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RURAL NOTES.

THE Canada West Farm Stock Association has established a branch of its business at Waukegan, Illinois, thirty-five miles north of Chicago. A detachment of the Bow Park herd has been located there, for the greater convenience of selling to western breeders. Success to the new departure!

THE "Davy" herd of Devon cattle in England, which has existed for nearly 200 years, and won a high reputation, was recently scattered by an auction sale. A yearling bull brought 100 guineas, a bull calf 90 guineas, cows sold for 80, 75, and 60 guineas, and the whole herd averaged £31 stg. per head.

AUGUSTUS STORR, of Brooklyn, N. Y. (may his tribe increase!), has presented to the State of Connecticut a well-stocked farm, with suitable buildings, located in the township of Mansfield, seven miles north of Willimantic, as a foundation for a State Agricultural School. The gift has been accepted by the State, an annual appropriation made for the support of the institution, and a board of trustees appointed.

THE British public is opening its eyes to the merits of American, which includes, in their indefinite way of speaking, Canadian cheese. An English paper says: "American cheese is coming into the market in very great quantities; from 30,000 to 40,000 cheeses have been landed in Glasgow every week during the last two months. Every lot is picked up as soon as it arrives, the quality being considered fine."

HERE is an item for those who desire to get rid of stumps. It is given for what it is worth, and may be easily tested by the curious: "In the autumn or early winter bore a hole one or two inches in diameter, according to the girth of the stump, and about eight inches deep. Put into it one or two ounces of saltpetre, fill the hole with water, and plug it close. In the ensuing spring take out the plug and pour in a gill of kerosene oil and ignite it. The stump will smoulder away, without blazing, to the very extremity of the roots, leaving nothing but ashes."

THE (English) *Gardeners' Magazine* says, that the importation of apples into Britain from the United States, from the abundant crop of 1880, amounted to no less than 1,348,806 barrels, of which 599,200 were shipped at New York, and 510,300 barrels at Boston. On this item, the *Country Gentleman* remarks, "it would be very gratifying to us, were it not for the fact that many of them were badly put up, to the injury of their reputation." Natural curiosity impels one to ask

how many barrels of apples were shipped from Canada during the season reported. Very likely the original statement included this, but it got sifted out while passing through the American papers.

BUTTERMILK is now being proclaimed, in certain quarters, as a panacea for many of the ills that flesh is heir to. It is said to purge the human system of refuse matter, to cure dyspepsia, and to be a remedy for sleeplessness. All this will be good news to those who are fond of the beverage. A show, at least, of scientific reason is given why buttermilk should aid digestion. The acid developed by churning is represented as aiding the secretion of gastric juices, which seems highly probable. Many would as soon take a dose of nauseous physic as drink buttermilk; still, if it is the efficacious medicinal agent which some authorities aver, we had better avail ourselves of it, even though wry faces have to be made in the process of gulping it down.

THERE is an evident "boom" in the direction of bee-keeping. Honey commands a high price, and the success of such men as D. A. Jones, Dr. Nugent and others, inspires a host of would-be imitators. But the trouble is, that few have any intelligent idea of the cost of success in bee-keeping. It involves, first of all, an intelligent knowledge of apian principles. This may be obtained by study of books on the subject, of which there is no lack. Then the manipulation of bees is an art only to be gained by practice. Most people make a failure of it at the outset, and have to pay for some lessons in the school of experience. Then the temptation comes to give the thing up in disgust. It is only those who persevere in the face of difficulties who achieve success. Perseverance is a rare virtue, and hence there are few really successful bee-keepers. In this, or in other pursuits, success has to be conquered.

THE Governor of Illinois, at the instance of a Committee of the National Shorthorn Breeders' Association, has issued a proclamation prohibiting the importation of "any domestic animal of the bovine species" into that State from certain districts infected with pneumonia, unless accompanied by a certificate of health properly signed by a duly authorized veterinary inspector. The localities placed under ban are as follows:—Pennsylvania—Counties of Lehigh, Bucks, Montgomery, Berks, Delaware, Chester, Lancaster, York, Adams, and Cumberland. New Jersey—Counties of Bergen, Morris, Essex, Hunterdon, Somerset, Middlesex, Monmouth, Mercer, Ocean, Burlington, Camden, Gloucester, and Atlantic. Maryland—Counties of Cecil, Hartford, Baltimore, Carroll, and Howard. New York—Counties of Putnam, Westchester, and Queens. Delaware—

County of Newcastle. Connecticut—County of Fairfield.

THERE is no end of "sells" in the nursery business, and people cannot be too careful in dealing only with respectable and responsible parties. Peter Henderson says that no season passes but some pretended dealers in nursery stock have the audacity to plant themselves right in the centres of our large cities, and hundreds of our smart business men glide smoothly into their nets. The very men who will chuckle at the misfortunes of a poor rustic when he falls into the hands of a mock auctioneer or a pocket-book dropper, will freely pay \$10 for a rose plant of which a picture is shown them having a blue flower! And this kind of imposition will continue so long as men purchase trees and plants without knowing anything about them, or without availing themselves of the horticultural information which is now offered in so many different ways, or without making it a point to deal with those who have a character at stake and a business reputation to maintain.

THE dry earth closet system is the best mode of utilizing that richest and most neglected of manures, the contents of the privy. One difficulty about the adoption of this method is that of emptying the box in winter of its solidly frozen contents. Prof. Caldwell, of Cornell University, has hit upon a simple way of conquering this difficulty. He procured a box of galvanized iron and one of the cheap wheelbarrows sold at country hardware stores, knocked off the scoop-like body of the barrow, and mounted his box in its place on the frame of the vehicle, without, however, fastening it there, and an opening was made under the seat of the privy large enough to receive them both. When the box was full it was wheeled to a distant part of the garden, which, as usual in a village residence, extends back from the rear of the house, and was dumped off so that it would lie bottom side up on the ground; a small kettle of boiling water was poured over it, and directly it could be easily lifted off the solid mass within. Till this simple but ingenious plan was arranged he became almost discouraged every winter by the complaints that were made of the trouble found in removing the contents of the closet; but this substitute for the old-fashioned and still prevailing style of an ugly outhouse at the back side of the yard over an offensive water and air-polluting vault, was so convenient and healthful that he could not give it up for any such obstacle; necessity became again the mother of invention, and hence this contrivance, which, though worth more than many a patented idea of which we make common use, has still not sought any recognition at the Patent Office.

FARM AND FIELD.

A SELF-MADE FARMER.

A correspondent of the Connecticut *Farmer* tells a racy story with a big moral to it, about two brothers who were farming in partnership, each working on his own account the half of every field. The land was poor, the work hard, and the returns meagre. One day the younger brother of the two, Robert, was hoeing corn. The sun shone like fuff, and he sweated in proportion. "Corn weather for certain," he said to himself, as he was resting for a little, hoe in hand, with a mighty ache in his back, and a deluge of sweat on his face. "This corn ought to stretch a little faster," said he; "why don't it?" But, in fact, the corn had to stretch pretty hard to get up as high as it was. Plant food was very scarce in that soil. It was to the corn what Mother Hubbard's cupboard was to her dog when a bone was wanted—"bare." Yet the grass and weeds grew in a tangled mess, and multiplied, as children will, wherever victuals are not abundant. As Robert surveyed the scene his eye caught one rank, dark green hill, that stood out in bold relief among the rest, tall and luxuriant, spreading its leaves all around, and drinking in the heat as if it liked it. Then he remembered that in carting out his scanty stock of manure an axle had broken at that spot, spilling the load. When it was gathered up half a peck or so of manure was left in a hole. This hill grew on that place. Robert resumed his hoeing, and his hands were not busier than his brains. He pondered what he had seen, and received instruction. When he went in to dinner he carried in his head the germ of an agricultural revolution. All summer he worked on, often thinking over the problem of that corn hill. At husking time four big stalks, each with two good ears of corn on it, solved the problem, "Why wasn't every hill as good as that?" He knew why.

"How much corn are you going to plant, Bob?" asked his brother George next spring. "I don't know; as much as I can manure," said Robert. A ten-acre field was assigned to this crop. George spread what manure he had over the five acres that fell to his lot, but Robert put his manure on so thick that he had only enough to go over an acre and a-quarter. "Are you going to make a compost heap, or what?" asked George, as he surveyed the prodigal coat of manure, and the small piece of land. "I am going to try and grow as much corn as you without hoeing so much ground," was the reply. With less ground to work, it was better ploughed, and more thoroughly hoed, than if there had been four times as much land to go over. The sight of that crop put new life into him all summer. It was a book that did him good every time he studied it.

"Well," said George in the fall, "how much corn have you got? I've got 212 bushels of good ears, and 86 bushels of nubbins off my piece." "I've got 200 bushels of good ears," answered Robert. "How much small?" "Not half a bushel." "If you had done as I told you, you would have got more corn." "A little more small stuff, but my land will raise a good crop next year without any manure, and on your five acres the very weeds will have the yellow jaundice. George, I've made a resolution not to cultivate where I can't manure." "You'll do big things then, if you are going to put all your crops into an acre and a quarter every year." Said Robert, "Next year this corn ground will raise its crop without any more manure, and the year after; big crops, too. If I've got more ploughed land than I can manure as I ought to, I'll turn it into pasture. This ploughing and skimming is played out."

A new leaf had been turned over. But another

page of truth caught his attention. Passing through the barnyard one day, just after a smart shower, he crossed a coffee-coloured brook, flowing along towards the road. He followed its course, and saw into what a giant growth it had forced the wayside weeds. Then he said: "I will give that strong coffee for my corn to breakfast upon." So he did, and next year his manure went twice as far, for it was twice as rich. He had learnt two great lessons, which many a farmer never masters through the whole course of a long lifetime: the value and economy of manure. The rest of the story is soon told. Ploughing less land, he had more for hay and pasture, increased the number of his stock, made a bigger pile of manure, enlarged his area of plough-land, and gradually worked his farm to such a point of fertility that it bothered him to tell which field he should mow and which he should pasture. Improved culture, improved stock, improved buildings, improved implements, improved circumstances, followed one after the other. At twenty-eight Robert Stuart might be seen sitting on a stump, in the burning sun, surveying a discouraging corn-field. At fifty he might be seen sitting upon his verandah, viewing broad and fertile acres, good crops, fine well-bred and sleek-looking cattle, and overflowing barns, environed by stacks of hay and corn. "The New England horror of Western competition" does not ruffle his peaceful and contented mind. Wise and happy Robert Stuart! May his tribe increase!—*Western Advertiser.*

HOPS.

Billy Barlow planted hops. Hops were worth 40 cents per pound, and he figured the income from ten acres, and said to his wife:

"Maria, we've struck a gold mine, and its name is Hops. You can order the piano now, and we will trot the boys off to college."

"But do you know how to grow hops, William?"

"Don't be a fool, Maria; hasn't the old vine in the corner of the garden borne hops since Tom was a baby, with no help but the dead butternut to twine on? Do I know how? Why it is harder to kill a hop vine than a burdock. But just think—*forty cents a pound!*"

Barlow paid a high price for hop roots, for they are always scarce when hops are up. His neighbours sold him hop poles at about their own price; for how could he banter when each individual pole was destined to bear, before the sunshine and the wind, a tasselled banner of hops—otherwise gold. Then he built a big hop kiln, with a gilded fish, six feet long, to keep the ventilator before the wind. Then Barlow sat in the shade and made plans as to what he should do with all the money. Suddenly the hops went down, down, down. The lower they went the less buyers wanted them, and the more particular they became as to quality—and Barlow's were not above criticism. Then he said to his wife:

"Maria, I am busted on those blamed hops, as sure as shooting. If it hadn't been for you and your wanting the piano, and teasing to get the boys off to school, I would have kept out of this miserable pickle."

Barlow's fancy hop house is now a pig-pen and hen house combined, and Barlow has gone into beans wiser and sadder, but poorer.

Hopkins planted hops. He bought Barlow's hop poles at half price, with all the hop roots he wanted thrown in.

"How is it you plant hops when they are so cheap?" he was asked.

"The price is likely to be better by the time mine are ready for the market," was the reply. "Father and I grow hops years ago down East; father was never frightened about the price of hops."

Hopkins did not get rich on his first crop—hops recovered slowly, but he kept right on, extending his field, giving the best culture, and producing a first-class article. I pass his place often, and my wife and I always notice the beauty of the hops and the careful attention given. The last time we went by, we saw that Hopkins had been painting his house, had put on an addition thereto, with wide cornice and blinds; that he had cut down the windows level with the ground floor, had put in double black-walnut front doors, with copper knobs and bell handle; that he had planted ornamental trees and shrubs on his grounds, and kept the lawn mower whirling. Hopkins drives a nice-looking rig on the street, and is said to carry a savings bank pass-book, into which the hops are entered when converted into hard cash. Hopkins is consulted on important questions of Church and State in his community; his boy has married the rich widow's pretty daughter, and all goes as salubriously as strawberries into the small boy's stomach. Whether hops goes up, or hops goes down, Hopkins plants hops. Barlow knows beans—Hopkins knows hops.

MORAL.—Look before you hop, but having once considerably hopped, stay hopped.—*C. A. Green, in Rural New Yorker.*

A NEW INSECT PEST.

More than two years ago we warned Canadian farmers, that in New York State, the clover crop was suffering from the attacks of a new and formidable enemy, which unless great vigilance was used would soon get a footing among us. The insect was the clover-seed midge, *Cecidomyia trifolii*, closely allied to the wheat midge, *C. tritici*. We have lately seen in the country papers along the line of the Canada Southern and elsewhere, complaints of the ravages of an insect answering the description of this pest, and now suspicion that the midge has attacked the Canadian clover crop is rendered a certainty by the receipt from Mr. O. F. Springer, of Burlington, of a parcel of clover-heads positively full of the midge's larvæ.

The mature, winged insect resembles the wheat midge so closely that none but an expert could distinguish them. The larvæ of the clover midge is of a bright orange-red colour and rather less than the eighth of an inch long. The eggs of the insect are laid in September on the heads of clover or some other legume. The perfect flies appear in June, lay their eggs, and the second brood turns up again in the winged form in September.

We regret to say that the experience of the New York farmers who have suffered from the visitations of the midge is, that there is but one method of subduing it, namely, to cease growing clover in the districts where the insect prevails. It will, however, probably be found at least partially effective if farmers in the infested districts will merely cut their first crop of clover somewhat earlier than usual, say just as the first heads are forming, and if they will cease endeavouring to get a seed crop.—*Canada Farmer.*

CLOSER FARMING.

The subdivision of farms, says an exchange, by the farmer of the future, means a change and a diversity of products, no less than the competition of other sections. For it is plain that if an acre can be made to produce \$100, where before four acres produced \$25 each, the same area will support just four times the former amount of agricultural occupation, whether by new methods and increased care the yield is of the same product as before, or by the introduction of a new interest the cultivation of the land is turned to better advantage. Up to a certain point there can be no doubt that two blades of grass may be made to grow

where only one grow; and where the farmer who now raises fifteen bushels of wheat to the acre might raise thirty, or who now grows forty bushels of corn might produce eighty or one hundred, he has not yet given such a fair trial to his present opportunities as to entitle him to experiment with an increased acreage or to turn his lands to new crops. The future farmer will, first of all, by all methods not exhaustive of the soil, so till his lands as to get the largest available yield of the crops which he now cultivates with profit.

ABSORBENTS.

The question, What to use as an absorbent in stables? is one that must be answered by each farmer, according to the convenience with which he can obtain the several substances named. Sand is undoubtedly, of itself, better to spread upon muck or clay lands than either muck or clay, but the quantity that would be likely to be used in the stables would have an effect upon a clay farm or a large muck swamp, so small as scarcely to be appreciable. In practice, farmers will use such absorbents as they can get. Where sand is plenty, it will be used largely by good farmers, even upon sandy land. Sand and sawdust are each very clean absorbents to use in stables, while muck is decidedly otherwise. Whatever may be used as an absorbent in stables, should be made as dry as practicable, and kept so till used. Many years ago we built an addition to our barn for the express purpose of laying up sand and dry earth for spreading upon the stable floors, and we know of no investment that has paid better. The addition is at the rear of the stables, running their whole length. It is ten feet wide, and will hold eight or nine months' supply of dry material. It is filled in during the fall, while dry, and being on the north side of the stable, keeps out a great amount of cold during the winter, and yet it never freezes so hard that it cannot be used during the coldest weather. If planning a new barn, we should as soon think of dispensing with hay room as to neglect to provide suitable room for dry earth. And yet we do not consider dry earth in itself a manure, whether it be sand, loam, or muck.—*New England Farmer.*

CLOVER AND DROUTH.

With the experience of the present season I am disposed to value red clover more highly than ever before as a drouth-enduring plant. Its intrusion into our meadows has this year proved a blessing, especially to those who, like myself, believe in early haying. I cut my grass early in July, and the clover springing up immediately, soon grew a foot high and blossomed. I then turned in my cows and kept up a flow of milk which, without the drouth-proof clover, would have been impossible, except by daily feeding with green corn or other milk-producing equivalent.

ASHES FOR FERTILIZING.

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

THE DAIRY.

GOOD COW PERFORMANCE.

EDITOR RURAL CANADIAN,—Seeing in your issue of 1st inst. that Colonel Thomas Fitch, of New London, Conn., hazards the opinion that "more than half of the cows registered in the 'gilt-edged register' of the American Jersey Cattle Club will not give an averaging ten quarts of milk daily, or make one pound of butter a day for three months;" and referring to the recent sale of the bull Polonius for \$4,500, also a more ordinary-looking thirteen-year-old cow for \$8,000, of "the Alpha Craze strain of blood," he says: "Down with such wild-cat theories, and give us good blood at fair prices and less humbug." I wish to show Colonel Fitch I can do it. I keep two cows; grades, a cross between Durham and Ayrshire. Both had calves last spring. For three months after they gave five "Yankee pails" of milk daily,—that is 52 quarts, or 26 quarts each cow per day. Now they give 40 quarts, or 20 quarts each. The pasture is not so good now. They get nothing in the summer except the grass they gather in the field, and it is not always abundant. I am sure with better feed they would yield more milk. Out of this milk we sell some daily, fresh from the cows. The family has plenty of cream and milk for all purposes. We feed a calf on sweet skim-milk. It gets 15 quarts daily; and during the last 30 days we made 82½ pounds of butter. Who heats that?
R. MUNRO.

Georgetown, P. E. I., Sept. 15, 1881.

[The above is an excellent showing for a couple of cows, and speaks volumes as to the mingling of Ayrshire and Shorthorn blood. There is no better cross for dairy purposes; and if our dairymen would only try it, they would find it so much to their interest, that they would be sure to adopt it, and weed out the common cattle whose poor performance makes such a discouraging hole in the profits. Let any man figure up the financial results of keeping up a herd wholly made up of such cows as described by our correspondent, and he cannot fail to see the folly of keeping poor cows.—Ed. R. C.]

THE COST AND PROFIT OF KEEPING A COW.

Dairying would be a more money-making business if greater care were taken to keep only the best cows. Many cows are a dead loss to their owners. This is conclusively shown by a prominent New York dairyman, who has been investigating the business of thirty dairies with the following results:—

"In the thirty dairies there are 939 cows, an average of about 31 cows to the dairy. The whole number of pounds of milk sent by them to the factories during the season was 3,658,945. This gives an average of 3,900 pounds to the cow. I calculate that it takes at least one cow to each dairy to supply the family with milk, therefore 30 times 3,900 is to be added to the above amount, or 117,000 pounds. Last season was an exceptional one, and the factories were run for a longer period than usual. They were open on an average fully seven months, or 214 days. If this be deducted from 365 days, there will be a remainder of 151. The average time for a cow to go dry is about 60 days, and this, taken from 151, leaves 91 milking days, in addition to the time during which milk was sent to the factory. This is nine twenty-firsts, or somewhat less than one-half of the factory time. But it comes at the beginning and end of the season, when the cows will not average so good a yield as during the time of pasturage, and I think that one-third of the amount given during that period would be a fair average for the remaining portion of the year.

We are now in a position to get at the total annual yield of these 939 cows, and it may be tabulated as follows:—

Whole number pounds of milk sent to factories. 3,658,945
Yield of one cow to each dairy, for family use. 117,000
One-third of above amount, for 91 days remaining. 1,219,618

Total number of pounds per year for 939 cows 4,995,563

"If now we divide this amount by the number of cows, we find that the annual yield for each cow was 5,320 pounds, a result which may be looked upon as quite satisfactory. One of the questions upon my postal was the 'average number of pounds of milk to one pound of cheese.' In every instance this has been answered, and I presume in accordance with the factory figures. The range of these figures is from 9.67 pounds to 11 pounds, and the average of the 80 factories selected is 9.8164 pounds. A calculation made upon this basis, therefore, would give, providing the entire season's milk had been made into cheese, 542 pounds to each cow. Multiplying this by 8.717 cents, which was the average price of cheese for the entire season upon the Utica market, the result shows that the average money product of each cow was \$47.25.

"We now turn to an entirely different set of figures, which are to show us what is the cost of producing this milk. The first item, of course, is the food of the cows, and in regard to this the estimates of different men differ greatly. The discrepancy probably arises from the different methods of feeding and the various kinds of food used. The estimates range from \$15 to \$30, and in two cases even rise as high as \$35. It is also probable that the quality of feed ranges from simple grass and hay to oat and corn meal and bran. But the average cost of feeding our thirty dairies amounts to \$25.26 per cow. Then comes the expense of labour in taking care of the dairy, and the average cost per head of cattle is \$6.67. The item of manufacturing the cheese ranges from \$1.25 to \$2, and as it may be interesting to see the different prices charged at various factories I give them:—Starting at \$1.25, they go to \$1.30, \$1.35, \$1.40, \$1.45, \$1.50, \$1.52, \$1.56, \$1.75, and \$2. The average price is \$1.49½. This makes the manufacture of 542 pounds of cheese cost \$7.77. Here, then, are the cost figures:—

Feed	\$25 26
Making	7 77
Labour	6 67

Total..... \$39 70

"We found the money product of the cow to be \$47.25. If we deduct the cost of that product viz., \$39.70, we have a balance of \$7.55. Very well. That would be a small, but at least a respectable, percentage of profit, if it were such. But is it? If so, what is going to pay for the taxes and insurance, for the inevitable expenses of repairs to buildings and machinery, to say nothing of the interest on capital invested and the cost of supporting a family? The probability is that in the case of average cheese dairies the product of the cows during the year 1878 was barely enough for their own support. My cards called for the number of horses, the cost of feeding them, and their value, inasmuch as they are indispensable adjuncts of the dairy. The estimate generally is that a dairy of 30 cows requires the use of a span of horses. But I have left out of the estimate the expense of keeping horses and interest upon their value, which ought properly to be included, for the reason that it would make the estimate look altogether too formidable. It is bad enough as it stands, and I would fain improve it if possible."

A CREAMERY is to be established at Londesborough. Of the \$2,000 capital required \$1,200 has already been subscribed, and the balance is expected in time to commence work early next spring.

HORSES AND CATTLE.

THE PERCHERONS.

The Percherons, in Ontario, are few in number, although some very fine specimens of the breed are now to be met with. A number of practical agriculturists recently visited the establishment of Messrs. Hiram Walker & Sons, Walkerville, near Windsor, in order to see some very fine Percherons purchased by them not long previously from a number imported from France.

Mr. Hiram Walker describes the Percheron as follows:—

"The Percheron is a snug, close-built horse, easily kept, has a quick action, is a fast walker, and, for a heavy horse, a fast trotter; he is good-tempered, and has great endurance. The majority are grey, but in the lot I bought from there were several black horses and some bays.

"To cross our stock, or even as they are, they will, in my opinion, make excellent general-purpose horses. They don't eat more than half what other horses eat to keep them in the same condition.

"Our Clydes, I think, would get better action and a lighter carriage if crossed with the Percheron. The Percheron has good bone and strength in compact compass. A Percheron horse weighing 1,600 pounds will go twenty miles as light as a pony.

"A properly selected, large, well-developed, light, common mare, crossed by a Percheron horse, should give a good carriage horse. I think the Percheron colts will be equal to any imported horses. We have a large number of mares in foal by Romulus."

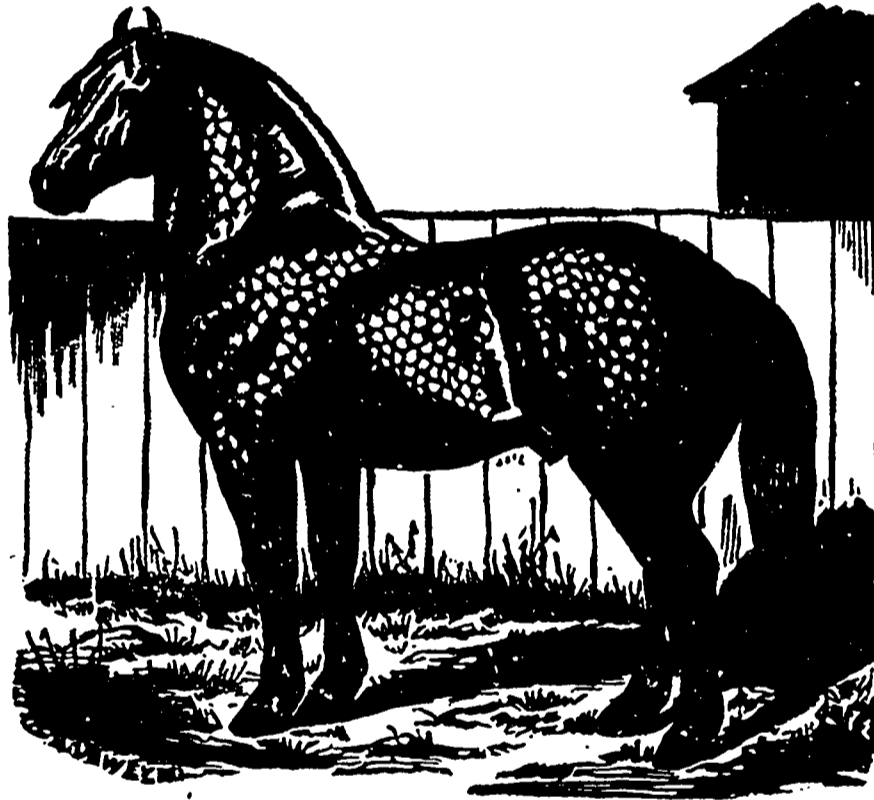
The horse in the accompanying cut, while in many respects a pretty faithful illustration, hardly conveys a just idea of the springiness and vivacity of the Percheron as represented in Messrs. Walker's stables. The latter consisted of one stallion, three mares and two colts.

KINDLY TREATMENT OF DOMESTIC ANIMALS.

Nothing can be more foolish than the attempt to catch either a horse, cow, pig, sheep, or dog by running after it. How many futile attempts to catch a horse have been made in pursuance of the above method! How many times has the horse, just as the hired man was about to walk up to its head and at the point of catching it, made a sudden wheel and shown the brightness of its shoes! At this juncture we have seen a little boy, who had never struck the horse with a whip, but who had given the animal many an apple in days gone by, stroking him and playing with him—at the time we have seen even this little fellow take the horse quietly by the foretop, and together they would go to any desired point. Or perhaps a lady makes her appearance, in whom the horse recognizes a friend who has frequently regaled him with a lump of sugar. He does not even wait for the lady to come to him; for he goes to her, and the simple lump of sugar will enable his mistress to lead the noble horse to his stall, a task which all the chasing and yelling of the hired man has failed to accomplish. The intelligent animal is attracted neither by the personal appearance nor the tone of voice of the rough fellow who strives to rule by force alone.

Another individual attempts by running and yelling to catch his cow or cows. Why do these naturally gentle animals run away from him? Because they remember full well that on former occasions, when he has succeeded in catching them, a series of blows from some heavy cudgel

has been their reward. Is there not some better way of securing the good-will of our herds and in managing them as we wish? There is a hollow place on the head of every cow, just behind the junction of the horns, which is commonly full of dust, short hairs, and the like, causing the animal an itching sensation. It is a source of extreme pleasure to the cow to have the spot scratched, and (since from its location the animal herself cannot reach it) hence, when her keeper approaches her, either in the stable or in the pasture, an era of good feeling may at once be established if due attention be paid to scratching this hollow spot. If, at your first approach, the cow is a little shy, offer her from one hand a nubbin of corn, while with the other hand you gently scratch the particular spot in her head mentioned above. In a very short time, whenever you go into their pasture, the whole herd will come to you, to have their heads scratched, and you will soon be satisfied that it is as easy to have them follow you as to resort to driving and loud noise.—*American Cultivator.*



THE PERCHERON.

POLLED CATTLE.

A writer in an exchange says: "No farmer who has owned a head of improved poll cattle will ever again have cattle with horns. A dozen of the polled cattle will drink at the same time from a trough which would accommodate but one animal having horns. The same number will crowd together under a shed for shelter the whole space which one horned animal would consider necessary for its comfort, driving its fellows out. With these polled cattle the farmer and the shipper of stock need have no fear of damage resulting from the goading of horns. There is now a demand from all parts of the country for young bulls of this breed, the progeny from a cross of these on horned cows being for the most part hornless. The bulls are notably quiet."

HOW TO CATCH A HORSE.

If the horse is shy and hard to catch, take finely-grated castor, oils of rhodium and cummin. Keep them in separate bottles, well corked. Put some of the oil of cummin on your hand and approach the horse on the windy side. He will then move toward you. As soon as you can

reach him rub some of the cummin on his nose, give him a little of the castor or anything he likes, and get a few drops of the oil of rhodium on his tongue. After this you can make him do nearly everything you want. Treat him kindly, feed well, handle gently, and your victory is certain.—*Turf, Field and Farm.*

NOTES ON FARM STOCK.

It is nearly time to consider the winter feeding of farm stock; at least this is the month to make all the plans and get everything in order for the cold season that will soon be at hand. The question of winter feeding in all its bearings is an important one. There is a constant outgo of fodder, and the problem is to so govern the expenditure that the best returns may be obtained. Not only must the animals be "kept," but they must be kept well, that the opening of the new year of pasturage may not find them run down, or as it is termed "spring poor." Aside from bringing the stock through in a healthy and vig-

orous condition, there is the manure to be considered. This should be a good dividend upon the winter's outlay, and therefore it should have a place in the plans for winter feeding. It cannot be too strongly urged that the best manure is made under cover. The same system which gives the best protection and care to the animals will insure the most satisfactory returns in the manure from them. Feeding for manure is more and more to be a leading factor in the winter keeping of farm animals. A plenty of the best feed, a free supply of pure water, and warm quarters, are three essentials in profitable winter farming. This does not mean that the animals shall be in the stalls and stables all the time, but it does preclude that out-of-door, straw-stack feeding when the animals must stand in unprotected, shivering groups the whole night through. Sheds—and good ones—will pay for themselves in the better manure

that will be made in them—not to mention the economy in food for the animals thus protected.—*American Agriculturist for November.*

TENDER-FOOTED HORSES.

An old man who has had much experience in handling and dealing in horses for more than half a century, said recently that he had never known a horse to get "tender-footed" that was kept loose in a shed and yard, or in a box stall; that turning round and treading with their forward feet in the manure kept them constantly moist and soft. His theory seemed perfectly reasonable to me. "I have no box stalls, but I use shavings for bedding, and every morning with a large shovel I move the wet shavings from under the horse's front feet, and then the last thing at night cover these with dry shavings for him to lie on." He also remarked that he had never known a flat-footed horse but what was a great worker.

Young cows do not give as rich milk as those of mature age do.

Some of the Maine farmers are coming to the conclusion that more oxen and less horses would be an improvement on the present order of things.

SHEEP AND SWINE.**SHEEP FARMING.**

The special advantages of sheep farming are thus tersely summed up by Professor Brown: "Fewer risks by death; two crops per annum; consolidating and manuring light soils; rich manure at all times; more easily kept on poor pastures; less cost in buildings and winter management; greater returns for money invested."

The limited size of the farms, the absence of any large area adapted for sheep runs, and the necessity for providing fodder for six months in the year, during which the sheep are in the yards, have all tended to discourage sheep farming on a large scale in Ontario. But Ontario is, on the other hand, a country confessedly well adapted to the raising of sheep. The dryness of the atmosphere preserves them from the diseases to which they are most subject, and if such com-

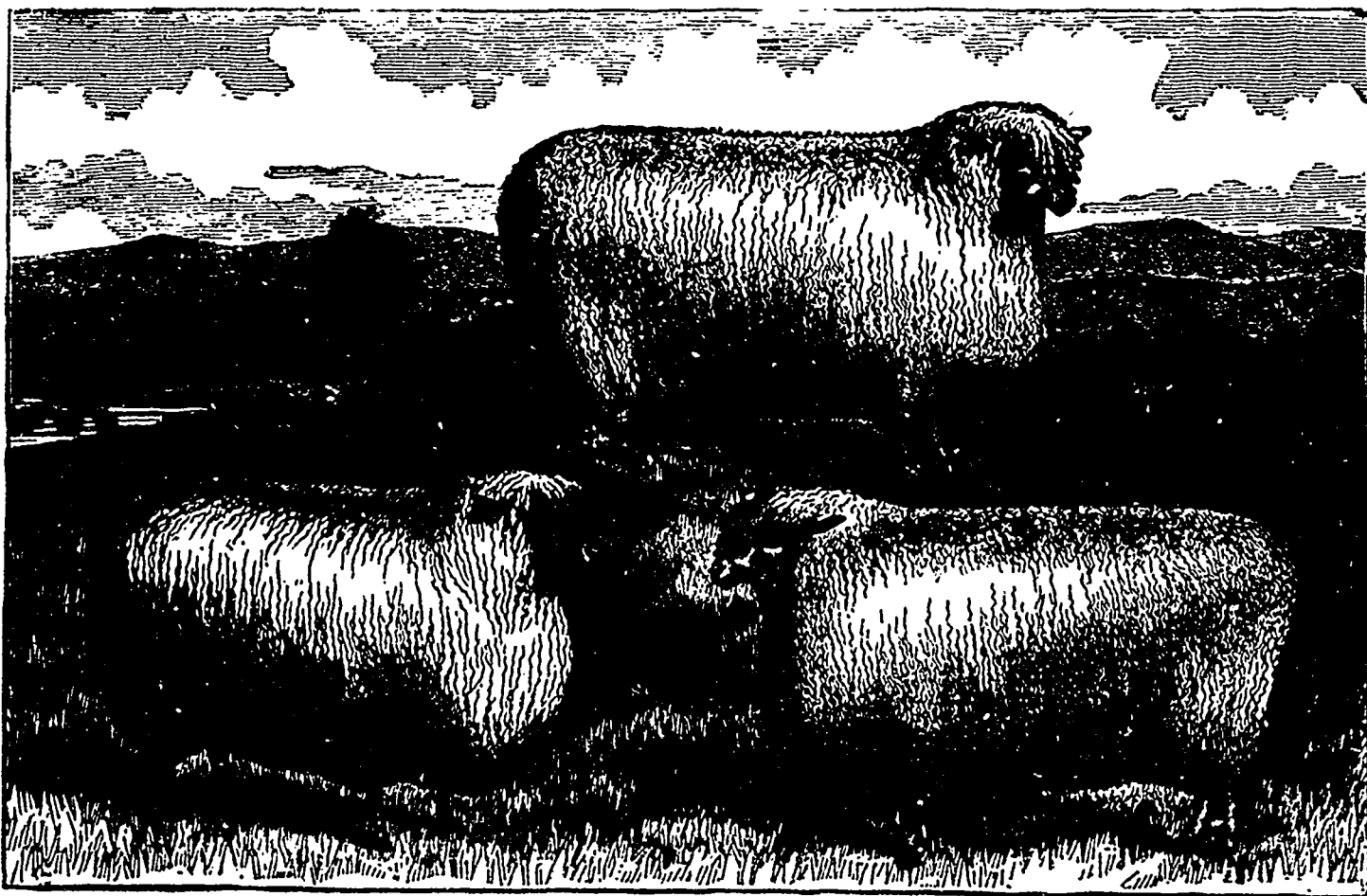
cause the steamship companies charge for sheep at per head, it is better to raise and feed large sheep. In this, however, as in everything else, the demand must ultimately settle the question of production or supply, and it will be the object of the Commissioners to indicate what—according to a fair view of the whole evidence—is the true policy of the Ontario farmer in respect of sheep-raising at this moment.

The sheep trade of Canada, outside the domestic demand, assumes three distinct forms: First, there is the trade in thoroughbred long-wooled sheep with the States; secondly, there is a large trade, mostly in lambs, for butchering purposes, with the States; and lastly, there is the shipping trade in mutton sheep for the British market. Then, for wool, there is for the coarse wools a large demand always from abroad, and a limited demand for local purposes at home, and, recently, an active demand both for home purposes and export for a medium wool, partaking largely of

sheep have their representatives in the group represented in the accompanying illustration, says:—

"The United States has hitherto been our best market for Cotswold sheep. The Kentuckians have been our best customers, and they are very particular about the quality of the wool, making that a speciality, and we have been trying to breed our sheep to suit the taste of that market; and I am satisfied that, in the last ten years, we have made a marked improvement in the quality of the wool. There is a difference in the quality of the wool in different parts of the same sheep. There is a tendency to grosser wool on the thighs. I consider that objectionable. The first place where our Kentucky customers catch hold of a sheep is the thigh, and if they find pretty good wool there they judge that it is good all over the body. . . . We also supply Cotswolds for the Western States—Missouri, Iowa, Illinois, as well as Kentucky."

This evidence is sufficient to show that there is a constant and active demand for both thoroughbred Cotswolds and Leicesters for breeding purposes in the States, with a prospect of the thoroughbred Southdown being also in request.—*Condensed from Report of the Ontario Agricultural Commission.*



COTSWOLDS.

plaints as the rot have ever been known, it has either been in the case of a new importation, or the result of some scandalous negligence. It may be broadly stated that in Ontario sheep are subject to no epidemics, nor, as a rule, to any fatal form of disease. And that Ontario is a most favourable breeding ground for sheep is proved, from the frequent reference in the evidence to the United States as a market for our thoroughbred sheep needed to improve their flocks, and which cannot be advantageously raised on the other side of the border line. The demand abroad for the long close wools, in which a large export trade has been done, while the tweeds and other goods chiefly manufactured in Canada required a wool not profitably grown in this country, was for a long period a strong inducement to the Ontario farmer to cultivate the long-wooled varieties. For mutton, they supplied a large carcase, and mutton was mutton to many people, no matter whether its quality, from an epicure's point of view, was first-class or not. Even today, in spite of the unquestioned preference of the British buyer for Down mutton of a moderate size, people are to be found who argue that, be-

the Down-wool character, and bringing a higher price than the long-wools. The evidence on these respective topics will now be noticed in due order.

FOREIGN DEMAND FOR THOROUGH-BRED SHEEP.

First, as to the American trade in breeding sheep, Mr. Russell, of Richmond Hill, County of York, says:—

"I have been breeding Cotswolds since they first came into Canada, and have taken prizes at the principal shows in Canada for Leicesters, Lincolns, and Cotswolds; but a few years ago I sold off all but the Cotswolds, finding they had better constitutions, and were the most profitable. My principal market is the United States. Last year I sent fifty to the States. In 1875 I sold all my yearling rams, eight of them at an average of \$105 a head. I have sold ewes of my own raising at \$300 per pair."

He adds as follows:—

"A number of Cotswold breeders have been springing up in various parts of the United States, but judging from their success, I am of opinion that the best stock rams for the American continent will be raised along the north shore of Lake Ontario. I do not believe that there is as suitable a soil and climate south of the lake. I do not think the Leicester wool has more lustre than the Cotswold. Of course Cotswold breeders could very soon improve the quality of their fleeces, but the American trade principally demands weight of fleece more than quality, and the profit to the breeder is to raise what is wanted."

Mr. Snell, of Edmonton (Peel), whose fine

CONCERNING SWINE.

A clover field is the place to pasture hogs. They come up in the fall in good prime condition for getting hardened in with corn.

If a good brood sow is rightly kept, the pigs from her will more than pay for her keeping by the sale of some over and above those intended to be kept.

A small early-maturing hog is much more valuable than a larger one, as no more food will be required to raise two good quick-growing ones than it will for a large, but slow, all lard hog.

Brood sows should be fed on slops containing plenty of vegetables. Rich food can be supplied, but it will not do to have it too concentrated. Give all the slops, rather watery, they will eat.

Young pigs will drink cows' milk very soon after they find out where the feed trough is. It should be supplied to them in plenty when the litter is large.

A good many sick animals are cured by too much doctoring.

Pigs are able to consume far more food in proportion to their weight than either sheep or oxen.

BEES AND POULTRY.

FARMERS AS POULTRY KEEPERS.

I have read considerable about the benefit a farmer would derive from keeping standard fowls—some sense and some nonsense. A farmer should keep standard breeds of fowls, because such poultry is more profitable than mongrel stock, and if hens are kept at all, one might just as well keep the best as the worst. But I would advise a farmer to keep out of what is known as the business of breeding fancy fowls. There is money in it—I know this—but not for the average farmer; it isn't in his line—anyone, to make a success of breeding standard fowls for sale as stock and exhibition birds, has a great deal to do besides merely rear the chickens. He must give a great deal of time to them, study the principles of breeding, and know how to, in brief, get his name up so that he can sell his birds after he gets them. Not one farmer in a dozen either can or would do what he must do who would become a rival of our leading fanciers. I don't know as I can make my meaning clear, but I say that while farmers should be poultry fanciers, while it would benefit them and their boys to become interested in breeding poultry to the standard, they are likely to meet with disappointment if they expect to reap a harvest of greenbacks by purchasing a few fine birds, as cheaply as they can, and then breed to sell again. If they pursue such a course just because they like it, I've nothing to say; people can't spend a little money in a more innocent and healthful way than by taking a fancy to thoroughbred fowls, and if they are naturally keen they can make some clean cash out of it, too; but that isn't what I am talking about—farmers who are genuine fanciers, and enjoy poultry breeding as they would any kind of fine stock breeding, should be the last to give it up also, and a farm is no farm without a good stock of good poultry; but that it will pay an ordinary farmer, so far as money is concerned, to breed for fancy points, I dispute most emphatically; it will pay him indirectly, but not in cash. Such poultry breeding is for the mechanic in village or suburb who attends shows, and knows all the ins and outs of "strains," and "breeds" and "breeders," and takes genuine pleasure in rearing, buying and selling premium birds. Our leading fanciers are not farmers; thousands of farmers take a keen interest in fine poultry, but are not known outside of their towns as poultry breeders. As to farmers' wives and children, I should advise them to "go into poultry breeding," both for market and exhibition; take the poultry journals, read them, get into the "fraternity," attend the shows, become fanciers; it will do you good in a hundred ways, and you may turn a few dollars of pocket money from it; therefore do it by all means! But the practical granger, "with hay-seed in his hair," etc., who cares nothing for cows but for the milk they give, nothing for horses but their ability to "pull," nothing for poultry except for its market value—if this sort of an agriculturist asked me if I thought it would pay him to go to keeping standard fowls, as Williams, Felch, Keefer, White, French, Comey and a thousand others do, I should say No, with a big N.—*Patience Pringley, in Poultry Bulletin.* [Patience is right.—Ed. R. C.]

BEE-KEEPING A SUITABLE EMPLOYMENT FOR WOMEN.

The following paper was read before the North American Bee-keepers' Association at its annual meeting in Lexington, Ky., by Mrs. L. Harrison, of Peoria, Ill., herself a practical bee-keeper of considerable experience:

"Bee-keeping, although a laborious employment, demands no great outlay of strength at

one time. It embraces the performance of many little items which require skill and gentleness more than muscle. The hand of woman, from nature, habit and education, has acquired an ease of motion which is agreeable to the sensibilities of bees, and her breath is seldom obnoxious to their olfactories by reason of tobacco or beer.

"Women have demonstrated that the making of hives and surplus boxes is no objection, as they have purchased them in the flat, nailed and painted them. The living of swarms is neither more difficult nor dangerous than the washing of windows or milking. The right time to extract honey, or to put on or take off surplus boxes, requires no more tact or skill to determine than the proper fermentation of bread, or the right temperature of the oven required for baking. She is in her allotted sphere while raising queens and nursing weak colonies, or caring for the honey when off the hive.

"The most powerful argument in view of the suitability of bee-keeping for woman is this: That it is something she can do at home, and not interfere with her domestic duties. Many women of small means have young children depending upon their exertions for support, and remunerative work to be performed at home brings very little in the market of to-day. For instance, the making of overalls at 5 cents a pair, and shirts at 50 cents per dozen. She is compelled to accept less pay than men for the same service performed. We had a friend chosen as principal of a school on account of her efficiency, but was compelled to accept lower wages than her predecessor, who was a man, and dismissed for his incompetency. But we have never found a dealer unscrupulous enough to offer less for a pound of honey because it was produced by a woman."

MARKET YOUR HONEY.

The *Grange Bulletin* gives the following advice for the present month. It is both good and timely, and should be heeded by those having honey to sell:

"This is the month to market your honey. Remember, too, the nicest-looking honey will always bring the highest price. Extracted honey in small packages sells best put up in neat glass jars. For larger packages, 2½, 5 and 10 pounds, use tin pails or cans. If in sections, have them all clean and nice, and packed in a neat shipping crate holding not over 20 lbs. each. Sections should all be scraped clean of propolis. In placing in the shipping crates, unless the comb is well fastened at the bottom, turn the sections top down to allow the honey to stand, rather than to hang on its own weight. Paste on a neat label with your name and location of your apiary. Sell as near home as possible, saving transportation and commission. At least, be sure your nearest town is well supplied."

The cultivation of beet roots for sugar manufacture has not been a success in Quebec. The farmers are quite disgusted with their crops, twelve tons of beets to the acre being the largest yield heard of. It is estimated that Sutton has merely raised enough beets to supply the manufactory for one-half day's work.

A LARGE number of farmers around Paris and in the Blenheim district, who had bought cattle to feed during the winter, have disposed of them again, preferring to sell their turnips at 20 cents per bushel to buyers, who are shipping them to the States. The comparative failure of the crop this year has enhanced the price of turnips nearly 100 per cent., and many believe that under the circumstances more profit can be made by selling than feeding them.

CURRENT NEWS ITEMS.

A BEE-KEEPER'S association has been formed in Listowel, with W. G. Hay at the head of it. They intend keeping a stock of upwards of 300 hives.

THE *Uxbridge Journal* warns the farmers to beware of shoddy pedlars, for they are swarming the country at present. Better come to town and buy from a respectable merchant.

A LARGE quantity of potatoes are daily being shipped from Prince Edward Island to the United States. The export of agricultural produce has given a great impetus to the fall trade of the Island.

MR. THOMAS MURRAY, the enterprising local member for North Renfrew, has started a stock farm at Pembroke, and on Saturday returned from the Whitby neighbourhood with fourteen head of shorthorns purchased there.

MR. GILES H. FOWLER, of Burford, has packed 4,000 barrels of excellent winter apples. He went to Montreal lately to see to the shipment of 1,000 barrels to the old country. Mr. F.'s brand on an apple barrel is a guarantee of excellence.

MR. WM. J. FULTON, of Fort Ellis farm, Truro, N. S., while ploughing, turned up a box of money containing silver and gold. The box is two feet in length, two feet wide, and nine inches deep, and weighed about 300 lbs. It is supposed to have been buried by the early French settlers.

Messrs. MATHESON, the well-known threshers in Zorra township, have threshed for Mr. Alex. Gordon 895 bushels fall wheat in nine hours and ten minutes. This is good work and hard to beat, but Vandy was not surprised at his achievement and remarked "that it was nothing more than he was accustomed to do."

At Martin Britt's barn, in Vespra, the threshers uncovered three chickens which had been there six weeks in a small hole alongside a beam or girt. The chickens must have eaten, as they were nearly twice as big as at the time they were stowed away in the mow. The mystery, however, is that they could have lived so long without drink.

It is astonishing, remarks the *Peterboro' Examiner*, at what a rate cattle and horses are being exported out of the country lately. The farmers will be under the necessity of going into breeding more extensively, or else they will be obliged to reverse the order of things and begin to import. From all parts of the country our exchanges are chronicling weekly the shipment of both horses and cattle.

THE *Huron Expositor* says:—If any man in Canada has any capital to spare, and would like to go into horse breeding, now is his time to do so. All through the summer buyers have been in Canada purchasing horses for the other side until there is almost a dearth of decent animals in the country. But apart from that, the victories of the American horses in England are bound to turn all eyes hitherward, and our people should be prepared to share in the general boom.

MR. J. G. A. WALLACE, of Brighton, proprietor of the "Harbour View Apiary," is an enterprising and successful bee-keeper. Last spring he had but 31 colonies, and during the summer this number was increased to 67, with 8,000 pounds of honey, 1,000 pounds of which was extracted honey, 1,500 section honey, and 500 box-honey. From this it will be seen that he has not only a thorough knowledge of his work, but that the business is a remunerative one. The section, a white honey, he sold for 20 cents per pound, the extracted for 12 cents, and the balance in comb, or box honey, for 15 cents.

Household Hints.

TART, juicy fall apples make good jelly. Boil the juice of the fruit in jelly, making to quite a consistency before adding the sugar. Lay over the top of all jellies a round of white paper dipped in brandy. If mould appears, it takes its seat on the top of the paper.

FISH CAKES.—Any kind of cold fish and mashed potatoes beaten up in a mortar together, taking the bones and skin from the fish. Flavour with pepper, salt, and a little cayenne; mix with the yolk of an egg. Then roll each little cake separately in the white of the egg and bread crumbs; fry them in boiling lard.

FRIED LIVER AND BACON.—Fry the bacon first, then cook the liver very slowly in the fat which comes from it. Make a little gravy with stock or flour and water in the pan, when all the liver is fried, and pour it round the dish. The liver should be cut in slices, and not more than the third of an inch thick.

OLD-FASHIONED BAKED APPLES.—Take juicy apples, pare and core whole; use a large corer. Put side by side in a baking pan and fill up centres with brown sugar, pour into each a little lemon juice, and stick in each a long piece of lemon evenly cut; put enough water in the bottom of the pan to prevent the apples from burning, and bake gently until done.

A GOOD way to make starch is this: dissolve the starch in a little cold water, have water boiling in the tea-kettle, and when the starch is entirely dissolved pour the boiling water over it, stirring it until it is thick; this is all the cooking the starch needs; blue it slightly, and add to it a bit of sperm or clean lard. There is no danger of lumps or of the starch burning, and so being filled with black specks, if prepared in this way; but unless the water is actually boiling when you pour it over the starch, your labour will have been in vain.

ROCK CREAM.—Boil a teacupful of the best rice till quite soft, in new milk sweetened with powdered loaf sugar, and pile it upon a dish; lay on it, in different places, square lumps of either currant jelly or preserved fruit of any kind; beat up the whites of five eggs to a stiff froth, with a little powdered sugar, and flavour with either orange flower water or vanilla; add to this, when beaten very stiff, about a teaspoonful of rich cream, and drop it over the rice, giving it the form of a rock of snow. This will be found to be a very ornamental as well as delicious dish for a supper-table.

ELLEN'S BREAD.—Take two-thirds of a yeast cake dissolved in a little warm water, and two teaspoonsful of sugar. Pour this into three quarts of flour with one teaspoonful of salt added. Mix well with one hand, adding warm water (about one pint), then knead well for twenty minutes, adding flour enough, and no more, to clean the dough from the hands and the pan. Cover with a thick cloth, let it stand all night, and mould out in the morning, not kneading any more than is necessary. Let it stand in pans till light. This fills two long, narrow pans, and makes a set of patty pan rolls. Pans are to be filled half full.

CHARLOTTE RUSSE.—Take half an ounce of gelatine, and put in only just enough warm water to cover it; while this is slowly dissolving take one pint of thick, sweet cream, and whip it to a stiff froth; beat well the white of one egg; after the gelatine is dissolved boil it for two or three minutes, then sweeten and flavour it; when it is about as warm as new milk, add the cream and egg and beat the mixture until it is cold. If the sponge cake over which this is to be turned is baked on a large, round tin which is scalloped around the edge, it adds much to the pretty effect of the dish. Put the cake while warm, to prevent its crumbling, into a round dish, allowing the scallops to show on top; then pour the whipped cream over it.

PLAIN PLUM CAKE.—This is a good school cake, and, if covered with sugar-icing, is rich enough for children's birthday parties. Make two pounds of flour into dough, with two ounces of German yeast and three gills of tepid water. Let it rise for an hour, then work in a pound of dissolved butter, six eggs well beaten, the rind of a lemon, half a small grated nutmeg, a pound of stoned raisins, a pound of currants, and half a pound of candied peel, shredded finely. When all the ingredients are mixed, beat the cake up well, and let it rise in a warm place for an hour, then put it into a greased tin, and bake in a good oven for two hours. If made into more than one cake, it will not take so long to bake. A still plainer cake can be made by using either half the quantity of butter, or of lard, or dripping, and half the number of eggs, and a little less fruit.

PLAIN QUESTIONS.

DO YOU KNOW how to write a good business letter, and the essential points to be kept in view?
DO YOU KNOW how to draw a note of hand?
DO YOU KNOW what is required to make it legal?
DO YOU KNOW the difference between Premium and Discount?
DO YOU KNOW that Merchants have been ruined by not understanding this one simple thing?
DO YOU KNOW the force of Compound Interest?

DO YOU KNOW how to ascertain the rate of Exchange, having sterling or foreign currency given and its equivalent in dollars and cents?
DO YOU KNOW the meaning of the term "General Average"?
DO YOU KNOW how to keep books so as to show your actual gain or loss?
DO YOU KNOW how to change your books from Single to Double Entry?
DO YOU KNOW the responsibilities of partnership?

If you cannot fully answer these questions in the affirmative, do not enter into business, for without such knowledge you cannot transact business intelligently and with that well-grounded confidence which every business man should have in the conduct of his affairs. Enter, therefore, on a course of instruction at the

BRITISH AMERICAN BUSINESS COLLEGE,
112 to 114 King Street West, Toronto.

School re-opens January 3rd. For circulars and information address the Secretary.

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Manager.

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N.B.—We are now prepared to receive orders for our celebrated new white grape, the "Golden Pocklington," perfectly hardy, having stood without protection last winter 32° below zero uninjured, and the vines are now loaded with fruit. Price for two-year vines \$2 each, \$20 per dozen. One-year vines \$1.50 each, \$15 per dozen. Send for circular. Special terms to parties wanting a large number for vineyard.—S. & W.

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

The Rural Canadian.

EDITED BY W. F. CLARKE.

TORONTO, THURSDAY, DECEMBER 1st, 1881.

NOW IS THE TIME.

Many friends in different parts of Ontario are getting up Clubs for the RURAL CANADIAN. They are respectfully urged to push the canvass vigorously during the next two weeks. A day's work now will give better results than a week's later on in the season. Let us hear from you at an early date with largo lists!

MR. JOHNSTON'S LETTER ON THE AGRICULTURAL AND ARTS ASSOCIATION.

We do not at all grudge the space occupied by the above-mentioned communication. It is an able and dispassionate discussion of a highly important subject, and a subject of present and pressing interest. The writer brings to it special qualifications for the task he has undertaken. His long and successful administration as President of the Ontario Agricultural College, the careful study he has given to all matters connected with farming, and the self-denying manner in which he has devoted himself to the attainment of a yet greater fitness for usefulness in the promotion of this branch of our national prosperity, are strong guarantees of his ability and sincerity in his endeavours to put the Association on a better footing. The officials of the Association are dealt with faithfully, yet kindly. Due allowance is made for the hampering circumstances which have militated against the financial success of the Association in the past, and suggestions are foreshadowed for the modification and removal of these circumstances in the future. Evidently there must be action taken by the Provincial Parliament in relation to this matter, and calm discussion will be helpful in this direction. We are thankful to Mr. Johnston for the cordial welcome he gives to THE RURAL CANADIAN, which, while averse to iconoclastic efforts for the destruction of an institution which has done good service to the country, will nevertheless do all in its power to reform abuses, correct mistakes, and promote the dawn of a new era of prosperity.

THE FUTURE OF BRITISH FARMING.

The agricultural situation in Great Britain has formed a topic for voluminous discussion during the past few months. Boiled down, the essential upshot of it all is, that the cost of production must be cheapened if the British farmer is to get a fair livelihood. In no other way can he maintain his ground in the face and teeth of the tremendous competition that sets in from the western world. It would seem that the cost of production cannot be cheapened to any appreciable extent, except by lowering the rents. This is a hard pill for the landlords to swallow, but sooner or later they will have to do it. Free trade, so far as bread and meat are concerned, is an established British institution which cannot be destroyed. So, at the bidding of necessity, which has no laws, rents must come down. It will be a

work of time. Leases will run out, and farms go a-begging. There will be an exodus of tenant farmers to this continent. Some will go to Manitoba and Dakota. Others, more wise, will buy improved farms in the older districts. These will be "more wise," because the class of tenant farmers in Britain is not well adapted to battle with the privations and difficulties of a new country. Such will find things more to their liking in settled parts of this continent, where they can find shops, churches, schools, and society. In all probability it will not be until emigration turns the tables on the landlords that they will yield to the unpleasant necessity of lowering their rent rolls. Tenants must grow scarce and land lie idle for a time before the situation will be accepted, and landowners resolve to make the best of a bad job. Meantime, America will pour her products into the British markets. With good harvests the farmers of this country may expect an era of prosperity. The price of improved farms will go up, and an accession of skilled British agriculturists to our rural population will give an impetus to scientific farming. At first the newly-arrived emigrant will be at some disadvantage owing to ignorance of the peculiarities of this climate, but this difficulty overcome, science will tell. Our impoverished lands will recuperate under the touch of the experienced husbandman, and our native farmers will have to compete with book-learning in a practical form. This will stimulate our people to study the great principles that underlie successful agriculture, and gradually farming as a profession will rise in public estimation. Britain will not suffer in the long run. There is no danger of its losing the agricultural supremacy and prestige which it has acquired. At most there will be but a temporary check inflicted on that great interest, which has been, and will continue to be, the glory and strength of the old country. Inequalities of condition will be gradually smoothed down to a more equitable standard; the lines of demarcation will fade somewhat between class and class, and society, like water, will seek and find a true level. There are some United States agricultural journals that positively gloat over the ruin and decay which they think are coming to the agriculture of Britain, and show unseemly joy at the anticipated collapse of the "bloated aristocracy" of the old world. No doubt, "the wish is father to the thought." But these prophets of evil are doomed to see their predictions fail. There is a good stiff backbone to Great Britain, and though it may have to bend, it will not break under the burden of circumstances. It will soon gain the necessary stiffness to support the load of national obligation which the times impose upon it.

FLESH AND FAT PRODUCERS.

The American Agriculturist makes up from the published analyses of the most eminent agricultural chemists the following table, exhibiting the relative nutritive value of different feeds. It corresponds strictly with the experience of many noted English feeders, and is probably the most trustworthy information yet collected in so compact a form:

	Flesh.	Fat.
Ti tips	1	5
Rutabagas	1	7
Carrots	1	7
Mangolds and kohlrabi	2	8
Straw	3	16
Potatoes	2	17
Brewers' grain	5½	18
Wheat and barley	12	68
Dried brewers' grain	16	70
Earth nut cake	20	40
Beans (English field)	22	46
Linseed	23	92
Rice meal	61	77
Locust beans	7	72

Hay (early cut)	8	50
Millet (seed)	8	76
Buckwheat	9	60
Malt	9	76
Rye	11	72
Oats	12	68
Corn	12	68
Palm nut meal	18	98
Tares (seed)	27½	57
Linseed cake	28	56
Bran and coarse meal stuff	31	54
Rape cake	31	53
Decorticated earth nut cake	39	45
Decorticated cotton seed cake	41	77

It will be seen from the above that cotton-seed meal has no superior as a flesh-former, and that for fattening it is better than every other article of stock feed. In a very short time it has established itself, both in this country and in Europe, as the food for beef cattle and for dairy purposes.

We commence the regular publication of the RURAL CANADIAN on first January next. Another special issue will be published about the 15th inst.

The law requires that every person who takes in a stray animal must notify the township clerk of his municipality of the fact in addition to advertising it, giving as minute a description as possible of the animal. The clerk is required to keep a list of all such animals. Persons failing to comply with this provision of the law, lay themselves subject to a heavy penalty and besides cannot collect expenses for keeping, &c.

The patent right for sharpening scythes swindle is still in operation in the western part of Canada. Two men named Bebee and Ainsley have been arrested. It appears these men have not only been engaged in the above swindle, but have added to their scythe sharpening note business, the more dangerous operation of horse stealing. Farmers should take care not to sign any document purporting to be for the possession of patent rights unless they know the parties to whom signed documents are given. Carelessness in this matter often brings trouble and loss.

THE CANADIAN POULTRY REVIEW is an ably-conducted journal, well worthy of being largely patronized by all who take an interest in the improvement of our breeds of fowls. It is not merely the organ of poultry-fanciers, but is eminently practical, while sufficiently scientific. The principles of good poultry management which it inculcates only need to be generally understood and observed, to increase very largely the profits of the egg crop and the fowl market. Considering, however, that cock-fighting is generally admitted to be a cruel and unmanly sport; also, that it is illegal; is it well that so excellent a periodical should admit American advertisements of "Guaranteed Game Steel Spurs"?

THE National Association of Shorthorn Breeders, which met at Jacksonville, Illinois, Oct. 26, 1881, spent most of its time in discussing matters of pedigree, and endeavouring to establish a standard herd-book, from which there should be no appeal. No definite final action was taken, but there was a general feeling that the whole subject of pedigree needs to be thoroughly overhauled, and put on a better basis. Measures were adopted to prevent the importation of cattle from certain districts at the east, where this disease is known to prevail. The result of these measures is stated in another paragraph. Hon. M. H. Cochrane, of Compton, Quebec, was appointed second Vice-president of the Association.

A RECENT American magazine contains an editorial advocating schools for teaching politics. No doubt some popular instruction in the science of government and the principles of political economy would be of public benefit. But there

is far greater need of schools of agriculture. As a stepping-stone toward those, the elementary principles of agriculture should be taught in our common schools. This branch of popular education cannot be much longer neglected. Agriculture lies at the foundation of our national prosperity, and must be recognized in our system of public instruction. There would be less need then of schools for teaching politics, for well-educated farmers would naturally read and think for themselves on the questions of the day.

MR. SECOMILLER, whose farm of 165 acres is situated about a mile and a half from Goderich, is said to be the largest fruit-grower in the County of Huron. Twenty-five acres of the farm are devoted to the culture of various fruits, comprising 400 peach trees, 900 plum trees, a large apple orchard, 250 pear trees, 800 grape vines, four acres of strawberries, some black currants, and an acre of raspberries. All are reported as producing a remunerative crop except the plums, of which the 900 trees yielded only one bushel in all. For this failure the curculio is held responsible. The proprietor is reported as saying: "I would give twenty-five cents a tree to any man who would destroy the curculio and save the fruit on the trees. I have tried jarring and smoking, but it's rather discouraging. If I could conquer the curculio, plums would be the best paying crop to raise. They would yield largely, and they hardly miss a year bearing."

The following section of the Act for the Protection of Game, etc., should be cut out and preserved by sportsmen: None of the animals or birds hereinafter mentioned shall be hunted, taken or killed within the periods hereinafter limited: (1) Deer, elk, moose, reindeer or cariboo, between the fifteenth day of December and the first day of October; (2) grouse, pheasants, prairie fowl, or partridge, between the first day of January and the first day of September; (3) wild turkey or quail, between the first day of January and the first day of October; (4) woodcock, between the first day of January and the first day of August; (5) snipe, between the first day of January and the fifteenth day of August; (6) water fowl known as mallard, grey duck, wood or summer duck, between the first day of January and the fifteenth day of August; (7) other ducks, swans, or geese, between the first day of May and the fifteenth day of August; (8) hares, between the first day of March and the first day of September.

PRESIDENT T. C. ABBOTT, of the Michigan State Agricultural College, points out very forcibly in the *Christian Union* some of the many good results to be expected from Agricultural Colleges. He shows that a higher appreciation of the farmer's calling is one of the most important of these results. He does not believe that it is the drudgery of farming so much as the want of education in connection with it that has brought this occupation into disrepute. A city surgeon of large practice works harder than the farmer; so does a sculptor; so does a chemist. Farmers have lowered their own business by neglecting intellectual culture. An occupation that is thought to require but little brains will command but little respect. The larger numbers of young men who become lawyers and doctors take only about two years of special study in addition to a good common school education. Yet their business is called a profession and thought highly of. When farmers as a class are similarly educated, farming will count as a profession, because it will in reality be one. Farmers fix their own status, and can raise it if they will.

THE AGRICULTURAL AND ARTS ASSOCIATION.

I.—ITS FINANCIAL MANAGEMENT.

MR. EDITOR:—Allow me, before saying anything else, to express my pleasure at the fair face of the newcomer which has made its appearance amongst the purely agricultural papers on my study table. Previously, but two—*The Canadian Farmer* and the *Farmer's Advocate*—could this rich agricultural province place there, and though both were excellent, yet surely there must be room amongst our two hundred thousand farmers for double that number. Heartily then do I wish you *bon voyage*. And, in compliance with your expressed desire that my good wishes should take the tangible shape of a paper or two on some subject pertaining to my old occupation, I send you this on the above subject. As a good deal has been said, during the late Exhibition season, about the financial management and future existence of the Provincial Association; as a large proportion of your readers take an interest in that body; and as many of them are, I am assured, unable to form an intelligent opinion on the questions at issue, from the want of reliable and dispassionate data on which to form it, I will, with your permission, in this and another letter attempt to supply that want. I hope neither to attack nor defend, but simply and candidly to state. In taking up the first of the two questions, it would be as unprofitable as it would be impertinent for me simply to give what the auditors have already done—a summary of the receipts and disbursements of the Association; but I shall place before your readers a comparative statement of the income and expenditure of the *Toronto Industrial Exhibition Association* and the Provincial Association for the last year, 1880. In that year the Provincial was held in Hamilton, and it was open for the same length of time as the Industrial in Toronto. Doubtless there were certain circumstances which militated against the Provincial, but on the whole no fairer comparison can be obtained. After making the statement in a couple of tables, I will give all necessary explanations thereon, point out a few facts evident on the face of them, and lastly, draw some conclusions in the shape of reasons and remedies therefrom. The following, then, are the receipts and expenditures of each:—

I.—RECEIPTS FOR 1880.

Industrial.	
1. Balance from 1879	\$ 9 62
2. Subscriptions	1595 00
3. Entry fee and space account	5042 51
4. Admission fee	24800 50
5. Privileges on grounds (stands, etc.)	3348 00

Total Receipts. \$34795 63

Provincial.	
1. Balance from 1879	\$ 1075 42
2. Donations and refunds	587 00
3. Members' fees	1626 50
4. Admission fees	10764 09
5. Privileges on grounds (stands, etc.)	1504 60

Analogous Receipts..... \$15557 61

6. Interest on deposits and rents	1096 81
7. Registration fees and Sales (Herd Book) ..	1230 82
8. Provincial grant	10000 00
9. Loan on real estate	5000 00

(a) Cross entry..... 32884 74
\$225 97

Total Receipts..... \$33110 74

II.—EXPENDITURES (MAINTENANCE) FOR 1880.

Industrial.	
1. Prizes	\$22455 24
2. Exhibition expenses (solely)	6765 21
3. Printing, postage and stationery	1817 59
4. Salaries	600 00

\$31638 04

Provincial.	
1. Prizes	\$18476 50
2. Exhibition expenses (solely)	7146 94
3. Printing, postage and stationery	2276 03
4. Salaries	2555 00

\$25454 47

5. Expenses of Council and its Committees ..	8941 20
6. Office expenses and insurances	266 14
7. Herd Book expenses	1216 79
8. Grant to Veterinary College	680 00
9. Examination of Prize Farms	106 05

\$80918 06

(a) Capital account..... 805 00
(b) Cross entry..... 226 97

\$31444 02

I. EXPLANATIONS.—These tables are almost self-explanatory. In each table are placed those receipts and expenditures of the Provincial which are purely for Exhibition purposes, along with the analogous or identical items of the Industrial. In the first table, the second items of each are strictly identical—both being gifts to the respective Associations. The third are also analogous; for whereas in the Provincial, exhibitors become members and have the privilege of entry, in the Industrial they are charged according to the number of their exhibits, or the amount of space occupied by them. All other items in the first table explain themselves.

In the second table, the first four items of each are absolutely identical. Those under the heading "Industrial," correspond with the books of the Industrial Association, which are plain and business-like, those under the heading "Provincial," do not correspond with the auditors' report of the Provincial Association, which is neither. Finding under the heading of "Exhibition expenses," items for "council expenses," "travelling expenses," "examination of prize farms," etc., and under that of "Miscellaneous"—amounting in all to the preposterous sum of \$1,289.84—a mixed medley of items, which should have been properly classified under their appropriate headings, I have been obliged to reconstruct the arrangement into that of the second part of Table II., which may therefore require a little explanation. The second item contains the expenses of the Exhibition and nothing else. As the directors of the Industrial are paid nothing, all expenses of the Council of the Provincial are, for the purposes of a fair comparison, eliminated. One-half the cost of postage and stationery, the salary of Mr. Denison, and the cost of printing it, have been charged to the Herd Book; and in this way items Nos. 3, 4 and 9 are changed from those in the auditors' abstract. One-third of item No. 5 belongs properly, it seems, to 1879; and item No. (a) covers some permanent repairs made to the building owned by the Association. So much for explanations, but, before making any general remarks, it might be well in passing to suggest to those having the matter in charge, the propriety of having every voucher properly endorsed and classified, that the auditors' abstract may be as thoroughly reliable as the financial statement is absolutely correct.

II. REMARKS.—1. From the two tables it will be seen, that on the operations of the whole year the Industrial cleared \$3,147.97, which with the small balance on hand they used in improving their buildings; the Provincial lost \$4,409.07, which they met by using the balance from 1879, and borrowing \$5,000 on their assets.

2. But the comparison is scarcely fair, for a glance at the tables will show even the uninitiated reader that the Agricultural and Arts Association, unlike all district ones such as the Industrial, exists for other purposes than simply holding an annual exhibition. What those purposes are is clearly stated by the Act creating it, but they may practically be summed up in the following list:—

- A. Exhibition Purposes.
- B. Non-Exhibition Purposes.
 1. Control of a Herd Book.
 2. Control of a Veterinary College.
 3. Control of Provincial Ploughing Matches.
 4. Examination of Farms and Essays for Prizes.

5. Miscellaneous duties referred to them, principally in connection with the Entomological, Fruit Growers', and Dairymen's Associations.

3. *B. Non-Exhibition Purposes.*—So far as these are concerned, the financial management cannot be impugned. The Herd Book is a financial success. For 1880 the receipts were \$1,230.32, and the expenditures, including Mr. Denison's salary, half the total expenses of postage and stationery, and its own printing, \$1,215.79. In 1879 the receipts were \$1,697.90, and, on the same basis, the expenditures \$1,409.03. The office expenses, though high in 1880, are yet not extravagant, and the insurances are reasonable. The sum of \$106.05 is a very small one wherewith to pay the travelling expenses of the two gentlemen who ran over half a dozen counties inspecting prize farms; whilst the value of the essays as contributions to our Canadian agricultural literature is out of all proportion to the sums given in prizes.

4. *A. Exhibition Purposes.*—Here the financial management has not been successful. By the tables given, it will be seen that on the Exhibition of 1880, as a financial speculation, the Industrial, paying \$22,500 in prizes, cleared \$3,000, whilst the Provincial, paying \$13,500 in prizes, lost in round numbers \$10,000. And this is not counting a cent for Council expenses. On the same basis, the loss in 1879 at Ottawa was \$13,277.49, and at Toronto in 1878 it was \$3,512.55. And the basis is quite equitable, for it is identically that on which all District Exhibitions have to be managed.

5. *C. Council Expenses.*—By referring to the second table, those will be seen to be, for 1880, the sum of \$3,341.20, but of that amount \$1,257.40 is entered as belonging to 1879, leaving \$2,083.80 as the expense for 1880. In 1879, those expenses, adding in the above amount, were \$4,294.06; in 1878, \$4,129.50; and in 1877, \$2,344.30. The latter year was the first under "The Agricultural and Arts Act."

III. REASONS AND REMEDIES.—Your space and my time will permit me but to indicate these. So far as *B. Non-Exhibition Purposes* are concerned, no fault can reasonably be found; but financial reconstruction is required, it will be seen, in *A. Exhibition Purposes* and *C. Council Expenses*. The problem has been faced by the Council of the Association, but the root of the matter has not been reached by them. Let us glance at the factors of the problem. Looking at Table I. it will be noticed that the receipts of the Industrial are far greater than those of the Provincial. Now, whilst the dignity and special ends of the Provincial would not perhaps allow the Association to use all the means which are used by the Industrial to draw, yet it is evident more must be done in that direction than has formerly been attempted, whilst the system of free entry to all members who are exhibitors needs careful consideration. Examining Table II., it will be seen that *B. Exhibition Purposes* includes the four items of "Prizes," "Exhibition Expenses," "Printing, etc.," and "Salaries." Now, it is unfair to compare the two as has been done, and say that to pay \$22,445.24 in prizes cost the Industrial \$2,182.80, whilst to pay \$13,476.50 cost the Provincial \$11,997.97; or, to pay \$1.00 in prizes cost the Industrial 40 cents, whilst the payment of a similar sum cost the Provincial 90 cents. The Exhibitions are about the same size; the divisions, departments, classes, and entries are about the same in the two; there are almost as many assistants required by the one as the other, and it costs no more to write a cheque for \$25 than one for \$15. Still, in size, number, and economy, the balance, small though it be, is in favour of the Industrial; and we must therefore proceed to examine the items mentioned under the heading "Provincial." This part has already been this year handled, I understand, by a Committee of

the Council. The first item—"Prizes"—will not stand any reduction, ought indeed to be increased. The second is mainly made up, as all Exhibition *habitués* know, of the expenses incurred for the services of gatekeepers, caretakers, judges, and secretary's and treasurer's assistants. The same Committee claim that these have been brought down to the lowest point compatible with efficiency. The report of 1881 will show. It should, perhaps, in all fairness here be stated that these expenses show higher in 1880 than in any previous year, the sum of \$1,100 being paid in Hamilton for motive power. In the meantime, the questions of experts for judges, and the propriety of caretakers, etc., being selected from the district in which the Exhibition may be held, are worthy of consideration. "Printing, etc.," cannot well be decreased, for advertising, etc., pays here as elsewhere. Some special contract must have been paid in 1880, as this item on the basis already explained was in 1879 but \$1,723.38; \$1,634.38 in 1878; and \$1,428.92 in 1877. "Salaries, etc.," is an item which has this year been decreased by some \$700. Seeing that the Treasurer gives bonds for \$25,000, which from a guarantee company at 1½ per cent. are worth \$375 per annum, it may be said that Mr. Graham, receiving \$400, now gives his services, like the treasurers of the District Exhibitions, gratuitously. A permanent secretary who is a responsible man cannot be asked to live in Toronto on less than \$1,200 per annum, and from many years' acquaintance with the new secretary, who is both able and efficient, I am sure he is worth more than that sum. But there is not sufficient for a permanent secretary to do. I will take the liberty, in considering the question of the existence of the Association, to point out what in my opinion should be done to increase his work, so that not more than half his salary should be charged to the Exhibition, even should it be \$2,000 per annum. On the whole, we are assured that "Exhibition expenses" will be lower this year than ever—lower than those of the Industrial. As I have said, the reports of 1881 will show, but the effort in the direction of economy is worthy of encouragement.

Lastly, there are *C. Council Expenses*—the expense of keeping up the Council of the Agricultural and Arts Association. This matter has likewise been attended to by the Committee mentioned. The members are now paid their travelling expenses at eight cents a mile one way, and \$3 a day for each day actually in session. They are in session three times a year, and during the whole time of the Annual Exhibition. Certainly the amount individually received cannot begin to pay the members for leaving their business to attend to the work of the Association, and hence their chagrin at finding their Exhibition not as certain a financial success as others must be greater. But there are far too many members in the Council for the work there is to do. There are now 27 in all—13 elective and 14 *ex officio*. The idea of a Board of 27 men, whose expenses have to be paid and service at least indemnified, handling an Exhibition that can compete financially with any one managed by a few directors working *con amore* for the good of a particular district, and giving their time and services gratuitously, is simply preposterous nonsense. Doubtless every man of the 27 has done his best to help on the work of the Association, but there is no necessity for 27 men to do it. Their number should be lessened, and that can only be done by an amendment to the *Agriculture and Arts Act*.

In conclusion, even their best friends must acknowledge that the financial management of the Agricultural and Arts Association has not been an unqualified success. An important cause for that want of success has been, it is said, the failure of receipts owing to the growth of District Exhibitions. But even then it is evident, from the con-

sideration of the subject in this letter, that there has been also wanting that fresh vigour and vigilant economy which alone can make financial management successful. It has arisen, doubtless, simply from want of attention to causes; and now that a movement has been made in the right direction, it is to be hoped that it will be as thorough and complete as the nature of the case requires. Of course, it must never be forgotten that the object for which the Provincial Association holds an Annual Exhibition is, not that it may be a paying speculation, but that the agriculturo of the particular district in which it is held may, by the example, rivalry, and emulation thereby awakened, be greatly stimulated and improved. But whilst this is being done, there is no reason, if an amendment to the Act be obtained, and vigour and a spirit of economy are brought into active exercise in increasing the receipts and decreasing the expenditure of management in the ways indicated, why the Provincial Exhibition should not be carried out, if not as a great financial success, yet in such a way that the loss certain to be met with in some sections in which it must be held, should be almost if not altogether counterbalanced by the gain obtained by it in others more fertile, more populous, and, agriculturally speaking, more advanced.

There are many in the Province, however, who assert that this is impossible, that the good which the Provincial has in the past accomplished is now being more effectually done by the District Exhibitions, that the necessity for itself as for its existence has gone, and that, as the speediest way to the abolition of the Association, the Legislature should withdraw from it the Provincial grant. But, as I have already, Mr. Editor, transgressed altogether too far on your space and good-nature, I will reserve the consideration of this question for a future communication, and subscribe myself,

Yours faithfully,

WM. JOHNSON.

Toronto, Oct. 14th, 1881.

MR. ROBT. STEWART, while at work on his farm just outside of the village of Hastings one day last week, unearthed an elk's antler of an enormous size, its length in a straight line being three feet four inches, the base measuring 10¼ inches in circumference.

When putting up his stove for winter a Colborne farmer found a potato plant of vigorous growth in the iron heater. By some accident a potato was thrown into it in the spring, and sprouted in the novel "patch." The little "murphies" were formed at the root, and looked rather odd growing in the air—there being no soil.

THE medals of the Ontario Agricultural and Arts Association for the best managed farms in District No. 2, comprising the Counties of Essex, Kent, Lambton, Elgin, Middlesex, and Oxford, were awarded as follows for the present year: Gold medal, William Donaldson, North Oxford; 1st silver medal, James Fisher, East Middlesex; 2nd silver medal, Alex. Dolson, East Kent; bronze medal, James Smith, North Middlesex; bronze medal, T. Parks, South Essex; bronze medal, James Smyth, East Kent.

HENRY G. VENNOR writes: "I predict for Great Britain a very severe winter, preceded by a cold, wet autumn. This cold weather will set in unusually early, and the Clyde, Thames and other rivers are likely to become firmly ice-locked. The heavy snow-falls this year bid fair to keep on the other side of the Atlantic. On this side the winter is likely to be, to a very considerable degree, open and mild, but between the periods there will in all probability be a few brief but intensely cold "dips," the first of these probably occurring toward the close of November, and the entry of December."

GARDEN AND ORCHARD.*A DAY IN THE "GARDEN CITY."*

If there is a city on this continent, or any other, that deserves the above name, it is Rochester, N.Y. It is doubtful if there is a city anywhere in the world that has so many pretty homes in it. The people seem to vie with each other in keeping their gardens neat. There is an almost total absence of rows or terraces of houses. Even double houses are rare. It seems as though every householder coveted a little horticultural domain of his own, and had secured it. Some of these domains, of course, are extensive. On the avenues, where wealth has congregated, there are spacious lawns and gardens; that is the case in all cities. But the beauty of this city is, that the smaller and quite unpretentious residences have surroundings of tastefulness and beauty which many palatial mansions in other cities cannot boast.

This is no doubt largely owing to the fact that Rochester has long been a sort of centre for such businesses as tend to develop the popular taste in the direction indicated. Some of the finest nurseries on this continent are located here. James Vick, the prince of living seedsmen and florists, has long resided here, and built up what is probably the largest business of the kind in the world. With extensive nurseries enviroing the city, each having handsome specimen grounds, with roses, tulips, asters, lilies and multitudinous other flowers blooming by the acre, as they do literally in Vick's extensive grounds, it would be strange, indeed, if the people at large did not catch the spirit of horticultural enterprise which is busy all around them, and "in their very midst," as the old-time phrase has it.

The well-known firm of Elwanger & Barry has the largest nursery here, and it is probably the most extensive in the United States, comprising, as it does, 500 acres or more. The specimen grounds, which are kept in the finest possible order, form virtually a public park, and there is this feature about it, that whereas most public parks contain only ordinary specimens of the commoner trees and shrubs, this is stocked with the best specimens of the choicest varieties, and forms an interesting *arboretum* which will well repay attentive study. A person with an eye for the beautiful could spend a considerable time in the contemplation of not a few single specimens, and feel well paid for so doing. An hour or so employed in hurriedly looking at such a place as this great nursery is simply tantamounting.

There are several other nurseries here that well repay a visit. I had but a hasty glance at those of H. E. Hooker, W. S. Little, Gould Bros., Frost & Co., which are the leading ones; but, besides these, there are a large number of smaller concerns. In addition to the nurserymen, there are dealers in nursery stock, who obtain the best plants and scions from all parts of the world, and employ skilled practical nurserymen to grow them to a saleable size for them. Prominent among these are Chase Bros. and Geo. A. Stone, of the firm of Morris, Stone & Wellington, well known in Canada. Their packing grounds present a lively spectacle, with some one hundred and fifty men hard at work in each of them putting up the fall orders.

I, of course, visited the mammoth seed establishment and grounds of Mr. Vick. Although the genial proprietor was absent, he was well represented by his right-hand man and general manager, Mr. Fuller. This is a vast concern. A more complete establishment could hardly be imagined for the purpose intended. Everything is done on the premises, even to the printing and despatching of mails. In fact there is a United States post-office located in this building for the

delivery and despatch of the mails received and made up here. In the busy season there are sometimes from 2,500 to 3,000 letters a day for Mr. Vick, most of them containing money or money orders. During the flush times, two men are constantly employed opening letters and taking care of the remittances contained in them.

Mr. John Charlton, a practical nurseryman, who works only a few acres of land, not far from Vick's place, is propagating for Mr. Pocklington, of Sandy Hill, N.Y., the now famous white grape which bears his name; and the best item in my day's work or pastime—it was both—consisted of a critical inspection of the plants and fruit. A bunch of the Pocklington was sent me from the Provincial Fair at London, where it was on exhibition. My first impression on opening the paper box that contained it was that so fine a bunch must have been raised under glass. This impression was not lessened when I ate the berries. A feeling of incredulity was left, which was not completely dissipated until I saw and tasted the clusters actually growing in Mr. Charlton's open grounds. The readers of the *Advertiser* have often been cautioned not to be carried away with nursery novelties, but to wait for thorough testing. Well, I deliberately let off the brakes from the Pocklington, and say to all who take any interest in grape culture, get it without delay. On an eighty-foot trellis of vines, only set out twenty-eight months, and from which many fine specimen bunches have been culled for the fall exhibitions now past, there still remained such a crop as I never saw before on vines of the same age. I have been considerably around among vineyards, nurseries and private gardens, but this display of Pocklingtons, both as to quantity and quality of fruit, far excels anything I have ever witnessed. These young vines were on the trellis last winter, one of the severest on record, yet slender twigs were laden with the choicest fruit. This one fact speaks volumes. The Concord and other varieties were growing side by side with them, but it far surpassed them all in every quality that can recommend a good out-door grape. Almost the only objection I was previously inclined to think might justly lie against the Pocklington was completely disproved by a personal inspection of it. I refer to an alleged tendency of the berries to drop. It will be admitted that by October 12, a grape that can be depended upon to ripen in this climate must be dead ripe. Well, I shook the clusters roughly, and am free to say that the berries are no more inclined to drop than any other out-door variety I am acquainted with. On the whole, I consider this grape the most valuable addition to our list which has been made since the advent of the Concord. It ripens a little earlier than that well-known variety, and its rich, golden colour makes it highly attractive. I am glad to add my personal testimony to that of such high Pomological authorities as Hon. M. P. Wilder, of Boston; C. W. Campbell, of Delaware, Ohio; Hubbard, of Fredonia, and Hooker, of Rochester, N. Y., in commendation of a grape which I hope to see largely cultivated in every part of Canada that can ripen a Concord. I have two Pocklingtons in my own garden, and only wish I had two dozen. —*Canadian Rural Editorial Correspondence of Western Advertiser.*

CHIP DIRT FOR TREES.

The great value of "chip dirt" for spreading around young and newly-set fruit trees, imparting to them double vigour in growth, is simply the benefit derived from good mulching. Decayed chips, leaf-mould and dried muck are all quite similar in their nature, and as they tend strongly to hold the moisture in the soil below, and cannot form a crust on the surface, they are well fitted

for the purpose; but as planters generally neglect this stirring, or perform it in an inefficient manner, while the action of the decayed vegetable matter cannot be hurt by neglect, it has a special advantage over other modes of treating the young trees.

LATE AUTUMN GARDEN WORK.

The question of cold frames is not sufficiently understood, and a word upon it is important at this time. They are constructed much in the same way as hot-beds, though the purpose they serve is somewhat different. A hot-bed is a frame with sash, in which manure is placed and covered with soil. The heat from the fermenting manure and the confined air of the frames force the young plants into a vigorous growth. The cold frame is also a frame with sash, but not furnished with bottom heat produced by the manure, and the plants are placed in it simply to be protected from severe cold and sudden changes in the weather. Cold frames are to preserve an even temperature, and one that plants like lettuce and cabbage can bear throughout the winter months. The frames may be constructed at a trifling cost, using plank twelve inches wide for the back and one eight inches wide for the front, placed as far apart as the length of the sashes used. By the aid of these frames an early stock may be gained of these vegetables, the market value of which depends greatly upon their coming as quickly after spring opens as possible. It is the first man in the market that gets his own price, and the last one must take whatever he can get for his labour. Many more cold frames could be used throughout the country with profit.

MORAL EFFECTS OF THE GARDEN.

We recommend to all women who are fortunate enough to have a piece of land at their command to cultivate a vegetable garden. The culture of strawberries, raspberries, blackberries, gooseberries, currant and garden vegetables is as delightful and profitable as anything in which a woman can be engaged in. She may sprinkle her garden well with flowers. All the better for that. A snowball in this corner, and a rose in that, a dahlia bed there and a moss border here, will not be out of place. Only let the substantial and useful constitute the chief part. A touch of the ornate, like a ribbon on a good bonnet, is not in the least objectionable. In all the schools study botany. It is healthful, pleasing and useful. The principles of horticulture are the principles of botany put into practice. Farmers study agriculture, why should not their wives and daughters study horticulture? The employment is both healthful and pleasant. What woman cannot raise beets, tomatoes, melons, onions, lettuce, and furnish her own table with them? What woman cannot plant a raspberry bush, or currant, or gooseberry, and tend it well? The experiment is both pleasing and profitable.

A CORRESPONDENT of the *Country Gentleman* says that the proper way to eradicate those troublesome weeds, wild carrot and oxeye daisy, is thorough cultivation of the soil. Both plants, with man's permission, will take possession of neglected spots, but have no place—and seem to desire none—in course of good farming.

AN apple tree should under no circumstances be trimmed when frozen. Cut two limbs from the same tree, of equal size, one in February, when the tree is frozen, and the other the following June, and the one cut in June will heal more and better during the season than the one cut in February. The best time to trim apple trees is from June to August.

HOME CIRCLE.

CHAT WITH MOTHERS.

In the management of your little ones nobody doubts your love, nobody doubts your readiness to sacrifice yourselves for them; but your methods, the wisdom of your service, may often justly be questioned.

At this time I ask your attention to a suggestion or two in regard to your methods of feeding your babies. You know how vital *regularity* is with us grown-up people. We may take the plainest food, and in moderate quantities; if no attention be paid to times and seasons, our digestion will soon be deranged. A man may eat nothing but beef and stale bread—the two best articles of food with which we are acquainted—and he may take them in proper quantities, but in a month he will have dyspepsia, if he constantly changes the hours of his meals. It is not the kind of food we eat at the railroad stations, but the irregularity of the hours of eating, which so deranges the stomach.

Now, we all know this to be true of ourselves—grown-up, matured, tough people; we believe it to rest upon a physiological law. And in view of this law let us consider how you feed your baby. You put it to your breast whenever it is uneasy, no matter what makes it cry; if it is hungry, or cold, or has a pin stuck in its back, or is sunfited and has the colic—no matter what may be the cause of its worrying or crying, you treat it with the same remedy—a dose of milk. The little thing does not know that milk is bad for it, and so it goes on sucking. It has learned to do but one thing—to suck; and in its eagerness to get relief, it will do that thing fifty times a day. In this way it is made feverish and thirsty. Its little pulse will run up to a very high rate. It is suffering with thirst. Like all creatures with thirst, it needs water. Nothing could be worse than milk. It is poison even to a strong man with a fever. What do you give your baby with a fever? One thing, and one thing only, and that is milk. Milk, milk, is the food and drink of every baby, given to it five, ten, twenty, or fifty times a day, just as it happens. At night it is coaxed to dine every time it wakes up.

A baby six to twelve months old should be nursed about eight o'clock in the morning, and it should have time to get all it wants. Every three hours till bed-time, or nine o'clock at night, it should have a good meal, which should be given with perfect regularity. During the night, nothing whatever. In a month the baby will not only become accustomed to this, but on this system the little chap will flourish as he never did before.

More than half the stomach and bowel diseases, fevers, and fits from which babies suffer and die, come from irregularity and excess in feeding them.—*Dr. D. Lewis.*

A HUSBAND AND FATHER.

A young man and his wife were preparing to attend a Christmas party at the house of a friend some miles distant.

"Henry, my dear husband, don't drink too much at the party to-day; you will promise me, won't you?" said she, putting her hand upon his brow, and raising her eyes to his face with a pleading glance.

"No, Millie, I will not; you may trust me."

And he wrapped his infant boy in a soft blanket, and they proceeded.

The horses were soon prancing over the turf, and pleasant conversation beguiled the way.

"Now, don't forget your promise," whispered the young wife, as she passed up the steps.

Poor thing! She was the wife of a man who loved to look upon the wine when it was red. But his love for his wife and babe, whom they both idolized, kept him back, and it was not often that he joined in the bacchanalian revelries.

The party passed off pleasantly, the time for departing drew near, and the wife descended from the upper chamber to join her husband. A pang shot through the trusting heart as she met him, for he was intoxicated—he had broken his promise.

Silently they rode homeward, save when the drunken man would break into snatches of song or unmeaning laughter. But the wife rode on, her babe pressed closely on her grieved heart.

"Give me the babe, Millie, I can't trust you with him," said he, as they approached a dark and somewhat swollen stream, which they had to ford.

After some hesitation, she resigned her first-born, her darling babe, closely wrapped in the great blanket, to his arms. Over the dark waters the noble steed safely bore them, and when they reached the bank the mother asked for the child.

With much care and tenderness he placed the bundle in her arms, but when she clasped it to her bosom no babe was there! It had slipped from the blanket, and the drunken father knew it no.

A wild shriek from the mother crossed him, and he turned just in time to see the little rosy face rise one moment above the dark waves, then sink forever.

What a spectacle! the idol of his heart gone—gone forever! and that, too, by his own intemperance. The anguish of the mother and the remorse of the father are better imagined than described.

THE PRIME OF LIFE.

Between the ages of forty-five and sixty, a man who has properly regulated himself may be considered in the prime of life. His matured strength of constitution renders him almost impervious to an attack of disease, and experience has given soundness to his judgment. His mind is resolute, firm, and equal; all his functions are in the highest order; he assumes mastery over his business; builds up a competence on the foundation he has laid in early manhood, and passes through a period of life attended by many gratifications. Having gone over a year or two over sixty, he arrives at a stand-still. But aghast! this is the viaduct called

the turn of life, which, if crossed in safety, leads to the valley of "old age," round which the river winds, and then beyond, without boat or causeway, to effect his passage. The bridge is, however, constructed of fragile material, and it depends how it is trodden, whether it bend or break. Gout and apoplexy are also in the vicinity to waylay the traveller, and thrust him from the pass; but let him gird up his loins and provide himself with a fitter staff, and he may trudge on in safety and with perfect composure. To quit metaphor, "the turn of life" is a turn either into a prolonged walk or into the grave. The system and powers having reached the utmost expansion, now begin either to close like a flower at sunset or break down at once. One injudicious stimulant, a single fatal excitement, may force it beyond its strength, while a careful supply of props and the withdrawal of all that tends to force a plant will sustain it in beauty and vigour until night has entirely set in.

FARMER JOHN.

"If I'd nothing to do," said Farmer John,
"To fret or to bother me—
Were I but rid of this mountain of work,
What a good man I could be!

"The pigs get out, and the cows get in,
Where they have no right to be;
And the weeds in the garden and the corn—
Why they fairly frighten me.

"It worries me out of temper quite,
And well-nigh out of my head.
What a curse it is that a man must toil
Like this for his daily bread!"

But Farmer John he broke his leg,
And was kept for many a week
A helpless man and an idle man—
Was he therefore mild and meek

Nay; what with the pain, and what with the fret
Of sitting with nothing to do—
And the farm work botched with a shiftless hand,
He got very cross and blue.

He scolded the children and cuffed the dog
That fawned about his knee;
And snarled at his wife, though she was kind
And patient as wife could be.

He grumbled, and whined, and fretted, and fumed,
The whole of the long day through.
"Twill ruin me quite," cried Farmer John,
"To sit here with nothing to do!"

His hurt got well, and he went to work,
And a busier man than he.
A happier man, or a pleasanter man,
You never would wish to see.

The pigs got out, and he drove them back,
Whistling right merrily;
He mended the fence, and kept the cows
Just where they ought to be.

Weeding the garden was jolly fun,
And ditto hoeing the corn.
"I'm happier far," said Farmer John,
"Than I've been since I was born."

He learned a lesson that lasts him well—
"Twill last him his whole life through.
He frets but seldom, and never because
He has plenty of work to do.

"I tell you what," says Farmer John,
"They are either knaves or fools
Who long to be idle—for idle hands
Are the Devil's chosen tools."

THE MEMORY OF ANTS.

The general fact that, whenever an ant finds her way to a store of food or larvae, she will return to it again and again in a more or less direct line from her nest, constitutes ample proof that the ant remembers her way to the store of food. It is of interest to note that the nature of this insect-memory appears to be identical with that of memory in general. Thus, a new fact becomes impressed upon ants' memory by repetition, and the impression is liable to become effaced by lapse of time. Sir John Lubbock found it necessary to teach the insects, by a repetition of several lessons, their way to treasure, if that way were long or unusual. With regard to the duration of memory in ants, it does not appear that any direct experiments have been made; but the following observation by Mr. Belt on its apparent duration in the leaf-cutting ant may be here stated: In June, 1859, he found his garden invaded by these ants, and on following up their paths, he found their nests about a hundred yards distant. He poured down their burrows a pint of diluted carbolic acid. The marauding parties were at once drawn off from the garden to meet the danger at home, while in the burrows themselves the greatest confusion prevailed. Next day he found the ants busily engaged in bringing up the ant-food from the old burrows, and carrying it to newly-formed ones a few yards distant. These, however, turned out to be intended only as temporary repositories; for, in a few days, both old and new burrows were entirely deserted, so that he supposed all the ants to have died. Subsequently, however, he found that they had migrated to a new site about 200 yards from the old one, and there established themselves in a new nest. Twelve months later the ants again invaded his garden, and again he treated them to a strong dose of carbolic acid. The ants, as on the previous occasion, were at once withdrawn from his garden, and two days afterwards he found

"all the survivors at work on one track that led direct to the old nest of the year before, where they were busily employed in making new excavations. . . . "It was a wholesale and entire migration." Mr. Belt adds: "I do not doubt that some of the leading minds in this formicarium recollected the nest of the year before, and directed the migration to it."—*George J. Romanus, in Popular Science Monthly for August.*

IMAGINARY DISEASES.

A medical writer believes that two persons in three who consider themselves invalids have no serious ailments, and that their diseases exist to a great extent in the imagination only. "Hardly a day passes that I do not see this opinion verified. There is often some disturbance of the system with those who ask advice, but they are not usually afflicted in the manner they had supposed, and most frequently not seriously ill in any respect except as to the imagination. I have never suffered an hour from any sort of illness, since acquiring the knowledge and experience which enable me to account for many of the seeming phenomena incident to human life; previous to that the monotony of my life would be occasionally interrupted by a scare, from which I would suffer during the time it required to reach the nearest competent physician. My imagination has thus presented me at various times with heart disease, kidney troubles, and liver complaint, each of which I left behind me when I came away from the doctor's, and have never heard from since. Few people have any idea of the aggregate of suffering and misery that is silently endured by thousands of our fellow-beings, under the supposition that they are victims of incurable diseases, when, in fact, there is nothing serious the matter with them. Every physician of experience is able to refer to many cases where he has been able to lift a terrible weight from the crushed spirit of some suffering mortal, by explaining away his fears. It should be more satisfactory to a humane physician to quiet the fears of one imaginary invalid, than to have a hundred rich patients who required his services. And yet as to imaginary diseases, let it not be thought that I would advise any person to quietly convince himself that there was nothing the matter, and thus silence his fears; there might be some serious trouble, and then the advantage of early treatment would be lost. A skillful physician should be consulted in every doubtful case. The probability is he would find the patient suffering in most cases from dyspepsia instead of heart disease, or from malaria instead of Bright's disease of the kidneys—that is, from a curable instead of an incurable disease."

SWEET HOME.

When two young people love each other and marry, they restore the picture of the apostolic church. They are of one heart and one soul. Neither do they say that anything they possess is their own, but they have all things in common. Their mutual trust in each other, their entire confidence in each other, draws out all that is best in both. Love is the angel who rolls away the stone from the grave in which we bury our better nature, and it comes forth. Love makes all things new; makes a new heaven and a new earth; makes all cares light, all pains easy. It is the one enchantment of human life which realizes Fortunio's purse and Aladdin's palace, and turns the "Arabian Nights" into mere prose by comparison. Before real society can come, true homes must come. As in a sheltered nook in the midst of the great sea of ice which rolls down the summit of Mont Blanc is found a little green spot full of tender flowers, so in the shelter of home, in the warm atmosphere of household love, spring up the pure affections of parent and child; father, mother, son, daughter; of brothers and sisters. Whatever makes this insecure, and divorce frequent, makes of marriage not a union for life, but an experiment which may be tried as often as we choose, and abandoned when we like. And this cuts up by the roots all the dear affections of home; leaves children orphaned, destroys fatherly and motherly love, and is a virtual dissolution of society.—*Jamies Freeman Clark.*

TO A MODERATE DRINKER.

No, not even the mildest of the California wines will prove useful. Wine is no more healthful than alcohol diluted in water. Suppose a wine contains seven per cent. of alcohol—and that surely would be light enough—it is no more healthful than water with seven per cent. of alcohol in it. The wine is practically just that, with a little colouring matter added. Often, very often, there is an addition of poisonous adulterating stuff. There is no doubt, as you suggest, that the wine is better than lager-beer. This is a wretched stuff, puffing a man out and making his brain stupid. There is a kind of drink known as water which I advise you to try. It may taste strange at first, but you will find it the best drink when you are sick or well, when you are hot or cold, indeed under all possible circumstances.—*Dr. Dio Lewis.*

SKIPPING HARD PLACES.

Boys, I want to ask you how you think a conqueror made out who went through a country he was trying to subdue, and whenever he found a fort hard to take, let it alone. Don't you think the enemy would buzz wild there, like bees in a hive, and when he was well into the heart of the country don't you fancy they would swarm out and harass him terribly?

Just so, I want you to remember, will it be with you, if you skip over the hard places in your lessons and leave them unlearned; you have left an enemy in the rear that will not fail to harass you and mortify you times without number.

"There was just a little bit of my Latin I hadn't read," said a vexed student to me, "and it was just there the Professor had to call upon me at examination. There were just two or three examples I had passed over, and one of them I was asked to do on the blackboard."

The student who is not thorough is never well at his ease; he cannot forget the skipped problems, and the consciousness of his deficiencies makes him nervous and anxious.

Never laugh at the slow, plodding student; the time will surely come when the laugh will be turned. It takes time to be thorough, but it more than pays. Resolve, when you take up a study, that you will go through with it like a successful conqueror, taking every strong point.

If the inaccurate scholar's difficulties closed with his school life it might not be so great a matter for his future career. But he has chained to himself a habit that will be like an iron ball at his heel all the rest of his life. Whatever he does will be lacking somewhere. He has learned to shirk what is hard, and the habit will grow with years.—*Arton.*

CIRCUMSTANTIAL EVIDENCE.

A lawyer in Central New York gives the following account of one of his first cases:

My client sued a neighbour for the alleged killing of a favourite dog. The proof consisted in the mysterious disappearance of the animal, and the possession of a dog's skin by the defendant, which, after considerable argument, was brought into court in evidence. It was marked in a singular manner, and was positively identified, with many tears, by the plaintiff's wife and daughter, as the undoubted integument of the deceased Bose. In summing up to the jury, I was in the midst of a highly coloured picture of the virtues of the deceased, and of the love of the children for their four-footed friend, when I was interrupted by a slight disturbance in the crowd near the door of the little school house which served as court house. Looking around, I saw my client's youngest son, a tow-headed urchin of twelve, coming forward with a dog whose skin was the exact counterpart of the one put in evidence. The dog wagged his tail with good-natured composure, and the boy cried, in his childish treble, "Paw, Bose has come home." I gathered up my law-books and retreated, and I never had perfect confidence in circumstantial evidence since.—*Harper's Magazine.*

WHAT IS WATER FOR?

Water is so common we hardly think of it. To begin with, water was God's builder of the world, as we see it. The rocks were mud and sand made by water and laid down by it, one kind on top of another. Coal, made of plants, was covered up by water, so that the rotten plants were kept there and changed to coal. Veins of lead, copper, gold, silver, crystals, were cracks in the rocks, filled with water that had these precious things dissolved in it. And water, as ice (glaciers), ground up rocks into earth, in which plants can grow, the sea and streams helping to do the work. Water builds plants, and animals, too. Three-quarters of what they are made of is water. When you pay twenty cents for a peck of potatoes, you are really paying fifteen of the cents for the water that is in the potatoes. A boy who weighs eighty pounds, if perfectly dried up, would weigh only twenty pounds. And there could be no potatoes nor boy without water. It must dissolve things to make them into new things; and it carries them where they are wanted to build the new things. It softens food, and then as watery blood, carries the food to every part of the body to make new flesh and bones, that we may grow and have strength. It carries the plant's food up into the plant. Water carries man and goods in boats, and, as steam, drives his cars. It makes the wheels go in his factories. It is a great worker, and we could not get along without it. And it makes much of the beauty of the world. Ask your friend how it does that.—*Arton.*

REST AND REPAIR.

There is "food for thought" in the following extract from the London "Lancet":

"It may be safely assumed that those have been mistaken who supposed that physiological rest consists in inaction, and that repair goes on during quiescence. Nutrition—and therefore repair—is the concomitant of exercise. Appetite is one thing, the power to digest food another. A man may feel ravenous, and consume large quantities of material containing the elements of nutrition, but be unable to appropriate the supply furnished, or, in other words, to nourish himself. It is so with rest. Mere inaction may be secured without rest, and idleness without the restoration of energy. The faculty of recovery and recuperation after exercise is in direct proportion to the vitality of the organ rested. This faculty is not to be called into action by inactivity. It follows that relief and recovery from what is improperly called "overwork" cannot be obtained by simply "going away for change," or by indulgence in idleness. A new form of exercise is necessary, and the mode of action chosen must be one that supplies moderate exercise to the part of the system which it is required to "rest" and "restore." Health-seekers often err by trying to recover their powers by simple diversion of energy. It is a popular error to suppose that when the brain is overworked the muscular system should be exercised by way of counteraction. The part itself must be worked, so as to stimulate the faculty of nutrition; but it should be set to fresh work, which will incite the same powers to act in a new direction."

SILENCE ABOUT OURSELVES.

Think as little as possible about any good in yourself; turn your eyes resolutely from any view of your acquirements, your influence, your plan, your success, your following—above all, speak as little as possible about yourself. The inordinateness of our self-love makes speech about ourselves like the putting of a lighted torch to the dry wood which has been laid in order for burning. Nothing but duty should open our lips upon this dangerous theme, except it be in humble confession of our sinfulness before God.

Again, be specially upon the watch against those little tricks by which the vain man seeks to bring round the conversation to himself, and gain the praise or notice which his

thirsty ears drink in so greedily. Even if praise comes unsought, it is well, while men are uttering it, to guard yourself by thinking of some secret cause for humbling yourself inwardly to God, thinking unto what these pleasant accents would be changed if all that is known to God, and even to yourself, stood revealed to man.

Place yourself often beneath the cross of Calvary; see that sight of love and sorrow; hear those words of wonder; look at the Eternal Son humbling Himself there for you, as you gaze fixedly upon Him, whether he, whose only hope is in that cross of absolute self-sacrifice and self-abasement, can dare to cherish in himself one self-complacent action. Let the Master's words ring ever in your ears: "How can ye believe, who receive honour one of another, and seek not the honour that cometh from God only?"—*Bishop Wilberforce.*

JOHN PLOUGHMAN'S WISE SAYINGS.

Don't be whining about not having a fair chance. Throw a sensible man out of a window, he'll fall on his feet and ask the nearest way to his work. The more you have to begin with, the less you will have in the end. Money you earn yourself is much brighter than any you can get out of a dead man's bags. A scanty breakfast in the morning of life whets the appetite for a feast later in the day. He who has tasted a sour apple will have the more relish for a sweet one. Your present want will make future prosperity all the sweeter. Eighteen pence has set up many a pedlar in business, and he has turned it over until he has kept his carriage. As for the place you are cast in, don't find fault with that; you need not be a horse because you were born in a stable. A hard-working young man with his wits about him will make money, while others will do nothing but lose it. "Who loves his work and knows how to spare, may live and flourish anywhere." As to a little trouble, who expects to find cherries without stones, or roses without thorns? Who would win must learn to bear. Idleness lies in bed sick of the mulligrubs, where industry finds health and wealth. The dog in the kennel barks at flies, the hunting dog does not know that they are there. Laziness waits till the river is dry, and never gets to market. "Try" swims it, and makes all the trade. "Can't-do-it" made meat out of mushrooms.

CURIOUS NUMERICAL FACTS.

The length of a solar year is 365.242 days. The length of a degree of longitude at the equator—taken from the printed Geodetical Tables of the British Ordnance Survey—is 365,234 feet; so that if the number of days in the year is divided by the number of feet in a degree, it will give 1,000 nearly; more exactly 999.977, which, if applied to the foot, would be within the thousandth part of an inch of its true length, a quantity that cannot be seen.

Again, the length of a degree of latitude at the central point of the British Island—according to the authority given above—is 365,242 feet, so that the length of a degree of latitude, measured on that parallel, divided by the number of days in the year, gives exactly 1,000 feet.

Now, there is no connection between the number of days in a year and the number of feet in a degree of latitude or of longitude; but after the lapse of a few thousand years, the scientific traveller from New Zealand or some other part of the globe may pay the inhabitants of Great Britain the same compliment that some scientific travellers are now paying the Egyptians, and attribute to scientific refinement that which is simply an accidental agreement in numbers.

We desire to commend to the author of "A Miracle in Stone," who imagines that, because a correspondence has been discovered between certain dimensions of the great pyramid in Egypt and the diameter of the earth, that therefore the pyramid was built by the direction of the Almighty, and was designed, at least in part, to furnish a standard of measurement for the world.

FEMALE SOCIETY.

What is it that makes all those men who associate habitually with women superior to others who do not? What makes that woman who is accustomed to, and at ease in the society of men, superior to her sex in general? Solely because they are in the habit of free, graceful, continued conversation with the other sex. Women in this way lose their frivolity, their faculties awaken, their delicacies and peculiarities unfold all their beauty and captivation in the spirit of intellectual rivalry. And the men lose their pedantic, rude, declamatory, or sullen manner. The coin of the understanding and the heart changes continually. Their appetites are rubbed off, their better materials polished and brightened, and their richness, like gold, is wrought into finer workmanship by the fingers of women than it ever could be by those of men. The iron and steel of their characters are hidden, like the character and armour of a giant, when they are not wanted in actual warfare.

THERE are four classes of men who print accounts of their travels. First, we have the makers of "tours" and "trips" and "views" and "vacations abroad," who write to be known as having travelled and as "authors." To this great primary division belong young lords fresh from the university, who, before going into "the House," hang up their voice tablets of transmarine adventure in the Temple of Fame in the form of Rambles in the Rocky Mountains, and ladies who never dream that there is anything worth knowing which is not in their guide-book. Then we have the regular professional traveller, who, like the "chanter" or talking man in a show, gets his living by exhibiting the great panorama of the world. He is invariably "a bit of a Barnum," has existed in all ages, and was provocative among the Greeks of several excellent proverbs which discredit all truth in all tourists. Above these we have the peregrinations of great poets, scholars, or diplomatists; and finally the scientific traveller, who, with an object in view, from which death itself must not daunt him, pushes on bravely to the end.

HINTS FOR LADY READERS.

MILK which has become sour may be sweetened or rendered fit for use again by stirring in a little soda.

THE yolk of an egg rubbed thoroughly into the hair, and then washed out with soft water, cleanses the scalp and hair remarkably.

SKIRTS are less scant and clinging than heretofore, and trimmings are beginning to be put on plain, rather than gathered or fluted.

GODEY'S *Lady's Book* says that dresses for this season are likely to be made up a great deal more plainly than they have been for many seasons past.

PRESERVING "skeletons" of leaves, seed-vessels, etc., is a long and tedious process. It is done by macerating them in soft water, and carefully washing away the green matter as it decays.

SPIDERS and their webs form the designs embroidered on the flounces and waistcoats of some Paris gowns. Gold thread is the material usually employed for this work, but sometimes silk is used.

OUR fashion correspondent failed to make mention of it, but buckwheat cakes this season are cut round, of a light brown colour, old gold and amber being the prevailing tints used for trimming.

NOTHING is better for children's morning dress than a sacque princess dress of blue or pink gingham, edged with a gathered flounce, then a ribbon sash round waist; or else a yoke princess dress is pretty.

TRAVELLING costumes are made as plainly as possible, with either a gracefully draped polonaise, and quite short skirt, or else tunic and corsage machino stitched round edges, or trimmed a self-coloured cord.

THE importance of sunshine in rooms devoted to the sick is beyond all calculation. This has been proven in hospitals by experiments again and again. If the bed can be so placed that the patient can see, a good reach of blue sky, it will do him or her more good than any drugs. Never enter a sick room in a state of perspiration, as the moment you become cool your pores absorb. Do not approach contagious diseases with an empty stomach, or sit between the sick and the fire, because the heat attracts the vapour. Preventives are better than any pills or powders.

A WRITER in the *Girl's Own Paper* advises "young housekeepers never to be careless in tea-making. Warm the teapot and cups, wait till the steam puffs from the spout of the kettle, or lid of the urn, before you pour the boiling water on the tea. Half fill the cups, and then add more water to the teapot before filling them up, unless quite sure that it holds all that will be required without being replenished. Also, never forget the 'cosy' cap, which, should there be none as yet amongst the other appliances of the breakfast table, I advise you to manufacture forthwith for yourselves."

THE *Scientific American* gives an engraving of a very cheap yet strong and comfortable chair which may be made as elegant as the tastes of the maker may dictate. The chair consists merely of a barrel cut off above the second hoop so as to form a complete back with half arms at the side. The barrel thus cut is mounted on two strips of wood, having casters under their ends, and brackets above to form the legs and to add to the appearance of the chair. A head is fitted to the circular portion and the whole is neatly upholstered. Of course it is necessary to select a good barrel bound with iron hoops, and a little care should be taken in the upholstering to disguise the barrel form as much as possible.

THE finest-looking specimens of manhood in every class are to be found among men between the ages of 35 and 50, but how many comely women can be found even among those who have compassed only the smaller number of years mentioned above? The home-work of woman, whether she be wife or servant, needs revision; if only genius can enable a person to be at the same time master and servant, nurse and ruler, then genius in this direction, if there is any, should make itself known for the benefit of those who are fighting magnificently against overwhelming odds. With a slighter physique that is occasionally subject to peculiar duties to which that of man can offer no parallel, woman is expected to daily endure a strain that no man would tolerate for any length of time. Until what is modestly called house-keeping is recognized as the noble science that it really is, and is carefully studied, the slaughter of women by overwork will continue, for at present it requires that every woman shall be a prodigy of sense, industry and endurance.

WOOLLEN dresses are the special feature of autumn and winter seasons. Plain cloths will be used for a variety of serviceable dresses. They have been prepared with extra care, are shrunk, and are to be bought in a very long list of colourings, which are not affected by rain, and are cheaper than heretofore. A new style of making cloth dresses comes to us from France. A box-plaited flounce borders the short skirt; the overdress opens up the front and is quite straight, meeting at the back from the neck in triple plaits. This overdress is formed into long sleeves reaching to the flounce, the arm, covered with a tight fitting sleeve, coming through the upper portion; the bodice is full and belted, with ribbon fastened in a large bow at the side or the front. Plain foules, serges, vicunas, cashmeres and merinos are all to be worn, as well as a few rich brocaded woollen and silk cloths, mixed with plain material. Dark blues, military blue, plum, brown, and gray, together with terra cotta, will be the favourite colours. Scotch stuffs, both plaids and checks, are used, especially the large checks, which require skillful matching; but the particular novelty of the manufacturers are the shaded striped tweeds. These sombre stripes are from 1 1/2 inches to 2 inches wide, and are of two colours, such as blue and gold, gold and brown, black and brown, the colours shot together as well as blended in the stripes. These are being made up as polonaises, jackets and overdresses, with plain tweed; and many plain materials have striped borderings. Tinsel is introduced into several winter fabrics, especially into the accompanying trimming; for example, a plain tweed, with a bordering of coarse interplaited silk, shot with gold.

YOUNG CANADA.

POLLY'S FIRST HALF DOLLAR.

"I never had a whole half dollar in my life; I suppose it is because grandma is so drestful poor, and I haint got any father and mother, only just her."

Polly, the six-year-old Miss who made this remark, was quite horrified at seeing Agnes Bond toss up a four-bit piece on her way to the store.

"I know your grandma is poor, but I like you all the same," and the affectionate girl put her arms lovingly around the forsaken-looking child.

"What be you going to do with all that money, Aggie?"

"O, I don't know, yet. Buy walnuts, perhaps, or oranges. What would you do with it, Polly, if it was yours?"

"I'd buy grandma a new dress, and some shoes, and some flour, and some butter, and some candy, and some—"

"Stop, Polly, you couldn't buy so many things. You might get some butter, or the candy, but dresses cost lots of money. You sit right still on the grass until I get back."

Aggie ran home as fast as she could go, but soon returned in a happy state of excitement, and all out of breath.

"Here, Polly, ma says you may have my half dollar, and buy what you please."

"O my!" cried Polly, in great glee. "Let me kiss you, and I'll go and trade my things before grandma comes. She's up to Miss Holley's, cleaning up the house, and I guess she'll be surprised."

The little friends parted very happy, Aggie for home without her walnuts, and the young financier to the store, her head filled with shoes, dresses and groceries. She tiptoed to look over the counter in Mr. Jones' store, and found that gentleman sitting at his desk.

"What will this little girl have to-day?" he asked tenderly, thinking of his own darling, who but a month ago had closed her blue eyes never to awaken.

"I want grandma a dress, because she is so ragged, and some shoes, so she can go to church, and some molasses."

"How much money have you, my dear?"

"I've got a whole half dollar that Aggie Bond gave me."

"Aggie Bond is a precious child," said Mr. Jones, recalling the sweet flowers she had so often sent to his sick Maggie.

"When will you get my things?" asked Polly, tired of standing so long on the tip of her toes.

Mr. Jones thought the matter over. "A dress and shoes—the original cost could be but three dollars and a half. 'He that giveth to the poor lendeth to the Lord.' I am afraid that I haven't lent the Lord as much as I ought."

"I'll wait on you in just one minute, Polly. Come right around here and pick out grandma a dress yourself. Anything in this pile," said he, touching a lot of gingham as he passed.

"I'll buy this," and she laid her hand on the only piece she could reach.

After tying up a bundle of the gingham and shoes, and making a strong loop of twine to carry it by, he put the half dollar in his pocket, and Polly laughed for joy as she turned to go.

The trader thought of his own little daughter again. "Look here, Polly, I've made a mistake; I forgot to give you the change."

"I forgot, too," said Polly; and she turned back to receive from Mr. Jones two half dollars.

"Are we all square now?" asked Polly.

"I think we are. Why didn't you buy something for yourself with your money?"

"Why, I just forgot myself. And I don't know as I want anything."

Polly's grandmother could not understand what it all meant, as she examined her nice presents and the two half dollars.

"Aggie gave me the half dollar, and I bought the dress and shoes, and had this left."

"But this is more than you had at first." It looked a little mysterious to Polly, but she concluded it was because he did not give her the flour, and butter, and molasses.

It was made clear to the grateful woman when Mr. and Mrs. Jones called that evening with dresses, aprons and shoes that their little girl had worn, and gave them to Polly. She clapped her hands for joy.

"Everybody is drestful good to me, and I'll trade with Mr. Jones every time I go to buy things. He never cheats a bit."

HALLO! JACK FROST!

Hallo! Jack Frost!
I thought you were lost;
I was really troubled about you.
I feared, it is true,
I should have to do
The whole winter long without you!

No ice on the lakes,
Nor any snowflakes,
Nor chance for a slide in the gutters;
Our skates and sleds must
Be covered with rust,
And ruined those beautiful outters.

That skim o'er the ground,
To the musical sound
Of bells that go jingle-a-jingle,
When soft lies the snow,
And chill breezes blow,
And hearts have a merrier tingle.

Hallo! Jack Frost!
I thought you were lost,
You are such a terrible rover,
Or else, frozen fast
To the North Pole at last,
You'd stay till the winter was over.

But here you are now,
With your frosty old pow,
And soon will the breezes mellow
Ring sharp and clear,
And shouts of cheer
Will welcome you back, old fellow!

My mittens and cap,
My skates and strap,
And sled, are ever so handy,
Just waiting for you
And your frosty crew,
My beautiful-Jack-a-dandy!

And soon we'll go
Over ice and snow;
And soon will the sleigh-bells' ringing
Join in the song
Of the merry throng
Of boys and girls who are singing:

Hallo! Jack Frost!
We thought you were lost;
We were really troubled about you.
And feared, it is true,
We should have to do
The whole winter long without you!

—Josephine Pollard.

CURED BY KINDNESS.

"You oughtn't to do so," shouted Willie, as the butcher dashed past in his waggon, giving the whip unmercifully to his half-starved horse. Another moment, in turning the corner, the waggon was upset, the horse broke into a run. The waggon was broken to pieces, and the man thrown out and badly injured. Next day "the vicious beast" was offered for sale. Willie's father bought him for a low price for use on the farm. It was a foolish bargain, people said, for the horse was quite uncontrollable. Even the owner said he would bite, rear, kick, and run away. But Mr. Ely bought it to please Willie, whose tender little heart was full of pity for the poor animal. "We will be so kind to him that he won't want to be bad, papa." So they agreed to follow Willie's plan.

Before long Mr. Ely and Willie began to drive the horse. People were surprised at the change

in him. "He would go as slow as desired," said the gentleman who told the story, "stop instantly at 'Whoa,' follow his master, come at his call, and rub his head on his shoulder."

What has made the change? Not force! The poor horse had been beaten, kicked, and starved before, and grew more and more stubborn. Now he was well fed, well bedded, well watered; not over-driven or over-loaded; never whipped, kicked or scolded. Kind words were given him, and now and then an apple or a piece of sugar. No gentler, safer, or more faithful horse went on the road. Willie's plan had succeeded. The little fellow fairly lived with the horse, and the horse seemed to know he was his best friend. Ben was a favourite with all the family. One night Mr. Ely was away from home. He had taken Ben early in the afternoon, but when bed-time came he had not returned. Thinking he would not be home that night, the family closed the house and retired.

About midnight Willie heard Ben's neigh. Jumping out of bed he ran to the window, and there was Ben at the door without his father. In a few moments the family were aroused, and Willie's brother hurriedly opened the door. No sooner had he done so, than Ben turned round and trotted off toward the road. He followed him quickly. Ben led him a quarter of a mile and then stopped. There Mr. Ely lay on the ground in a swoon. When he was taken home he soon recovered, and told them that as he was riding through the woods he struck his head against the overhanging branch of a tree and fell from the horse. He was stunned by the blow and did not remember anything more. After that night Ben was the hero of the village. But there was one strange thing about him: he never forgot either a benefit or an injury. Sometimes when in harness he would see his former master. Then all his old fire would return; his eyes would roll, he would champ his bit fiercely, and show an intense desire to get at his enemy. Only Willie or his father could quiet him then. Ben taught the people of that village more than they ever knew before of the power of kindness. And a good many of Willie's little friends began to practise his way of treating their dogs and ponies. They found that the surest way to manage them was by kindness.

This, you know, was Mr. Rarey's way. It was his secret in training horses. If any of our boys have any doubt on the subject suppose they try it for themselves, for this story of Ben is a true one.

TEACH THE BOYS ABOUT IT.

At home and at school the boys should be taught the natural effect of alcohol upon the processes of human life. First, they should be taught that it can add nothing whatever to the vital forces or to the vital tissues—that it never enters into the elements of structure; second, they should be taught that it disturbs the operation of the brain, and that the mind can get no help from it that is to be relied upon; third, they should be taught that alcohol inflames the baser passions, and debases the feelings; fourth, they should be taught that an appetite for drink is certainly formed in those that use it, which destroys the health, injures the character, and in millions of instances becomes ruinous to fortunes, and to all the high interests of the soul; fifth, they should be taught that crime and pauperism are directly caused by alcohol. So long as \$2,000,000 are daily spent for drink in England, and \$2,000,000 per day in the United States, leaving little else to show for its cost but diseased stomachs, degraded homes, destroyed industry, increased pauperism, and aggravated crime, the boys should understand the facts about alcohol, and be able to act upon them in their earliest responsible conduct.—*Parish Magazine.*

Scientific and Useful.

SPEARMINT tea is very good for children troubled with worms. I have seen sage used for the same purpose.

A FLANNEL folded several times and heated on the stove will, if changed often, relieve severe pain in the side or stomach.

FOR toothache caused by cold, take a woolen cloth of several thicknesses wet with vinegar and put over a hot brick or stone, with something thrown over the head to keep in all the steam.

A SURE CURE FOR CHILBLAINS.—Three applications of vaseline will cure the worst case of chilblains. For ordinary cases one or two applications will be sufficient. Although vaseline is made from petroleum, it is far more rapid in its work of healing than kerosene.

THE ordinary length of the hair is from twenty inches to a yard, and its weight from six to eight ounces. The speed of the growth of the hair under ordinary circumstances, is half an inch per month. Observations have shown that the hair grows faster in youth than in age, by day than by night, in summer than in winter, when cut than when left uncut, and when frequently cut than when cut seldom. Constant shaving makes the growth more persistent, and increases the coarseness of the hair. After illness, in which the hair has fallen, if the patient be young, it is advisable to shave the head; otherwise the hair may remain thin and poor.

HOW TO CURE FROSTED FEET.—The late cold snap makes a republishing of the infallible cure of frost bites desirable. If it be the feet, make a strong lime water, as hot as you can bear; thin whitewash will do. Soak your feet in it from fifteen to thirty minutes; then rub them thoroughly with the palm of the hand, removing all the dead cuticle that the lime has loosened. Anoint with sweet oil or lard. Repeat a few times, and you are cured—not merely relieved, but cured—and that terrible itching is gone, that may otherwise follow you a life-time. Ointment made of lime-water and sweet oil can be used on the ears if they are frosted.

HOPS have many uses. A handful of them steeped in a quart bowl (always steep in earthen) of water until the strength is extracted, strained and sweetened with loaf sugar, and bottled for use, is as good or better than any hop bitters ever purchased. Dose, one glass full taken three times a day; is a good antibilious alterative and tonic for ordinary family purposes. For outward application, make some small bags of cotton six inches square and fill with hops. When the face aches, or the head is in pain, or the throat and chest are sore, heat one or more of these bags very hot, up to scorching the cloth even, and apply to the suffering part. It is a great improvement on wet cloths, or wet applications of any kind.

VERY few persons are aware what a valuable auxiliary turpentine is in many diseases. It is a sovereign remedy for croup. Saturate a piece of flannel in it, and place the flannel on the throat and chest, and occasionally two or three drops on a lump of sugar may be taken inwardly. Nothing better than turpentine can be applied to a severe cut or bruise, and it will give certain relief almost instantly. Let any one who has an attack of lockjaw take a small quantity of turpentine, warm it and pour on the wound, no matter where it is, and relief will follow in less than a minute. Flannel cloth wrung out of turpentine into hot water, as hot as the patient can bear, is one of the best of remedies for inflammation.

CELERY FOR RHEUMATISM.—A German physician states that celery in a cooked state is a certain cure for rheumatism. It should be cut up in small pieces and boiled in water until it becomes soft, and the water drunk by the patient. The soft celery should then be cooked with some fresh milk, meal and nutmeg, served up with toast and eaten with potatoes, and the pain will immediately cease. The physician says that he has repeatedly employed this remedy, and always with success. He attributes the origin of rheumatism to an acidulated state of the blood, and not to cold or humidity. When it is rendered alkaline neither gout nor rheumatism can occur. English statistics shew that in one year, 1876, 3,640 persons died of rheumatism. At least two-thirds of the complaints known under the general name of heart disease are to be ascribed to rheumatism and its painful ally, the gout.

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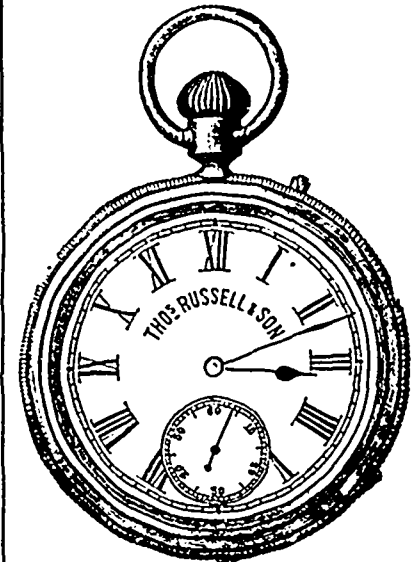
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SPECIAL NOTICES.

While attending the Provincial Exhibition, held at London, the fine display of Agricultural Implements made by the Globe Works Company of that city attracted not only our attention but the attention of every farmer visiting the Exhibition. Among the many labour-saving implements shown by this Company their IMPERIAL HARVESTER was the centre of attraction. This machine embodies every feature to render it a perfect reaper. It is constructed throughout with a view to convenience in handling, to strength, durability and simplicity. All its parts are made of the best materials, and it possesses so many excellent features that it is pronounced by all the only perfect reaping machine made.

The New Automatic Tilling Rake with which the IMPERIAL is equipped is certainly the most perfect working mechanical device we have seen on any reaper. Its movements are easy and positive, and its gathering and sheaf-making properties are most perfect. In fact, the whole machine has only to be seen to convince the most sceptical of its great superiority over all other reapers, and every farmer should not consider himself possessing a perfect harvesting machine unless he has the IMPERIAL HARVESTER.

The Globe Works Company make the celebrated Model Mower, the most perfect, simple and effective mower said to be in the market. Also the Centennial Hay Rake, the Farmer's Friend Grain Drill, which is pronounced the most accurate sowing drill in existence, and which was awarded the Highest Honours at the Centennial Exhibition over all competitors. The Globe Works Company also make Hand and Power Cutting Boxes, Horse Powers, Gang Ploughs, Corn Ploughs and Ploughs. In fact, our readers can be supplied with the very best implements by this Company. Send for Illustrated Catalogue to the GLOBE WORKS COMPANY, London, Ontario. See out of Imperial Harvester in advertising columns.

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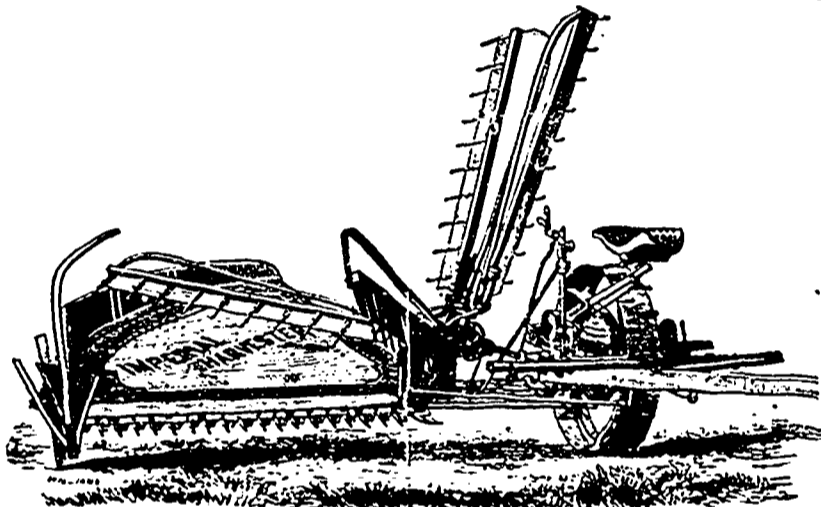
PROCLAMATION!

Whereas we have decided to commence this day a Grand Closing Sale of the whole of our immense stock of Silks, Velvets, Dress Goods, Hosiery, Gloves, Millinery, Mantles, Shawls, Blankets, Flannels, Cloths, Tweeds and Gents' Furnishings. We will also offer for sale at the same time our large stock of Ready-made Clothing, which is the most complete and best stock of the kind in Canada, being cut and made on the premises by first-class competent workmen, and quite equal to ordered clothing.

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THIS IS NO HUMBUG, BUT A GENUINE CLEARING SALE.

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- 3rd. THE CELEBRATED FIVE-ARM JOHNSON RAKE.

Farmers, before ordering Reapers for next harvest, will consult their own interests by giving the IMPERIAL the most critical examination. In this Machine will be found all the good qualities of others, and it contains many improvements that cannot be had with any other Machine. Every Machine is sold under full warranty that it is just as represented. Send for Illustrated Catalogue of Farm Machinery to the

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FOR HORSES, MILCH COWS, SHEEP, CATTLE, HOGS, POULTRY.

Horses will keep in perfect condition; improves their appetite; are less liable to influenza or colic; improves their wind, prevents worms and hiccoughs, giving them a fine coat and healthy condition.

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Hogs will be happier, and consequently fatten rapidly.

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But be sure that the name "DEVONSHIRE" is upon every box, and buy none of the worthless imitations.

JOHN LUMBERS, Sole Manufacturer, - - TORONTO.

TORONTO WHOLESALE MARKETS.

OFFICE RURAL CANADIAN,
Toronto, 24th Nov., 1881.

COUNTRY PRODUCE.—Apples.—There is an active demand, and dealers show a disposition to store in anticipation of higher prices. Car lots of choice fruit are worth \$2.50 to \$3 a barrel, and some holders refuse \$3.10 for Greenings and Ballwines. Shipments to Great Britain have commenced. Beans are in good demand and higher, with sales of 50 to 100 bushel lots at \$2.25 to \$2.35; jobbing lots are firm at \$2.50 to \$2.60. Eggs are unchanged from last week and the supply insufficient; case lots bring 20c to 21c per dozen. Hogs are firm at \$7.75 to \$8 on the street, and \$7.50 in car lots. Hops are higher, with sales of choice lots at 21c to 22c; yearlings are firm at 12c to 15c. Onions are scarce and firm, barrel lots being worth \$2.50 to \$2.75. Potatoes continue in good demand and firm, with sales at 85c per bag; some holders ask 90c by the car lot. Poultry offers freely and continues easy; chickens and geese sell at 6c to 6c per lb., and ducks and turkeys at 8c to 9c. Tallow unchanged, with sales of small lots of rendered at 8c; dealers pay 4c for rough and 7½c to 7c for rendered.

FLOUR AND MEAL.—Flour has been quiet all week, with apparently little demand. Holders are firm, and the tone of the market is firmer at the close than at the opening of the week. The latter part of last week superior extra offered freely and sold to a small extent at \$5.75. On Monday and Tuesday there were buyers at that price, but holders advanced their prices to \$5.82½ to \$5.85. Yesterday superior extra offered at \$5.80, without bids. Spring extra is purely nominal at \$5.65 to \$5.70, and strong bakers' at \$6.25 to \$6.30. The stock in store is 2,450 barrels, against 3,060 barrels last week, and 2,000 barrels the corresponding week of 1880. Bran is in fair demand at \$13, but holders ask \$14, and no sales reported. Cornmeal is quiet, with business confined to small lots at \$3.75 and \$4. Oatmeal is scarce and higher at \$4.90 to \$5.00 by the car lot; small lots sell at \$5.25.

WHEAT.—The market has been firm on a small business. Offerings are small, holders being impressed with the idea that prices advance. Spring has been selling in car lots to millers at \$1.35 for No. 1 and at \$1.38 for No. 2, but these prices were refused on Tuesday. No. 2 fall sold in car and round lots on Saturday at \$1.30, and on Monday four cars brought \$1.31. An uninspected lot of Spring sold on Monday at \$1.35. Tuesday the market was slightly easier, and yesterday No. 1 spring sold at \$1.35, and No. 2 at \$1.33. No. 2 fall offered at \$1.30, with \$1.28 bid. The market to-day closed steady; No. 1 spring sold at \$1.36, No. 2 offered at \$1.34. The stock in store is 190,456 bushels, against 198,757 bushels last week, and 78,271 bushels the corresponding week of 1880.

COARSE GRAINS.—Barley.—There has been a moderate amount of business since our last, but the demand is chiefly confined to No. 2, which is relatively the strongest grade in price. Holders are firm, and offer one to five car lots only at a time. On Friday and Saturday sales of No. 1 were made in car lots at 93c, and No. 2 at 84c and 90c. On Monday the market was somewhat firmer, and a round lot of No. 1 sold at 94c. The demand was active on Tuesday for No. 2, and all car lots offering at 90c were taken at that price. Yesterday there was little business done; No. 2 offered at 90c, No. 3 extra at 84c, and No. 3 at 80c without bids. The market closed steady, with sales of car lots of No. 1 at 92c; No. 2 choice at 89c; and No. 2 at 87c. The stock in store is 314,163 bushels, against 302,242 bushels last week, and 313,241 bushels the corresponding week of 1880. Oats have offered more freely this week, but the demand continuing good prices show no decline; sales were reported every day of car lots at 45c on track; a car of Eastern sold yesterday at 43c. No stock in store. Peas are dull, with none offering; the demand is fair, and prices nominally firm at 80c for No. 1 and 78c for No. 2. Stock in store 7,321 bushels, against 6,754 bushels last week, and 44,982 bushels the corresponding week of 1880. Rye is easy, the demand having subsided; the last sale was reported on Saturday at 90c on track. Stock in store 9,917 bushels. Corn quiet, with only a moderate demand, and prices nominal at 78c to 80c.

HIDES AND SKINS.—The receipts of hides are moderate and prices steady. Dealers continue to pay butchers 9½c for No. 1 steers and 8½c for cows. Sales of car lots of cured, average weights, are reported at 9½c. Calfskins are dull and nominal at 14c. Sheepskins are offering lively, and prices are firm at 75c to \$1.05.