed by reasonably preventive measures.—*Rural New Yorker.*

RAW MEAT FOR FOWLS.

A writer in the *Poultry Yard* claims that cooked meat is much better for fowls than raw meat. Well, I used to think so too; but now it makes me mad all over when I think of all the time that I have wasted in boiling meat for fowls. Last winter I fed raw meat right straight through cold weather, and my fowls never did better. Of course I don't feed meat that is as tough as a whip-lash, neither do I feed stinking meat. Such stuff, whether cooked or raw, is not fit for fowls; but I get fresh liver, lights, heart, and all, hang up a chunk, and let the fowls help themselves. Sometimes, just for a change, I boil up a lot of bones, but life is too short for me to fool away much time cooking meat that had better be given to the fowls raw.—*Fanny Field.*

INCUBATORS.

Enquiries are often made about artificial hens, or incubators. The "Glass Hen" which was exhibited at the Toronto Industrial and other fairs led many people to think glass better than feathers for chick-hatching. It is questionable, however, if man can improve much on the natural process. A correspondent of the *N. Y. Tribune* says:—

"There are a number of incubators—good ones, too, if properly managed—for sale in Bucks County at a considerable sacrifice. I never invested in one on my own account, and don't think I ever shall. It does not pay any man or woman who has anything else to do to make a 'hen cluck' of him or herself. Many who are enquiring about the incubators and poultry farming have not the slightest idea of what is involved in it. After one has learned to run Brahma and Cochin hens to their full capacity in the business, then will be time enough to investigate the incubator."

THOMAS DAVIS, of Guelph, has a Dorking hen which is credited with having laid an egg measuring 8x14 inches.

WARMTH in the roosting-places, pure water, gravel, warm food, some animal food and green food, cabbage, etc., are essential to the well-being of poultry in the winter, if you expect plenty of eggs. There is nothing lost in keeping fowls well.

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The Rural Canadian.

EDITED BY W. F. CLARKE.

TORONTO, MARCH 1st, 1882.

OSHAWA FARMERS' CLUB.

This is one of the few working farmers' clubs the Province of Ontario can boast. It has been in existence about four years, and has not, like some others, been dormant and inactive. It has held regular meetings, at which practical farming has been discussed in its varied aspects. Occasional lectures have been given by able agriculturists. On the occasion of the usual fortnightly meeting of the club, February 11th, about 160 members were present, to hear an address by Mr. John Dryden, M.P.P., on "Success in Farming." It was an able effort, abounding in hints based on the speaker's personal experience, and we shall try to give a synopsis of it in a future issue of the RURAL CANADIAN.

TORONTO INDUSTRIAL EXHIBITION ASSOCIATION.

The annual meeting of the above-mentioned body was held February 14th. In the President's report reference was made to prevailing bush fires having somewhat diminished the attendance at the last exhibition. The number of entries at each of the three exhibitions which have been held was 8,234 in 1879, 11,074 in 1880, and 9,842 in 1881. With a view to giving greater satisfaction in the awarding of prizes, the Directors recommended to their successors a reduction in the number of judges, and the employment of thoroughly qualified experts, who should be reasonably compensated for their services. A wider representation in the Association was also suggested, by the comprehension of all the Presidents and Secretaries of the County Agricultural Societies in the Counties of York, Ontario, Peel and Cardwell in its membership. The financial condition of the Association was fully stated. Summed up in brief, it places the assets at \$47,511,016; the liabilities at \$15,125,051; leaving the amount of assets over liabilities, \$32,385,965. After discussing some points bearing on future exhibitions, the following gentlemen were elected by ballot as the Board of Directors: Mr. J. J. Withrow, Mr. J. McGee, Mr. W. F. McMaster, Mr. W. Rennie, Mr. A. Smith, Mr. J. Fleming, Mr. W. Christie, Mr. G. Booth, Mr. A. McGregor, Ald. Love, Mr. W. H. Doel, Mr. W. B. Hamilton, Mr. G. Leslie, Jr., Mr. D. C. Ridout, Mr. J. Crocker, Mr. W. S. Lee, Mr. R. Davies, Mr. P. G. Close, Mr. J. E. Mitchell, Mr. D. Lamb.

Nineteen committees were appointed, leaving the Finance Committee and the officers of the Association to be chosen on a future occasion. The meeting then adjourned.

ENSILAGE WISDOM.

A convention of ensilagers, or ensilagists, whichever may be the proper name by which to designate them, was recently held in New York city, composed for the most part of men who have experimented more or less with silos. There was a perceptible toning down of the extravagant claims that have been so often set up in books and communications to the papers on this subject, not a few of which soared quite above the realm of credibility. The meeting embodied its matured convictions in a resolution with which few fair-minded and intelligent agriculturist will be disposed to quarrel. It was to the effect that, after six years of successful experimenting in the use of silos, the system has been found to be of great advantage to the farming interest. A similar resolution might very properly be passed in regard to pasturage, hay-raising, and root-growing. Ensilage is no new thing under the sun. It has long been known in Europe, where it ranks as one among various methods of cattle-feeding. In this country, where heavy crops of green corn fodder can readily be grown, ensilaging may prove to be of greater comparative value than in Europe, where it is not extensively practised, still less does it supersede all other methods of winter feeding. On no point was the moderation of the N. Y. meeting more conspicuous than in relation to the average crop of green corn fodder per acre. Twenty-eight tons was the largest yield, ascertained by actual weight. 21, 14, 11, and 9 tons per acre were reported, and one speaker, evidently not yet recovered from the ensilage fever, claimed 58 tons per acre, but the yield was "estimated." The land was not measured, nor the crop weighed. About \$2,50 per ton was admitted to be a fair average "bill of cost" for ensilage. Its relative value does not seem to be yet ascertained. One authority makes four tons of ensilage about equal to one ton of hay. We shall doubtless reach the "bottom facts" in regard to this matter before long.

FARMING IN EAST MIDDLESEX.

At the annual meeting of the East Middlesex Agricultural Society, held at London on the 18th ult., a report was presented from which we glean the following interesting paragraphs:—

"The past season has been very favourable to the farmers of this county. There have been great crops and high prices for everything grown on the farm. The only drawback was a severe drought in the latter part of the summer, that injured the pastures and hindered the fattening of beef cattle. This was quite a loss, as owing to the high prices paid for cattle to export, it has become a very important branch of the agriculture of the country.

"We are inclined to take a very hopeful view of the prospects of the farmers of this part of Ontario. It is a common opinion that the farmers of America are gradually and surely ruining their land by over-cropping and bad management. We do not believe that this opinion will apply to this county. We are convinced that our farmers, by procuring better implements, and by more thoroughly working and draining their land, and by producing more beef and cheese, instead of depending principally upon grain, are actually improving the soil, and we are satisfied that in general the old farms in our county are more productive now than they were twenty years ago."

AMERICAN AGRICULTURAL ASSOCIATION.

The annual meeting of the above-named body was held in New York city, February 1-3. It was largely attended, many prominent agriculturists from various parts of the

United States being present. The opening address by President N. T. Sprague, of Vermont, presented the magnitude and importance of the farming interest in the United States, very forcibly indicating also lines of desirable and practicable improvement. A telling paper on "How Crops are Moved," was read by Gen. H. E. Tremain, of New York. It dealt very fully with the transportation question, contending for legislative action to establish a uniform relation between through and local freights. He said that "heavy penalties for violations of law and improper charges should be laid on railroads, and means afforded individuals to bring suit to recover such penalties; that it should be the right of States to take railroad property at fixed premiums on its cost, and be represented in their governing authority." In closing, he urged that every penny of expenditure and every act of administration of railroads should be made public.

Prof. Northrup, of New Haven, Ct., spoke on the "Homes of Farmers." He showed that though the chances for long life in the case of farmers are greater than those of any other class of people, yet statistics prove that their wives and families are comparatively short-lived. This he attributed to defective sanitary arrangements and bad cookery. The premises around farm houses were often in an unwholesome state. Too much salt meat is eaten. There should be less frying, and more baking, broiling, and boiling of food. He urged the formation of rural improvement associations, and the beautifying of farm homes.

Fish-farming was discussed, and highly commended. The tariff was considered at some length, and the following resolution adopted in regard to it:—

"Resolved, That in view of the fact that our present tariff was enacted twenty years ago, during the time of our late war, to secure an extraordinary revenue for an extraordinary purpose; therefore, this convention favours the Bill now before Congress in favour of a tariff revision."

The cotton industry was reviewed, and it was noted that the introduction of labour-saving machinery consequent on the Atlanta Cotton Exposition had been of great benefit. A Mississippi planter was quoted as declaring that the Exposition had been worth \$20,000 to him, and that his was no exceptional case—a striking example of the benefits of implement exhibitions, worthy of being pondered by those who doubt the utility of such things.

The *Country Gentleman* gives the following summary of the remainder of the proceedings:—

Dr. Byron D. Halsted, of New York, read a paper on "Weeds, and how to Discover them with a Microscope." Mrs. Amelia Lewis spoke on "The Condition of Farmers' Wives," and Willis P. Hazard, of Westchester, presented a paper on the "Channel Islands; the People and their Cattle." Then Dr. Robert Grimshaw, of Pennsylvania, read a paper on "Sugar-beet and Beet Culture." He said beet sugar was a fact, and sorghum sugar was a myth. Half of the world's supply of sugar is made from beets.

Frank H. Willard read a paper by Prof. X. A. Willard, of Little Falls, N. Y., on "Science in the Dairy," a synopsis of which will be given hereafter.

A model palace stock car was exhibited by Mr. James Montgomery. Cattle can be brought from Chicago to New York, in this car, in 45 instead of 120 hours, the time it takes by the cars now in use. The car is provided with feeding and watering arrangements, and the animals are stalled in pairs.

The following officers were elected for the ensuing year:

President—N. T. Sprague, of Vermont; Superior Vice-president, H. E. Alvord, of New York; Secretary, J. H. Reall, of New York; Treasurer, H. W. McLaren, of New York.

PUBLICATIONS RECEIVED.

SEVENTH ANNUAL REPORT OF THE ONTARIO AGRICULTURAL COLLEGE AND EXPERIMENTAL FARM, for the year ending December 31st, 1881; p.p. 214.—In this goodly volume a large amount of information is embodied, both in relation to the institution itself, and farming in general, of which use will be made in future numbers of the RURAL CANADIAN.

HOW TO SELECT COWS; A Treatise on the Guenon System of Selecting and Breeding Dairy Cows.—This work is of great practical value. A résumé of its contents will shortly be given in these columns. Published by W. P. Hazard, West Chester, Pa. Price 50 cts. in paper, 75 cts. in cloth.

W. RENNIE'S SEED CATALOGUE FOR 1882.—A very full advertisement of requisites for farm and garden, on sale by this well-known Toronto dealer.

J. HARRIS'S CATALOGUE OF FIELD, GARDEN AND FLOWER SEEDS FOR 1882. Moreton Farm, Rochester, N. Y.

E. P. ROE'S CATALOGUE OF SMALL FRUITS AND GRAPE VINES, for the Spring of 1882. Cornwall-on-the-Hudson, N. Y.

D. A. JONES' CIRCULAR AND PRICE LIST of all apiary supplies, with a brief pamphlet on the wintering of bees. Beeton, Ont.

DR. NUGENT'S CIRCULAR AND PRICE LIST of Italian and Cyprian bees and queens, and leading apiary supplies. Strathroy, Ont.

STRAWBERRY CIRCULAR FOR SPRING, 1882. M. Crawford, Cuyahoga Falls, Ohio.

APIARY CIRCULARS AND PRICE LISTS. L. C. Root & Bro., Mohawk, N. Y.; James O. Facey, New Hamburg, Ont.; M. Ramer, Cedar Grove, Ont.; G. B. Lewis, Watertown, Wis.; W. P. Henderson, Murfreesboro', Tenn.; C. H. Deane, Mortonsville, Ky.; James Fornerook, Watertown, Wis.; C. Dadant & Son, Hamilton, Ill.

GRANGERS IN COUNCIL.

The Provincial and Dominion Granges have had their annual sessions in Toronto. The Provincial Grange met February 8-11. An able opening address was delivered by the Worthy Master, Jabel Robinson, of Elgin County. It glanced at the bountiful harvest, and the consequent prosperity of the farming interest; regretted the scarcity of farmers in Parliament; and pointed out the advantages that would accrue to the country if this class, by far the most numerous, were properly represented in our halls of legislation. It was urged that as the price of agricultural products is fixed by others, farmers ought to combine in order that they may learn how they can produce more, and how they may

supply their wants "at first cost, and at a cash value." The *Globe* thinks that in these few words "the whole question of protection versus revenue tariff, as applied to Canada, is unconsciously summed up." But as party politics are out of order in Grange meetings, the Worthy Master probably had in view only the exactions of middlemen and storekeepers. The duty of Government to see that transportation companies only get a fair share of the farmers' profits was insisted on. Here again the *Globe* sees a frowning glance toward Dominion politics, but it is most likely the general railway system was referred to, the tendency of which always and everywhere seems to be to bear oppressively on the farmer. The possibilities of the Grange as an educational power were pointed out, and the necessity of a better style of farming was urged. "Our forests are vanishing, our soils are deteriorating, and our taxes increasing." "An exacting tribute is now paid to those who neither toil nor spin." In conclusion, zeal for the advancement of the Order was inculcated. In addition to the routine business done, a resolution was passed commendatory of the action of the Ontario Government in regard to the abolition of market fees; and another disapproving of any use being made of their official position or the prestige of the Grange for the promotion of speculative enterprises. Reports were also adopted recommending under-drainage, the eradication of the Canada thistle, rotation of crops, the production of fat stock, and dairy products; also frequent change of seed, which members were advised to obtain through the Grange. The Grange Mutual Fire Insurance Company was reported to be in a highly prosperous condition. A report on "House and Home" was also presented, which contained many suggestions as to the best methods of making country life more attractive and enjoyable.

Dominion Grange met February 16th and 17th. The Secretary, Mr. W. P. Page, read the annual address, which outlined the condition of the Order throughout Canada. There are 784 subordinate Granges, 54 division Granges, and two provincial Granges. "While, without doubt, there had been a considerable falling off in membership, as well as in the number of local Granges, yet the Grange was practically stronger than ever—stronger in its capabilities, there being left after the weeding that had taken place those who were devoted to the principles of the Order, and ready to give practical direction to its teachings." The address mentioned the good results the Grange had achieved, and urged farmers to combine for the purpose of carrying important points of legislation. They had followed party leaders long enough. They should assert their independence, and learn to consider questions on their merits, seeking for legislation in the interests of agriculture. After the transaction of some ordinary business, a public meeting was held, at which Mr. Johnston, ex-Principal of the Ontario Agricultural College, delivered a telling address on the transportation question as it affects the interests of farmers. At a subsequent session, a report was presented on this subject, which so pithily and forcibly summarizes the main points in Mr. Johnston's address, that one is tempted to suspect his own able hand as having prepared it. The *Globe* says of it, "We have never read a more

vigorous denunciation of railway monopolies, or one which showed less straining for the sake of effect." It is such a truthful and masterly indictment of the existing system, that, long as it is, we give it in full:—

"Your Committee on Transportation, Monopolies, and Legislation beg leave to report as follows:

"That we find the powers of railway companies increasing to an alarming extent. In regard to this means of transportation, while legislation may encourage the construction of new lines of railway, we yet believe that such lines of railway could have been built and facilities for transportation given without placing in the hands of any company such unrestricted power as the Legislatures have given to them. This is a circumstance which will require the people to exercise great diligence to meet and counteract the increasing power of these monopolies. Experience has shown that the corporate power which manages a railway is rapacious and merciless in the extreme; it is marked by encroachments and usurpations; it assumes rights that belong to the people, forgetful of the fact that its first duty is respect at least to the people, the power from whence it emanated; it taxes the products of honest labour at its own merciless will, and usurps the power so to do; it boldly warns the people against any attempt to recover rights they have innocently yielded, upon the plea that its property is private property, and therefore not amenable to the public for wrongs in its management; it will not submit to be made subject to regulations or laws dictated by the people's representatives; its power is irresponsible and defiant, and with astonishing effrontery it even sneers at any attempt on the part of the Legislature to restrain its rapacity or hold in check its assumed prerogative; it hesitates not to resort to a system of bribery and corruption to effectually checkmate all attempts on the part of the people to recover their yielded rights by a system of dead-heading in the granting of free passes to legislative and judicial officers of the country, thus destroying their freedom and independence in the honest discharge of their official duties. Entrenched as it is in the Capital, either by self-interest or controlled by corrupt influences on the part of a large majority of our law-makers, the railway power to-day sways the commerce of the country, nay, even of the continent. Accelerated by its own growth, licensed by its own greed, usurping as desire advances, how long will it be before the Government itself will be but a suppliant tool in the hands of a creature of its own creation?

"Your Committee cannot place too much stress upon the centralizing tendency of the railway corporations of this country, which we regret is becoming so general that it is very apparent that in a very short time we will have but two or three railway corporations in the Dominion, when by pooling receipts and friendly combination nothing like competition will be possible, and as a natural result high and discriminating rates will be charged by such corporations upon the same principle as the great corporations on the American side which have adopted the principle of fixing the tariff by what the traffic will bear, regardless of the actual value of the

service rendered, and it is well known that the burdens of all such combinations fall upon the producer, as neither dealer nor consumer can be made to participate in such bearing. And history goes to show that no principle is too high for them to sacrifice in order to contribute to the all-devouring greed with which their every propensity seems ever to abound; and whereas the railways of this country have been to a very large extent constructed by bonuses granted by the municipalities and Government subsidies, both of which are the people's money, and both of which have been contributed, in a very large number of instances, for the express purpose of providing a competition that would keep the freight and passenger rates at something like what the service is actually worth, only to be disappointed and chagrined by seeing the very object they sought to gain defeated by the action of the Legislature confirming an amalgamation of the line they thus helped to construct with the very lines they were endeavouring to provide a competition with.

"And your Committee are of opinion that the time has come when the Grange should take a more decided stand in reference to what they conceive to be our vital interest. Our legislators but a day or two ago told us we were an acknowledged power in the land. Where does that power lie, and how and when are we to exercise it? Your Committee conceive that that power lies in our co-operative efforts in the selection of our representatives, independent of party politics. In this matter our interests are identical, and our efforts should be united at the ballot-box. We do not wish to be understood as asking patrons to relinquish party ties by any means, but we do believe it to be the duty of every patron, irrespective of party, to see to it that candidates for Parliamentary honours answer satisfactorily the following questions, viz.:-

"1. Will you with your vote and influence seek to restrain effectually the growing tendency of railway corporations to oppress the people by means of high and discriminative rates beyond the actual value of service rendered?

"2. Will you under any circumstances except from any railway company any token of recognition conferring upon you the rights of travel over such railway without paying for such privileges the ordinary rates of passage?

"And your Committee would further recommend that the Dominion Grange put forth a vigorous effort to place our views upon this subject prominently before the country, in order that the people may have the opportunity of acting thereon at the next general election to our Legislatures.

"And your Committee would also recommend to the Executive Committee the propriety of petitioning the Government at Ottawa to remove the present vexatious restrictions upon the cultivation of tobacco, as such restrictions have almost entirely destroyed that industry, which has been and could otherwise be a profitable undertaking in some of the Erie counties of this Province."

The Committee on Agriculture submitted a report, strongly urging a thorough system of under-drainage, the eradication of noxious weeds, clean culture, and improvement of stock by using thorough-bred male animals; noted the rapid disappearance of the forest,

and suggested that trees be planted on side lines and along fences for shelter, shade and ornament; and expressed the opinion that statistics as to crop reports might be collected by means of the Grange organization. Official reports; also reports on education, temperance, music, and home attractions were presented and adopted.

The following officers were elected for the ensuing year:—W.M., A. Gifford, Meaford; Overseer, D. B. Newcombe, Sheffield Mills, Nova Scotia; Secretary, Luther Cheyne, Brampton; Lecturer, Levi Van Camp, Bowmanville; Chaplain, J. C. Shipley, Kingston, Essex; Steward, Wm. Brock, North Middlesex; Assistant-Steward, T. McLeod, Dalston; G.K., Ewen Cameron, Port Stanley; Treas., J. R. Bull, Downsview; Ceres, Mrs. Van Camp; Pomona, Mrs. Hillburn; Flora, Mrs. Wilkie; Stewardess, Mrs. McLeod; Auditors, E. H. Hilborn and A. J. Hughes. Executive Committee—Jabel Robinson, Middlemarch; and Robert Wilkie, Rondeau.

A vote of thanks was tendered to Mr. W. P. Page, the retiring Secretary, for his long and faithful services, and it was resolved that the Grange acknowledge these services by some suitable token of respect. The Grange finally adjourned, subject to the call of the Executive Committee.

SKETCHES OF CANADIAN WILD BIRDS.

BY W. L. KELLS, LISTOWEL, ONT.

THE CROWS.

The *Corvidæ*, or crow tribe, are among the most numerous and widely diffused of the feathered race, some species being found in nearly every quarter of the globe; but only one member is particularly numerous in Ontario, and that is the common carrion crow. The raven stands at the head of this genus; but it is rare in the settled parts of this country, and when one of them is seen, or killed, the event is generally recorded in the local press. The blackbirds are very numerous, and some of them closely resemble the crows, between which and the more insectivorous tribes they evidently form a connecting link. Animal matter generally constitutes their food, though they sometimes feed on grain and fruit.

THE RAVEN.

The raven is now a rare bird in the settled parts of Canada, though at one time it appears to have been numerous. A few specimens are occasionally seen in the vicinity of Niagara and the southern counties of Ontario; and one that was shot at Watford, a few years ago, measured four feet from tip to tip of its wings. In the yet unsettled regions of Canada, this bird is still numerous; and Mr. H. G. Vennor, of weather and ornithological fame, writing from the head-waters of the Ottawa, in 1879, says:—"Ravens are abundant on Trembling Lake and Mountain, and their hollow croaks were unceasing. They remain here all the year round, but what they subsist on I could not determine." It has also been found in the highest latitudes to which Arctic explorers have penetrated. Dr. Kane, speaking of his last visit to the ship which he left frozen in the ice, says:—"As we returned to the brig, we heard the rustling of wings, and

a large raven sailed away in the air. It was 'Old Magog,' one of a pair that had cautiously haunted near our brig during the last two years. He had already appropriated our homestead." The plumage of the raven is deep glossy black, its length is over two feet, its bill large and strong; its eye has a fierce look; and it feeds on dead animal matter, as well as on the eggs and young of other birds. The author of "The Polar World" says:—"The raven, one of the commonest land birds in Iceland, is an object of aversion to the Icelanders, as it not only seizes on the young lambs and eider-ducks, but also commits great depredations among the fish laid out to dry upon the shore. Poles to which dead ravens are attached, to serve as a warning to the living, are frequently seen in the meadows; and the Icelander is never so happy as when he has succeeded in shooting a raven. This, however, is no easy task, as no bird is more cautious, and its eyes are as sharp as those of the eagle. Of all Icelandic birds, the raven breeds the earliest, laying about the middle of March its five or six pale green eggs, spotted with brown, in the inaccessible crevices of rocks. Towards the end of June, Preyer saw many young ravens grown to a good size, and but little inferior to the old ones in cunning."

CURRENT NEWS ITEMS.

MR. JAMES SWANSTON, of Egremont, sold the other day, in Mount Forest, three pigs nine months old, weighing ten hundred and twenty-four pounds, at 8½c. per pound. Receipts \$87.04.

At a wood-chopping match at Munceytown, a few days ago, for a purse of \$25, an Indian named Eli Dalson chopped four cords and nineteen feet in seven hours, and offers to chop against any white man for \$50 a side.

MR. C. A. MATHESON, of Perth, a short time ago opened up his silo and tested it by feeding to the cattle on his farm. He says that his cattle generally ate the ensilage readily enough, and that as a food for stock it is a success.

MR. P. ERBACH, of Baden, purchased a section of land in Manitoba, in August last, for \$5 an acre, and sold it the other day for \$10 per acre, a clear profit of \$3,200. This land is forty miles from Emerson, and in the very heart of the Mennonite settlement.

MR. ABRAHAM CAVANAGH has disposed of his farm on the 13th concession of McKillop, to his neighbour Mr. David Crawford, for the sum of \$5,000. The farm contains seventy-five acres. Mr. Cavanagh has purchased a larger farm near Elmira, in the township of Woolwich, Waterloo county, and intends removing thither as soon as he can make the necessary arrangements.

THE *Gull Reporter*, which comes from an extensive fall wheat growing centre, says:—"The open weather experienced so far this winter has led many to believe that the fall wheat must have received serious injury from the absence of its usual covering of snow, and alternate freezings and thawings. From inquiries made, however, we are pleased to learn that so far the plant has, to a great extent, escaped injury, and that it is only on heavy and low-lying lands that it appears any the worse."

GARDEN AND ORCHARD.**BAGGING GRAPES.**

Enclosing bunches of grapes in paper bags is a practice that is coming into favour among fruit-growers. It preserves the berries from being punctured by birds and insects, while it affords absolute protection against rot and various forms of fungoid disease. Ordinary two-pound bags used by grocers are found suitable to the purpose. Their cost is trifling when compared with the magnificent bloom, beautiful colour, and fine flavour they are said to secure. Of course, they could not be employed in large vineyards, nor would they be necessary for crops of grapes raised for common market or wine purposes; but amateurs and others desirous of growing a limited quantity of fruit of the highest quality would do well to try this plan. A correspondent of the *N. Y. Tribune* gives his experience in bagging grapes as follows:—“Grapes in the open air in this section have been for a long time of the forbidden fruits; raising them was entirely out of the question. In 1820 I carefully bagged a few bunches of some of Rogers' Hybrids, etc., with enthusiasm, but very little hope of success. Still, in the autumn I had a few fine bunches wherever the protection of the bags prevented the rot from destroying the berries. Last year found me ready to test the theory in the most thorough manner, and the consequence was, the finest grapes my vines ever produced. Why, even the Concords, which have been behaving so badly for several years, were so large, plump and handsome, and withal so luscious, that I could hardly believe I had raised them. The whole system is so simple that, in one's own garden, it is well worth the little trouble and expense necessary to protect every promising bunch that sets. The ordinary brown paper bags in use by grocers are what I used, merely enclosing each bunch and tying the end loosely around the stem. This should be done about the time the berries begin to swell, say about the size of peas, and the bags must remain on until the fruit is well coloured and fit for the table. The confined atmosphere, preventing any sudden change in temperature, is certainly not prolific of disease, as the microscopic fungoid pests do not enter inside the covering, which, after all, is the greatest epidemic disease we have to contend with.”

BARREL GARDENING.

Many people profess to be deterred from gardening for want of space. The word “profess” is used because in so many cases the plea is an excuse for want of horticultural zeal and taste. Those who have any door-yard at all, front or back, can garden a little if they strongly desire to do so. A gentleman in Guelph raises an astonishing quantity of fruit in a plot 20 feet by 30. People who are confined to a room or two in a tenement house cannot have an out-door garden; still, even these can grow a few plants in the window. But there are many families limited to a small out-door space who, nevertheless, can indulge a taste for gardening, if they have it, within small compass. The

Scientific American is credited by the *New York Tribune* with a suggestion which is well worthy of being passed round for the benefit of those whose out-door quarters are scant, but who yet would like to garden a little. It is that strawberries may be grown, as houses are built where ground is limited, several stories high. A barrel has tiers of holes bored in it, fifty in all, and is then filled with rich loam to the first tier of holes, when a strawberry plant is inserted in each hole and the roots spread on the well-compressed soil, and so on to the top. A fruit can with perforated bottom, and containing good manure, is set in the top, and water poured through this as wanted. August is recommended in preference to April for setting these plants, but there is no method of protecting for winter stated. Something of this kind would be necessary, and the strawberry being an evergreen would require a little light even when at rest. Perhaps a few evergreen boughs tied around the barrel would answer this purpose. Fifty plants in a single barrel would be rather crowded, unless the barrel were a large one. But the number of holes could easily be adjusted to the size of the barrel. A few plants might also be set in the top of the barrel around the fruit can. Such a barrel, encompassed and crowned with verdure, blossoms or fruit, would be a pretty ornament for a small lawn—quite as pretty as some of the vases and rustic affairs that are often used for this purpose. There seems no reason why flowers, pansies for example, or daisies, might not be treated in a similar manner. Once get the idea started, and nurserymen, florists and plant-dealers generally will act upon it, and sell barrels already planted and flourishing. Long ago, barrels were recommended for growing melons, cucumbers and tomatoes. A few holes are bored around the middle of the barrel, and it is filled with stones up to the holes. The upper half of the barrel is then filled with rich soil, a tube of some sort being inserted in the centre, to admit of pouring water into the barrel. The plants are set on the open top. Even where there is only a paved yard, some gardening may be done by thus using barrels. Not only will a horticultural taste be gratified and cultivated by such means, but an amount of produce by no means despicable may thus be obtained.—*Lindenbank, in Montreal Witness.*

EVAPORATING FRUIT.

The modern process of drying fruit quickly by means of a high degree of artificial heat, is a great improvement on the old slow method of exposure to the sun, air, and cooking stove. In the one item of cleanliness, the advantage is very great. It must be admitted that dried apples hung on strings in farmers' kitchens for weeks and months, coated with dust and traversed by innumerable flies, are not a very inviting article of food. Fruit that has been dried in the open air, and to which all the particles of dirt that float in the atmosphere, and insects of all kinds have had free access, is not much better. The eggs of moths are often deposited in apples while drying, and these hatch out into small grubs and worms. All these and other evils are avoided by the use of evaporators. This im-

proved process is carried on extensively in establishments constructed for the purpose, where fruit is dried on an extensive scale. There are many such establishments in the United States, and they are beginning to find their way into this country. Small, portable evaporators are also in the market, suitable for those who have orchards large enough to yield a surplus of fruit for sale. They are specially adapted for drying peaches and apples. The fruit thus prepared is very salable. No family that has used it, would think of returning to the use of fruit prepared by the old method. Evaporated apples, when cooked, can hardly be distinguished from the green fruit. We know whereof we affirm, having used them in our family, with much satisfaction, for two winters. They cost but little more than green fruit by the barrel. There is no waste from rotting, and there is no time consumed in preparing them for the saucepan.

ANNUAL CROPS OF APPLES.

In proof of the statement recently made in these columns, that annual manuring and culture will give crops of apples every year, the following fact, mentioned by a correspondent of the *N. E. Farmer*, may be cited: “I know a farmer who has followed this practice from year to year, and the past ‘off’ season harvested 600 barrels of Baldwins. He never adopted any of the devices recommended to bring about this result—that is, picking off the bloom or girdling the limbs—but attributes his success solely and only to constant culture.”

PRUNING EVERGREEN HEDGES.

The axiom that summer pruning weakens and winter pruning strengthens, seems to be particularly adapted to evergreen trees, if not so material elsewhere. It is found that while the hedge is young and vigorous, and seems to want to get up to be a tree as rapidly as possible after the young growth has been made, is the time to trim it. This somewhat weakens each succeeding annual growth, and in time the hedge gets to a pitch when there is no great desire to grow up to trees, but is satisfied to be in the proper hedge condition. One of our most successful hedge managers tells us that after this, if the late pruning is continued, the hedge is almost sure to go backwards; and he attributed the cases of premature decay, which once in a while occur in our hedges, to continuous late pruning after a meek and humble disposition has been gained for the hedge. His idea is—and his success warrants a faith in his opinion—that the annual pruning of a hedge should be some days earlier every year, beginning while very young and vigorous, just after the young growth has fully expanded, until after a dozen years or more, it may be weeks before the buds push into growth. These facts are valuable; they show that, as we may say of many other operations of gardening, there is no rule as to best time or best treatment.—*Germantown Telegraph.*

WHEAT and clover on the high lands in Wentworth are looking well, but on the low ground they have been badly winter-killed.

HOME CIRCLE.

MOTH AND RUST.

BY ALICE B. NEAL.

"I never could understand, Eliza, why you choose to bury yourself in that little country town, away from everybody and everything."

"I dare say not," returned Mrs. Mason, good-naturedly.

"And there you vegetate the year round," continued her sister, with the same ill-used expression of tone and face. "How you live without a summer's jaunt at the very least, within thirty miles of Saratoga, too! I don't believe you ever see it!"

"We were there three years ago, you recollect."

"Yes, I had to tease you into it though, and write that you would not see me at all if you did not come where I was. You haven't been in New York since that winter, and I don't believe you would have been now but for Harry's wedding."

"I don't think I should have been, Ellen; though you ought to know well enough not to be affronted at it."

"O, it's not that! But what is the use of having a decent income and a good position, and burying yourself where nobody ever sees or hears of you?"

"But we do have some very pleasant neighbours, and a great many people would miss us if we should move away. It would make a difference to some families."

"O, your poor people, and workpeople, and all that: it's the very thing I complain of. John says so, too. He's provoked whenever he thinks of it—that you should slave your life out for people that have no kind of claim on you. And then you get so behind the times. I believe you've had that dress the last five years."

"But, Ellen, it's a nice silk, and it's just as much in fashion as it ever was. I had it made plainly, and trimmed with the same, so that it might last. I could not afford to get a new walking-dress, and have a pretty evening-dress and cap for a wedding, too."

"I must say you looked very well at the wedding," and the recollection seemed to soothe Mrs. Bradford's irritation a little. "A great many remarked it, Lucy's friends, too, and they are all such fashionable people. To tell the truth, I was afraid you would think it your duty to look like a fright."

No, Mrs. Mason knew her duty better than that—better than to wound her sister's feelings or pride at the marriage of her only son with a fashionable woman. She knew the propriety of time and place too well to appear without a "wedding-garment;" it would not have been following the only rule of life she walked by—the golden rule.

It was for this reason that she had hesitated a little about accepting the invitation. She knew the unavoidable expense of the journey, and her dress would be more than she had been accustomed to allow herself; yet it would give her sister pleasure, and they had not met for a long time. The Masons were not poor, in the ordinary sense of the word. Mr. Mason had retired from business, to the surprise of everyone, just as he seemed in the very way to realize a large fortune, satisfied with a comfortable income—large indeed in the country place to which he removed. Mrs. Mason gave up her town house and fashionable acquaintances, gradually laying aside all extravagance in dress and style of living, as if they really were in straitened means. Mrs. Bradford could not understand it.

The two sisters went on with their morning occupations until Mrs. Bradford had finished looking over her list of calls, and shopping, and general engagements for the week. For a person who had just reproved another for "slaving," it was rather a formidable list, and would require a great deal of planning and calculation, and hard work to accomplish it.

"You did not say how you liked the new dinner-set, Eliza," she said, reminded of the omission by a memorandum "to call at Haugwout's and match wine glasses and goblets," broken at the wedding supper. "Every dessert plate is different: it's the handsomest set imported this year—the shapes are perfect."

"Yes, I noticed the style, and the painting. It was very beautiful, and very difficult to match, I suppose."

"Match! why, it can't be matched! That's the charm of it; it's the only one in the country."

"I should think you would dread to have it used."

"So I do. I never give a dinner without fear and

trembling—servants are so careless. What do you think I discovered this morning? A great scratch on my silver tea-kettle. One of the legs of the tripod was bent, too! and I have not had it six months! And there's the large silver waiter, had to go to Tiffany's, it was so dented and injured the other night. Tired as I was, I sat up an hour and a half counting spoons and forks, and hunting up things. We have everything it's possible to have in silver, for I like the family plate, I must say, and it will also go to Harry, so it's really a saving, you see."

Mrs. Mason could not see the saving, particularly if it was liable to loss and injury. She had already noticed the extensive additions made to the great plate safe, let in a recess in the dining-room. Of this Mrs. Bradford kept the key, and generally went herself every time it was required, not daring to trust the waiter. The ordinary tea-set, spoons, forks, etc., was carried to her room every night in a plate basket, and she was usually roused from her morning nap to set it outside the door, the waiter choosing to lay the table an hour before it was necessary.

"Your house seems to have everything heart could wish, certainly," Mrs. Mason said, feeling admiration was expected of her, and then in an instant reproached herself for her common-place remark, for she knew that what her heart most desired was wanting.

"But then, it's a monstrous deal of trouble to keep everything in order," sighed Mrs. Bradford, thinking of the damask curtains that must be attended to, having been almost ruined by the demolition of a tray of creams against them. "You can have no idea of it. John likes to have everything just so, and I do myself. It takes one person's whole time to be looking after things. I expect they will break one of the mirrors every time the parlour is cleaned, and I dust every Parian, and vase, and ornament, myself; only think of it! But I wouldn't let them touch the 'Ruth and Naomi' for as much as it is worth, or the 'Cleopatra,' or the 'Eve.'"

Mrs. Mason thought her sister was beginning to lay down a clear case of "slavery," much as she inveighed against it.

"But I must go and see about putting the French chalk on those curtains," continued Mrs. Bradford, and she darted up suddenly. I really wish you would help me, Eliza; I have so much to do to-day."

Mrs. Mason was at her sister's disposal, and accompanied her to the dining-room, or rather tea-room, where the mishap had taken place. Here appeared the cook for her orders, dinner company being expected, and Mr. Bradford being very particular as to the arrangements. A wrong gravy, or an overdone canvas-back duck, would spoil the whole pleasure of an entertainment for him.

"O, so the marketing has come. Well, I'll be down in a moment, Andrew. No mint for the lamb! Send Patrick off for it instantly! Mr. Bradford will never forgive my having lamb without it. And do, Patrick, be sure about the castor. When your master is dressing a salad, every instant is of importance; and don't keep him waiting for the egg, or have it served in a saucer, as it was the last time. Wine! Isn't the wine given out? There, Eliza, you see how it is from morning till night! And I don't believe the silver has been touched. Where's Patrick? The instant you come back, come to me for the key, and tell the cook to garnish the fish properly to-day. She sent up a delicious broiled salmon the last time without so much as a sprig of parsley or a scrap of an egg! Only think of it, Eliza!"

Unpardonable omission!

Mrs. Mason worked away at the curtain, while her sister made divers journeys to the kitchen, dining, and store-room, interrupted by the cook, waiter, and housemaids for special instructions in their several departments; and then she came back heated, wearied, and perplexed with fresh subjects for complaint and lamentation.

"There's no use trying to have anything here! What do you think I discovered in the laundry? Three cambric pillow-cases, with the deep French work, covered with iron-mould; and one of my best tablecloths, seven yards long—that one with Dinah and the hunt! Mr. Bradford's father brought it himself from Russia. There they were, rolled up in a heap, and put away damp, because Maria was too lazy to iron them yesterday. Next to silver, I must say, I like home linen, and as it will last for ever and ever, and do as well for Harry as us, I have the handsomest

I can get. Only think of it! ruined! salts of lemon hasn't the least effect. She's tried it, and taken a piece out of one of the pillow-cases."

This seemed very much like a contradiction to the statement that home linen "lasted for ever and ever." But to any one who shared in Mrs. Bradford's taste for thoroughly nice and handsome napery, her presses were as much to be admired as her plate was. She showed them to her sister with pardonable pride—pardonable in Mrs. Bradford—in the course of the morning. There were piles of pillow-slips, plain and highly ornamented; sheets smelling faintly of the dried lavender folded between them, an old-fashioned and delicate bit of housewifery Mrs. Bradford had retained; blankets as soft and fine as a lady's shawl; counterpanes of every variety and tint; yet, not a block from this luxurious mansion, the poor had died of cold and starvation the past winter; the aged, and sick, and little children, shivering with the cold so near this hoard of "purple and fine linen."

"And now we are here, I might as well show you my India scarf and shawl. I keep them in this camphor trunk; and my fur boxes are here, too; so you might as well see my sables at the same time."

Mrs. Bradford lifted two very handsome hearth-rugs from the trunk, and knelt to unlock it. "I've tried rather an experiment this year. I dislike the smell of tobacco and all those sort of things so much, that I concluded to try a way I saw recommended in an English magazine, just to have the thing beaten out, and aired well, and pinned up in linen without anything. Gunter's foreman told me that tobacco was all nonsense. Here are my crape shawls, the white and scarlet, but you've seen these, and they're so common nowadays, I never think of wearing them."

The camphor chest held quite a collection of foreign boxes and packages, the dull, silken covers of the Chinese cases being the most prominent. The shawls, which had been replaced in Mrs. Bradford's affections by the still more costly cashmeres, were folded as smoothly, and in as excellent a state of preservation as when they first arrived. Stewart or Beck would have taken them at very little discount from the first heavy cost; but Mrs. Bradford would not have dreamed of selling them, though she probably would never wear them again, now that they were "common."

Mrs. Mason could appreciate the rare shade and delicate texture of the cashmere proudly submitted for her inspection. In her fashionable days, a cashmere was the desire of her heart. Here was just the style it would have suited; it would have been much more becoming to her tall, delicate figure than Mrs. Bradford's broad shoulders. She could not restrain an exclamation of pleasure as she gathered the graceful folds in her hands, and was conscious of the feminine wish to "try it on"—a lingering vanity she did not suspect herself of before.

"Now, how much do you suppose I gave for both?" asked Mrs. Bradford. Just look at the border of this scarf; and such a lovely shade, too! I happened to be in Stewart's the morning they were opened, and I consider them great bargains. Only nine hundred for the two."

Mrs. Mason had seen more than the border when the scarf was held up to the light. She might be mistaken; she hoped she was; but she thought she discovered the minute traces of moth-holes! Yes, there they were, and the dusty rolls clinging to the thick wool of the border were seen in another instant by Mrs. Bradford herself. The shawl, too, when it came to be examined, had been attacked by some insidious enemy. Mrs. Bradford tore open her fur-boxes, and shook the costly cape and muff in the sunshine. Alas for experiments! the black feathery particles flew out in a shower, and one of the rich tips came off in her hands.

It was a catastrophe that put all thoughts of visits and shopping out of the question; her chief treasures had sustained irreparable injury, and a paltry pair of embroidered moccasins, purchased at Niagara the year before, had been the cause of all the mischief.

Mrs. Mason felt her lingering love for such perishable finery rebuked, as her sister lamented her folly and its consequence, particularly as she had intended the shawls for Harry's wife at some future day, and so thought them good investments of the large sums paid for them. The suit of sables, purchased only the winter before, were, in their way, quite as choice and costly.

As dinner-time approached, Mrs. Bradford was sum-

moned to the thousand and one preliminary annoyances of a hostess, on whom every detail devolves, and whose heart was set on having every arrangement perfect. She could not trust even the French cook to arrange the costly dessert of hot-house fruits, and then the silver could not be given out till the last moment for fear of thieves. "They had such a fright," she told Mrs. Mason, "at the time the oyster boy carried off all the spoons and forks in his can while the cook's back was turned. Now York thieves were getting so ingenious."

Five o'clock train was the dinner-hour, and the whole laborious day had been passed in looking over the valuable woollens in the press, bawling accidents, and making ready for guests that were almost entire strangers, and very uninteresting people, their only title to Mr. Bradford's courtesy being a letter of introduction. Mrs. Bradford was obliged to be polite and entertaining, when her thoughts were with the careless waiter and the elegant dessert-set, a sullen, unpunctual cook, and her fastidious husband. The host, depressed by the losses of the day and hazards of the morrow, noticed every delinquency with double displeasure, to be poured out to the much-enduring Mrs. Bradford as soon as the visitors had departed.

Mrs. Mason thought she had never had so exhausting a day in all her exertions for the poor and the sick as Mrs. Bradford had undergone for people who would never think of her again. Besides, their claim, notwithstanding her sister did not allow it, was to her a sacred and loving bond.

She told her husband of the mishap to the cashmeres as they retired, weary with the platitudes they had been compelled to listen to throughout the evening.

"Well," he said, with very unsympathising indifference, "I don't suppose Ellen thinks

'Tis better to have had and lost,
Than never to have had at all.'

There's John been lecturing me this morning for not coming back and going into business again. He says there never was a better chance for people with capital at command. What do you think about it?"

"O, no!" Mrs. Mason said, earnestly. "Just see how John is swallowed up in business and business cares from morning till night. Ellen says herself he scarcely takes time to breathe, and fairly talks in his sleep. He looks twice as old as you do, so haggard and anxious."

"But he says it's neglecting my talents, and—oh, he's exceedingly eloquent on the subject—and how you are shut up from society, and everything you used to be so fond of."

"You know I feel about it."

"John must be coining money," mused Mr. Mason, drawing his neck-handkerchief through his hands. "I shouldn't be surprised if he should die a millionaire, if luck doesn't turn against him."

"But what if he does, Philip? I'm sure you cannot envy him. What is the use of dying rich? And there's Harry and his wife will spend as fast as John can make. Then just see what a life Ellen leads: she is looking after the servants from morning till night, yet they break, and injure, and destroy for all that. You can't be serious."

"But I am," said Mr. Mason, "serious in my determination to abide by my choice of years ago. I could not serve two masters any better now. There's the moth and rust of the body and soul they forgot to watch against. Did you hear one sensible, clever thing from anyone at dinner to-day? What did Mrs. Mears discourse upon?"

"The usual topic here: bad servants and high markets, and how particular Mr. Mears was about his table."

"We had the different dishes talked over, and the difference in English and American mutton discussed. Then the stocks and prices current, and, of course, the everlasting subject of wine, a never failing, inexhaustible theme! Longworth's champagne, and that Madeira was going out, rather, and sherry was in great demand, and so on through the whole list. When are we going home, Eliza?"

Mrs. Mason was very much relieved at the change in her husband's tone. She was beginning to believe him in earnest about returning to city life, and was frightened at the prospect for both of them.

Finding that he could not influence his brother-in-law to embark capital in his favourite speculations, Mr. Bradford suffered them to depart in peace. For

himself, he was blind to the inroads that were daily made on health, disposition and domestic happiness by all this heaping up treasure. He intended to stop some time and enjoy himself and his fortune, but that time never seemed to come. The Masons watched the gains and losses, the gathering and the scattering abroad, from their country-house, where plenty and simplicity were united. Their lives were not fretted by daily recurring annoyances and accidents, or shortened by corroding care. Their treasures had long been accumulating where neither "moth" nor "rust" could intrude.

DAN'S WIFE.

Up in early morning light,
Sweeping, dusting, "setting right;"
Oiling all the household springs,
Sewing buttons, tying strings,
Telling Bridget what to do,
Mending rips on Johnny's shoe;
Running up and down the stair,
Tying baby in a chair;
Cutting meat, spreading bread,
Dishing out so much per head;
Eating as she can by chance,
Giving husband kindly glance;
Toiling, working, busy life,
Smart woman,
Dan's wife.

Dan comes home at fall of night—
Home so cheerful, neat and bright,
Children meet him at the door,
Pull him in and look him o'er,
Wife asks, "How the work has gone?
Busy times with us at home!"
Supper done, Dan reads with ease;
Happy Dan, but one to please.
Children must be put to bed—
All the little prayers are said,
Little shoes placed all in rows,
Bedclothes tucked o'er little toes;
Easy, noisy, weary life,
Tired woman,
Dan's wife.

THE SLIGHTED SCHOLAR—A STORY.

Cases like the one I am about to relate are much too frequent in our country, and they are such, too, as should be guarded against by all who have an interest in education. The incident was brought to mind by hearing a complaint made by the parent of a poor boy, who had been grossly neglected simply because he was poor and comparatively friendless!

Many years ago, when I was a small boy, I attended a school in the town of——. Among the scholars there was a boy named George Henry. His father was a poor drinking man, and the unfortunate boy had to suffer in consequence. George came to school habited in ragged garments—but they were the best he had; he was very ignorant, for he had never had an opportunity for education.

Season after season, poor George Henry occupied the same seat in the school-room—it was a back corner seat, away from the other scholars—and there he thumbed his tattered primer. The ragged condition of his garb gave a homely cast to his whole appearance, and what of intelligence there might have been in his countenance, was beclouded by the "out covering" of the boy. He seldom played with the other children, for they seemed to shun him; but when he did, for a while, join with them in their sports, he was so rough that he was soon shored off out of the way.

The teacher passed the poor boy coldly in the street, while other boys in better garbs were kindly noticed. In the school, young Henry was coldly treated. The teacher neglected him, and then called him an "idle blockhead," because he did not learn. The boy received no incentive to study, and consequently he was the most of the time idle, and idleness begat a disposition to while away the time in mischief. For this he was whipped, and the more idle and careless he became. He knew that he was neglected by the teacher, and simply because he was poor and ragged, and with a sort of sullen indifference, sharpened at times by feelings of bitterness, he plodded on his dark, thankless way.

These matters went on for several years. Most of the scholars who were of George Henry's age had passed on to their higher branches of study, while he, poor fellow, still spelled out words of one and two syllables, and kept his distant seat in the corner. His father had sunk lower in the pit of inebriation, and the unfortunate boy was more wretched than ever.

The look of clownish indifference which had marked his countenance, was now giving way to a shade of

unhappy thought and feelings, and it was evident that the great turning point was at hand. He stood now upon the step in life from which the fate of after years must take its cast.

At this time a man by the name of Kelly took charge of the school. He was an old teacher, a careful observer of human nature, and a really good man. Long years of guardianship over wild youths had given him a bluff authoritative way, and in his discipline he was strict and unwavering.

The first day he passed at the teacher's desk of our school was devoted to watching the movements of the scholars, and studying the dispositions with which he had to deal. Upon George Henry his eyes rested with a keen, searching glance, but evidently made little of him during the first day; but on the second day he did more.

It was during the afternoon of the second day that Mr. Kelly observed young Henry engaged in impaling flies on the point of a large pin. He went to the boy's seat, and after reprimanding him for his idleness, he took up the dirty, tattered primer from his desk.

"Have you never learned more than is in this book?" asked the teacher.

"No sir," drawled George.

"How long have you attended school?"

"I don't know sir. It's ever since I can remember."

"Then you must be an idle, reckless boy," said the teacher with much severity. Do you realise how many years you have thrown away? Do you know how much you have lost? What sort of a man do you think of making in this way? One of these days you will be too old to go to school, and then while your companions are seeking some honourable employment, you will be good for nothing. Have you parents?"

"Yes, sir," answered the boy in a hoarse, subdued voice.

"And do they wish you to grow up to be an ignorant, worthless man?"

The boy hung down his head and was silent, but Mr. Kelly saw two great tears roll down his cheeks. In an instant the teacher saw that he had something besides an idle, stubborn mind to deal with in the ragged scholar before him. He laid his hand on the boy's head, and in a kind tone he said:

"I wish you to stop after school is dismissed. Do not be afraid, for I wish to assist you if I can."

George looked wonderingly into the master's face, for there was something in the tone of the voice which fell upon his ear that sounded strangely to him, and he thought, too, as he looked around, that the rest of the scholars regarded him with kinder countenances than usual. A dim thought broke over his mind, that, from some cause, he was going to be happier than before.

After the school was dismissed, George Henry remained in his seat till the teacher called him to the desk.

"Now," said Mr. Kelly, "I wish to know why it is that you have never learned any more. You look bright, and you look as though you might be a smart man. Why is it that I find you so ignorant?"

"Because nobody ever helps me," replied the boy. "Nobody ever cares for me, sir, for I am poor."

By degrees the kind-hearted teacher got the poor boy's whole history, and while generous tears bedewed his eyes, he said:

"You have been wrongly treated, George—very wrongly; but there is yet time for redemption. If I will try to teach you, will you try to learn?"

"Yes—O yes," quickly uttered the boy in earnest tones. "Yes—I should love to learn. I don't want to be a bad boy, he thrillingly added, while his countenance glowed with unwonted animation.

Mr. Kelly promised to purchase books for the boy as fast as he could learn to read them, and when George Henry left the school-room his face was wet with tears. The scholars, who had remained in the entry, saw him come out, and our hearts were warmed towards him. We spoke kindly to him, and walked with him to his house, and his heart was too full for utterance.

On the next day, George Henry commenced studying in good earnest, and the teacher helped him faithfully. Never did I see a change so radiant and sudden as that which took place in the habits of the poor boy.

As soon as the teacher treated him with kindness and respect, the scholars followed his example, and the result was that they found in the unfortunate youth one of the most noble-hearted, generous, accommodating, and truthful playmates in the world.

Long years have passed since those school-boy days. George Henry has become a man of middle age, and in all the country there is not a man more beloved and respected than he is. And all is the result of one teacher having done his duty.

You who are school-teachers, remember the responsibility that devolves upon you. In this country of free schools, there should be no distinction between classes. All are alike entitled to your care and counsel, and the more weak the child the more earnest should be your endeavour to lift him up and aid him.

YOUNG CANADA.

THE EXPERIENCES OF A TOWNSPARRROW.

The Sparrow sat on the chimney top
And wagged his little tail;
He ducked his head and wiped his bill,
Then through the air did sail.

A merry sight it was to see
Him fold his ready wing,
And cock his eye, as who should say,
'Tis pity I can't sing.

For I have much that I would tell
Were gift of story mine;
I light on window sills, and watch
The good folks while they dine.

But I,—my dinner waits for me
On roof and street and square;
No man-servant, no maid-servant,
For me repast prepare.

I always have good appetite,
And eat with relish rare;
Because I very active am,
And love the open air.

'Tis little wonder that I'm wise,
With wandering up and down,
And flying here and flying there,
In all parts of the town.

The sights I see are often sad,
And often they are funny;
But one thing I much wonder at,
The love of men for money.

For me gold coin and silver white,
Were little worth, I know,
And often, I'm inclined to think,
Men value them for show.

And that the happiness they bring,
Lies mostly in the name;
For happiness, to rich and poor,
In measure comes the same.

PROMISING.

"How obliging Ed. Dayton is," said Martin Wells to Will Buchanan one day when they left the school-house together. "He says he will lend me any book he has, and he has so many nice ones. He promised to bring me 'Carlina' to-morrow. I never could finish it, because I didn't get the magazine."

"Oh, yes, he's very good about making promises!" said Will, dryly.

"And he said he'd get me a ticket to the Mercantile, or speak to his father—he's one of the managers. There's some arrangement by which they give tickets to a certain number of boys. Wasn't it kind of him?"

Martin was a stranger in a strange place, with little money to spend, and Ed. Dayton's pleasant words and obliging offers had made a strong impression upon a mind naturally sensitive and grateful.

"Oh, certainly, very kind of him," said Will, who knew pretty well the nature of Ed. Dayton's promises, but would not prejudice a stranger against a school-mate.

"So different from John Fitz Adam," continued Martin, "I wanted to see 'Atkinson's Siberia,' and I knew he had it, and I did venture to ask him to let me take it this week, and all he said was he 'couldn't promise.' It's the first time I ever asked a favour of any one in this school," said Martin proudly. "I guess it will be the last."

"It's not like John to be stingy," said Will—and then the boys parted.

The next morning Ed. Dayton had forgotten to bring "Carlina," and then when Martin, two days after, ventured to remind him of his promise, he said that the book was his sister's, and that she didn't like to lend her books.

Seeing the state of the case, Martin said nothing about the library ticket, of which he

heard nothing more, to his very great disappointment, for he dearly loved books.

He was going home Friday night, feeling rather tired, home sick and lonesome, when John Fitz Adam came running after him with a book in his hand. "Here's Atkinson," he said, out of breath, "I couldn't promise it the other day, because I didn't know whether father wanted to send it away to grandma or not, and it was lent to my cousins, but it came home last night, so it's at your service, and keep it as long as you like."

"Oh, thank you!" said Martin, brightening, and regretting his hasty judgment of John; "I'm sure you are very good," and then the boys parted, and presently Martin was joined by Ed. Dayton.

"I think Fitz Adam is a regular mean fellow," said Ed. "I just asked him this morning to look out some references for me in some books I know he has at home, and he wouldn't promise to do it, because he said he thought his father wanted him this evening. I'd like to see the time when I couldn't promise to oblige a friend."

"And I'd like to see the time when you'd keep your promise," thought Martin. "It people always keep their promises, they are generally rather careful how they make engagements. It don't cost any one much to promise, who never performs."

"GIRLS, HELP FATHER."

"My hands are so stiff I can hardly hold a pen," said Farmer Wilber as he sat down to "figure out" some accounts that were getting behindhand.

"Can I help you, father?" said Lucy, laying down her bright crochet-work. "I shall be glad to do so if you will explain what you want."

"Well, I shouldn't wonder if you can, Lucy," he said, reflectively. "Pretty good at figures, are you?"

"I would be ashamed if I did not know something of them after going twice through the arithmetic," said Lucy, laughing.

"Well, I can show you in five minutes what I have to do, and it'll be a wonderful help if you can do it for me. I never was a master-hand at accounts in my best days, and it does not grow any easier since I have put on spectacles."

Very patiently did the helpful daughter plod through the long lines of figures, leaving the gay worsted to lie idle all the evening, though she was in such haste to finish her scarf. It was reward enough to see her tired father, who had been toiling all day for herself and the other dear ones, sitting so cozily in his easy-chair enjoying his weekly paper.

The clock struck nine before her task was over, but the hearty "Thank you, daughter, a thousand times!" took away all sense of weariness that Lucy might have felt.

"It's rather looking up when a man can have a clerk," said the father. "It's not every farmer that can afford it."

"Not every farmer's daughter is capable of making one," said the mother, with a little pardonable maternal pride.

"Nor every one that would be willing if able," said Mr. Wilber; which last was a sad truth. How many daughters might be of use to their fathers in this and many other

ways who never think of lightening a care or labour! If asked to perform some little service, it is done at best with a reluctant stop and unwilling air that robs it of all sunshine or claim to gratitude.

Girls, help your father. Give him a cheerful home to rest in when evening comes, and do not worry his life away by fretting because he cannot afford you all the luxuries you covet. Children exert as great an influence on their parents as parents do on their children.

LITTLE BY LITTLE.

If you are gaining a little every day be contented. Are your expenses less than your income, so that, though it be little, you are constantly accumulating and growing richer and richer every day? Be contented; so far as concerns money you are doing well.

Are you gaining knowledge every day? Though it be little by little, the aggregate accumulation, where no day is permitted to pass without adding something to the stock, will be surprising to yourself.

Solomon did not become the wisest man in the world in a minute. Little by little—never omitting to learn something even for a single day—always reading, studying a little between the time of rising in the morning and laying down at night; this is the way to accumulate a full store-house of knowledge.

Finally, are you daily improving in character? Do not be discouraged because it is little by little. The best men fall short of what they would wish to be. It is something, it is much, if you keep good resolutions better to-day than you did yesterday, better this week than you did last, better this year than you did last year. Strive to be perfect, but do not become downhearted as long as you are approaching nearer to the high standard at which you aim.

Little by little, fortunes are accumulated; little by little, knowledge is gained; little by little, character and reputation are achieved.

THE MILL TO THE STREAM.

"I notice," said the stream to the mill, "that you grind beans as well and as cheerfully as fine wheat."

"Certainly," clacked the mill; "what am I for but to grind? and so long as I work what does it signify to me what the work is? My business is to serve my master, and I am not a whit more useful when I turn out fine flour than when I make the coarsest meal. My honour is not in doing fine work, but in performing any that comes as well as I can."

That is just what boys and girls ought to do—do whatever comes in their way as well as possible, and those who act so are sure to get along nicely.

LITTLE words, little deeds, not one great act of mighty martyrdom, make up the time of life.

PETER the Great, Emperor of Russia, was one day in a sailing boat, when he became so angry with one of his companions that he seized him with the intention of throwing him overboard. "You may drown me," said his subject, "but your history will tell of it." The reminder was effectual, and the Emperor pardoned the man.

GRAPE VINES.

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WORDEN—"The grape for the million"—an improved Concord seedling, as vigorous, healthy, hardy and productive as its parent, and ripening with (or a little before) the Hartford; the best black grape to follow Moore's Early; better than Concord for home use, and "beats it out of sight" for market. One year vines 25 cts. each, \$2.50 per dozen.

POCKLINGTON—Very large in bunch and berry, and better than Concord in quality, destined probably, from its magnificent appearance and the ease with which it can be raised, to drive all other tested white grapes out of the market during its season.

Messrs. SROBE & WELLS who control the sale in Canada, pay \$400 gold for the best samples of Pocklington at the Provincial Exhibition in 1883, and by their special grace I am allowed to send this variety to my customers, and offer the vines at \$2.00 each, one year old.

JEFFERSON—A fine native cross between Concord and John, with the delicious quality of the latter joined to the health of the Concord vine. Light red, large in berry and bunch, a good shipper and keeper—it is, I believe, the best red grape in America for home use or market: one year, \$1 per vine.

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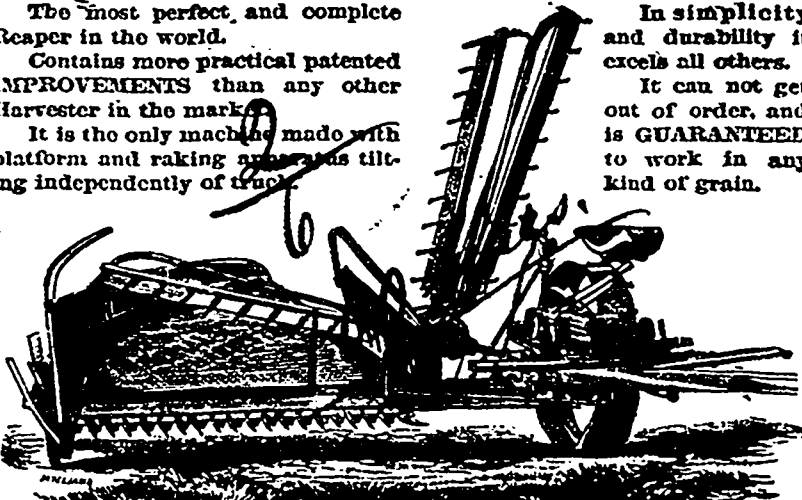
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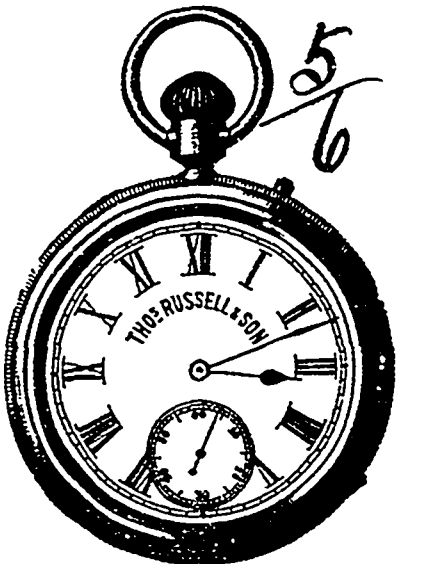
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