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THE
RURAL CANADIAN.

Vol. II. No. 12.

Toronto, December, 1883.

\$1 per annum, in advance.



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RURAL NOTES.

WHETHER it is more profitable to breed especially for eggs or for flesh, each one must determine for himself. It is largely a question of location and circumstances.

MR. FULLER, of Hamilton, is so well satisfied with the record of his famous cow Marianne, of St. Lamberts, that he has recently doubled her price. She is now held at \$20,000. It's a pretty stiff price for one little cow.

THE potato crop is hardly up to the average in Ontario this year. On low lands it was attacked by rot, especially in districts visited by heavy rains, and all late potatoes were more or less affected by frost—growth being arrested by the cutting down of the vines. Still it is likely that we have enough and to spare.

THE fine growth of young wood made by fruit trees this year gives good promise for next year's crop. Fruit buds are plentiful, especially on apple and peach trees, and fruit-growers are hopeful. But it is very important that something should be done to arrest the spread of black-knot among plum and cherry trees. The damage done by it this year has been enormous.

THE Government of New Brunswick is making an effort to encourage dairying in that Province. The proposition made with that object is, that if any individual or company will give a satisfactory guarantee to the Government that they will set up a permanent dairy and run it, the Government will purchase the outfit imported by that firm and allow such persons the use of it.

KEEP an account with the farm. This is as important as keeping accounts of sales and purchases. You will know what you are doing, and whether the farm is paying or not, if a strict account is kept with it. You will know your gains and losses year by year, and exactly what you are worth. You will also learn where the leaks are, and where your largest profits are made.

THE *Stock-Raiser's Journal* is a new candidate for favour, the initial number having been issued in November. It is a sixteen-page paper, neatly printed and well edited, and is exceedingly good in its special department. Mr. Thomas Shaw, of Woodburn, Wentworth county, is himself a successful breeder of stock, and his practical life will be invaluable in dealing with live stock topics. The new journal is published in Hamilton.

THE Province of Ontario has a new Commissioner of Agriculture, Hon. James Young having

resigned on account of ill health. His successor, Hon. A. M. Ross, of Huron county, is a very able man, and, although his forte is finance, we believe he also takes a keen interest in agricultural subjects. But it needs a strong man to make a reputation in the Department of Agriculture after the long and successful administration of Hon. S. C. Wood.

A FEW years ago experiment stations in Europe began testing seeds which were offered for sale in the markets, with the result that adulterations were discovered, most ingenious in character, harmful in effect and remarkable in amount. The same thing is doubtless true of our own country, but the remedy is not easy. It is a well-known fact that several varieties of noxious weeds have gained a foothold in Ontario during the past ten years, through the sowing of imported clover and other seeds.

THE pollution of the marsh by the Gooderham & Worts byres is one of the vexed questions with which Toronto's city fathers have to deal. One would suppose that the enterprising farmers and market gardeners of the adjacent country would gladly join in putting a stop to the nuisance complained of by carting the manure to their own lands, or, in these days of syndicates, perhaps a syndicate might be formed to purchase a block of land, utilize the manure of the byres, and conduct a model farm.

THE man who invests his money in improving the productiveness of his farm is wiser than the man who delves and pinches to put money at interest. A hundred dollars at interest will earn six more in a year; but the same money spent in draining, tilling, and manuring a field may double itself in the same period. Many a patch of land on our Ontario farms has lain for a generation producing nothing but coarse grasses and weeds, which, when reclaimed by underdraining has paid for the whole outlay with one crop.

MILLERS are anxious to get the duty on wheat reduced or abolished, and a deputation of their association has been urging their views on the Finance Minister. It is not alone that we have a short crop of wheat in Ontario this year, but the quality is very inferior. Much of the fall wheat in the western counties is little better than tailings, and the flour product is five to fifteen pounds less than the average per bushel. But our spring wheat is of a far better quality, and probably enough of it has been grown in Ontario to bread our own people.

ONE of the objections made to agricultural shows is that, in the competition for live stock prizes, there is no distinction between the profes-

sional breeder and the average farmer. The latter may be owner of one, two or three very good animals; but what chance has he with the former who enters the pick of a herd of thirty or forty? The professional breeder "scoops" all the prizes, and the average farmer is nowhere in the competition. It is a question whether the time has not come for a change of the regulations in this matter, especially as regards the Provincial, Industrial and Central fairs.

SO far as has been observed the clover seed midge does not appear to do much injury to alsike clover, probably because this variety grows only one crop in the year and the first brood of the midge is much less numerous than the second. Alsike grows best in a low clay or a sandy loam; on high or well-drained land it is almost certain to fail, excepting in a rainy season. It does very well when mixed with clover and timothy seed, and often spreads by natural process from field to field and farm to farm. As an exterminator of Canada thistles and other noxious weeds, the alsike clover is a pronounced success.

THE recent convention of cattle men at Chicago considered the subject of contagious diseases, and several interesting papers were read by professors and scientists. But it does not appear that anything new was said; there were the same old reports on the prevalence of pleuro-pneumonia in the Atlantic States and of Texas fever in Texas and the States immediately northward of it. What they want is to procure authority from Congress to stamp out these diseases, and surely the influence of the agricultural class in the United States is strong enough to accomplish this object if it be properly organized and directed. The danger is that they may defer action until it is too late.

HOW many farmers are there who know with any degree of accuracy the area of their cleared land, or of their several fields? A very small minority of the whole, we do not hesitate to say, and yet it is desirable for many practical reasons why the exact area of every field on the farm should be known, and a record kept of it with a plan of the farm. The fields on the plan may be numbered for convenience of reference, and the dimensions and area of each noted. To ascertain the area of a square or rectangular field, take a pole one rod (sixteen and a half feet) long; measure two sides of the field; multiply the length (in rods) by the breadth and divide the product by 160, the number of square rods in an acre; the quotient will be the area of the field in acres. Measure your fields this winter; the work will be more instructive than a day at school for the boys.

FARM AND FIELD.

PRIZE FARMS IN ONTARIO.

The Agricultural and Arts Association lately awarded a silver medal on the farm of Mr. William Rennie, the well-known seedsman and successful farmer. The farm is fifteen miles from Toronto, and contains 120 acres, of which 107 are under cultivation. We make the following extract from the report accompanying the award:

"The acreage of the different crops is: Barley, fifteen; oats, twelve; white clover for seed, four; hood crops, fifteen (two acres of this in potatoes of different varieties grown for seed); half an acre of onions and two acres of beans; an acre of sugar beet; the balance mangolds of different varieties, of which the long red appears to be the heaviest cropper. A few drills of turnips had been sown, but were a total failure. Mr. Rennie stated that the land around was not at all suitable for turnips, and but few are grown. The roots are a remarkably fine crop, and will produce a very large quantity of feed. This crop gave evidence of having been well managed from first to last, judging from the appearance of it on both our first and second visits. Mr. Rennie's system of preparing land for roots is as follows: As soon as he can get time after harvest the land is heavily manured and ploughed under with a shallow furrow, and afterwards deeply cross-ploughed with a sub-soil plough following, in this way stirring and breaking up the soil to a considerable depth. The land is harrowed and well worked up, and toward the latter part of the season it is drilled up with a double-mould plough, and left in that shape until the spring, when all that is required to prepare the land for sowing is to harrow down the drills and re-make and sow on the freshly-drilled soil. Previous to drilling up the last time 200 pounds each of salt, plaster and bone-dust are sown to the acre.

"Fifty-three acres were cut for hay this year, the noticeable feature being not only the large quantity to the acre, but the closeness of the grasses. For this field, Mr. Rennie sowed twenty-seven and a half pounds to the acre of the following mixture: Red clover, six pounds; alsike, three; timothy, four; white clover, one; sweet vernal, one; yellow oat grass, half pound; and two pounds each of orchard grass, perennial rye grass, Italian rye grass, red top, blue grass and meadow fescue. At our second visit, a second crop could have been taken off; but Mr. Rennie wisely preferred to feed it on the land. At that time there were in pasture fifty sheep and lambs, three cows and six steers; and since then twenty more steers have been bought. All the steers and sheep were intended for winter fattening, as well as more sheep to be purchased. The woodland and pasture comprise eighteen acres. The fattening cattle and sheep are kept on until the spring, and are heavily fed—the theory carried out on this farm being to lay on flesh as rapidly as possible. All fodder is cut and fed is with meal, bran and oil-cake. Roots are cut or pulped.

"The rotation followed varied with the nature of the soil on the different parts of the farm, one portion of the farm lying well up, and a large part being flat. The course is usually in grass two years, and then grain, the variety depending on the nature of the soil. This is followed by roots, chiefly mangolds, for the reason, already stated, that turnips are not suited for this soil. The next year grain is seeded down, usually spring wheat or barley. Two teams are required. These are grand animals, one pair having been sold since we were there in July for \$850. They are kept in the stable summer and winter, Mr. Rennie thinking that they stand the work much better than when allowed to run on the grass."

There was also awarded a gold medal on the farm of Simpson Rennie, brother of William, containing 102½ acres, of which six is woodland. The following statement of the produce grown, and what was done in 1892 in the way of feeding, will give a good idea of what the farm produced, and the way in which it is used, as well as the profits of the system:

	Acres.	Yield in Bush.	Received per Bush.	Amount Received.
Wheat	10	850	\$1.10	\$935 00
Barley	13½	993	75	774 75
Oats	15½	920	50	460 00
Peas	0	125	72	90 00
Corn	1½	250	35	87 50
Mangolds	2½	2,000	10	200 00
Carrots	1½	250	10	25 00
Potatoes	1	160	50	76 00
		Tons.	Per ton.	
Hay	22	85	\$14 00	\$490 00

RESULT OF FEEDING CATTLE.

Cost of cattle	\$460
Ground pea and barley meal	145
Unout hay	125
Roots	125
Total	\$855
Received for cattle when sold	\$920
Cost of six young cattle which ran in straw yard	160
When sold brought	190
Cost of 17 pigs, \$85; meal and other feeds, \$93	178
When sold brought	208

HIRED HELP ON THE FARM.

The success or failure of the farmer is apt to depend more on his skill in dealing with men in his employ than on any other single item in farm management. On every farm much of the labour done must be hired. The farmer who understands human nature can secure more effective cheaper help than he who does not. As a rule farm employes are a difficult set to deal with. The more enterprising and intelligent are apt to get the western fever early and seek homes for themselves. Occasionally a young man of good habits and intelligence works for others on the farm a few seasons to get the capital to commence farming on his own account. These make altogether the best help, and should be secured at almost any reasonable price they may ask. An ignorant, unskilled blunderer will waste and destroy twice the amount of his wages in a single season. Good farming consists in carefulness in little things. When we consider how few farmers are able to stand the test, the wonder is that, when much of the detail of farm work is left to hired help, there should be as much good farming as there is.

When a faithful and intelligent hired man has been found, all his reasonable demands should be satisfied. Better use farm tools without oiling than have a hired man constantly grumbling. The friction will do less damage on the insensate iron than on the human temper and feelings. The hired man need not and should not be "boss," but a good farmer will not hesitate to consult him at times, and listen to, if not follow, his advice. Two heads are better than one, and there are few men so ignorant as not to know more about certain things than their employers. It is common for farmers to resent any advice from their employes as impertinence; but the fact that advice is thus resented shows that the farmer who does so is in some doubt as to his position. Young farmers and those having little experience in the business are most apt to have trouble with their hired men, and this is mainly because they are afraid to lower their dignity by asking the opinion of their employes. If a young man is intelligent he will not take kindly to such treatment, and this is one reason why so few of the better class of young men seek employment on the farm.

It is essential to the best success with farm help that they should have the fullest confidence of their employer and be interested in their work. Men will not and cannot work as well for a poor as

for a good farmer, not alone because they have less to do with, but because the enthusiasm of interest will in one case impel the help to do their utmost, while lack of interest will retard every effort. When work is progressing favourably it is easier to do a good day's labour than when it is lagging, and the better the help the more difference this feeling will create. Poor help is of the kind that does things mechanically, and with such it may matter little whether the work is reasonable and effective or not. A story is told of an English farmer, who, on hiring a new man, first employed him in doing the most unreasonable and preposterous job of which he could think. The next day he set him to undoing what he had done before. The man went at his task each time without a word of protest, or even seeming to care what he was set to do, so long as his pay was sure. The rich farmer at the close of the second day said he was satisfied, for he had found a man who would do exactly what was told him without thinking or caring for the result. In other words he was seeking for a mere machine, and he had secured one to his liking. A man is not a machine, however, even if he is a farm hand hired by the month. Whoever seeks to transform him into a machine not only injures his manhood, but impairs his effectiveness as a worker.

In every way possible hired help should be made interested in that which they are doing. If a farmer discusses his plans and calculations, his employes will soon take an intelligent interest in the work they are doing. Then, if the employer is taken sick, or some unexpected emergency calls him away, one among his employes will be able to take the lead, and arrange to keep the work in progress. It may be necessary sometimes to employ men who do things mechanically, but where several men are employed one or more among them should be competent and be authorized to take charge of affairs when the employer is not present.

The fact has often been noted that employes will work better and more freely for a rich man than a poor one. In the days of slavery southern negroes used to boast of the wealth and respectability of their owners, as reflecting lustre on themselves, and something of this feeling is quite common among hired help with regard to their employers. Nothing succeeds like success, and no man can do his best when working on a practical failure. A lazy, drunken farmer may often have a kind, sensible and loving wife; but he cannot keep a good hired man two seasons in succession. As a rule, the better the farmer the more thorough his culture, and the more promptly he keeps up with his work the better the class of help he can employ. Keeping in advance of work is doubly important, for if a farmer gets behind, his men see his helplessness and do about as they please. Generally a farmer will not have any trouble about help leaving him if he manages always to be so well beforehand that their leaving will not seriously distress him.

As for payment, the old Mosaic rule not to let the sun go down without paying the servant his hire is a good one for all day help. Hands hired by the month of course do not expect pay until their time has expired, and this should be in the contract. But for a faithful hand all money needed should always be ready when asked for. This is not so much for the benefit of the hired man as of his employer. Usually the less of his wages an employe takes up before his time expires the better for him, yet the employer cannot afford to have a dissatisfied man about the place, for lack of a few dollars which he will have to pay in any event, and can generally pay with trifling inconvenience a few months or weeks before the money is legally due.—*American Cultivator.*

WEEDS AND THEIR SEEDS.

In a recent experiment station Bulletin, Dr. E. L. Sturtevant gives the following facts, as reported in the *Albany Cultivator*:

Weeds, however, show a most remarkable fecundity. It becomes impossible to select an average plant, as the growth varies so much in localities. We have, however, selected plants representing vigorous plants, and the average plant of our fields. The number of species of weeds upon the station farm is quite large, and the number which can start on a limited area is very surprising. June 22, a single square foot of ground in our pear orchard, that had been ploughed and harrowed this season, was found to contain 856 growing plants, comprising 7 distinct species, not counting grasses or clovers. At the same date our forage plot contained 24 species of weeds, our lawn 18 species, our fields 80 species, and our garden 28 species.

On September 28, one vigorous pursley plant (*Portulaca oleracea*) contained 9 branches, the average branch 15 branchlets, the average branchlet 212 seed capsules, one average seed capsule 75 seeds, thus making for an estimate a grand total of 2,146,500 seeds.

June 21, an average plant of shepherd's purse (*Capella bursa pastoris*) contained about 1,000 pods, each pod at least 20 seeds, and more blooms to come. A better specimen showed 2,200 pods and still blooming; a vigorous specimen had 4,400 pods at least and still blooming. The number of seeds to a plant may, therefore, be estimated at from 20,000 to 80,000. A fair sample of mallow (*Malva rotundifolia*) had 1,100 blossoms, and more to come, each bloom producing 15 seeds; the estimate for the plant, therefore, is 16,500.

A fair sample of chickweed (*Stellaria media*) showed 128 flowers and capsules, each of which produced from 7 to 10 seeds. A better plant showed 471 capsules, and many had opened and fallen. This plant flowers during a very long season, and the number of seeds upon the plant at one time may be safely estimated at from 1,000 to 4,000.

A plant of corn speedwell (*Veronica arvensis*) showed 49 pods with 90 seeds to a pod. A more vigorous plant showed 175 pods and about 101 seeds to a pod; another plant had 78 pods, and still another 129. The number of seeds can, therefore, be estimated at from 4,000 to 15,000 to the plant. A specimen of the thyme-leaved speedwell (*Veronica serpyllifolia*) had 112 pods with about 58 seeds to the pod, or an estimated number of 8,000 seeds to the plant.

A fair, rather smallish plant of black mustard (*Sinapis nigra*) had about 120 blossoms and pods. One pod had 15 seeds; the estimate, therefore, is 1,800 seeds to the plant.

It does not require a very vigorous dandelion (*Taraxacum dens-leonis*) to throw up 10 or 20 blossoms, in a season yet each head may contain 120 seeds or more, or from 1,000 to 2,000 to the plant.

A fair sample of curled dock (*Rumex crispus*) had 9 stems; one stem, selected as an average one, had 21 flower spikes, one average spike counted 869 blooms. A single stem had, therefore, about 7,750 blooms, and the 9 stems about 69,000 blooms. A larger plant in the garden had 10 stems, the largest stem had 41 seed spikes, the smallest 20 seed spikes, the largest had 680 whorls, the smallest 219 whorls. The computed number of seeds is therefore at least 98,890.

On June the 25th, an average flower of the ox-eye daisy (*Leucanthemum vulgare*) contained 802, and another flower 849 skenes to the flower. One plant had 72, and another plant had 120 blooms.

While often there is but one stem to a seed, yet frequently there are more, up even to 28. One stem may have 18 blooms. The number of seeds to a plant may, therefore, be computed at from 8,000 to 96,000 seeds.

On July 6, a fair stool of chess or cheat (*Bromus secalinus*) had 211 heads, and an average head had 18 seeds; the estimated number of seeds is 8,798.

A fair sample of corn chamomile (*Anthemis arvensis*) had 151 seeds to the flower, and 48 flowers to a stalk. This plant has from one to ten stalks. The seeds can, therefore, be computed at from 7,000 to 70,000 to a plant.

On July 12, a vigorous plantin (*Plantago major*) had 8 flower spikes, and one of these, not the largest, had 561 blooms.

On August 29, an average sized plant of pig weed (*Chenopodium album*) had 28 branches. One branch bore 21 branchlets. One average branchlet bore 18 flower spikes. One average spike contained 108 seeds. The computation for the plant is, therefore, 825,552.

ABUNDANT GIVING.

The sun gives ever, so the earth;
What it can give, so much 'tis worth.
The ocean gives in many ways;
Gives paths, great rivers, fishes, bays;
So, too, the air, it gives us breath,
When it stops giving comes in death.
Give, give; be always giving;
Who gives not is not living;
The more we give the more we live.

God's love, though in our wealth unheaped,
Only by giving it is reaped;
The body withers, and the mind,
If pent in by a selfish rind,
Give thought, give strength, give deeds, give pelf,
Give love, give tears, and give thyself.
Give, give; be always giving;
Who gives not is not living;
The more we give the more we live.

SMALL FARMS AND BIG CROPS.

Twenty years ago the State of Mississippi, always famous for its cotton yield, contained about forty thousand plantations, averaging three hundred and seven acres each; now she has nearly twice as many, but the average size is only half that of 1860. The number of acres under cultivation is less than in 1860, for scarcely any rough land has been cleared, and some plantations have been injured by broken levees, and yet the cotton crop is twice as large as it was in the good, old times. No better proof could be wanted to establish the desirability of decreasing the size of farms and increasing the number of owners; but the lesson should be learned elsewhere as in the south. Whole counties in the United States are wretchedly poor, because every farmer is trying to handle a "quarter section"—one hundred and sixty acres—with only enough capital and working force to properly till a quarter as much soil.

A FARM of 160 acres should keep fifty head of cattle or their equivalent in other stock. What is raised on the farm should be consumed on the farm, for the farmer thereby saves fertility to the soil and one profit to the pocket-book.—*Indiana Farmer*.

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

It is true beyond any doubt that under-drainage mitigates the effects of a dry season. A drained soil is always loose and porous, and no matter how little the rainfall, it seldom bakes hard. The reason is that the air circulates freely through it, as temperature and atmospheric pressure vary, and thus it readily absorbs the dews and moisture which are never entirely absent from the earth's surface in the night season.

HOUSEHOLD HINTS.

Be loving, and you will not want for love; be humble, and you will never want for guiding.—*D. M. Mulock*.

The *Lancet* thinks that if children would wear woollen next the skin, and wear longer clothing, suspending it from the shoulders, we would hear more of boisterous health and less of backaches and pains.

A boiling solution of sulphate of copper applied to a floor before laying a carpet will keep away moths. For outside coverings of furniture, especially of wool, a solution of corrosive sublimate dissolved in colourless alcohol can be used without fear of discolouration, and is a certain exterminator of these pests.

WARM flannels, perfect protection for feet and legs, abundant clothing, a saddle horse six or eight hours a day, in the open air in all weathers, wheat, oats and beef in generous quantities, much friction of the skin and plenty of sleep, cure a person threatened with consumption. When a doctor has given his advice to such a patient he has done all he can for him. *Dio Lewis* says so.

THERMOMETERS are inexpensive, and every occupied room should have one. Fuel is often wasted by allowing the air to become too hot, and inmates catch cold by allowing the temperature to fall too low unawares. A thermometer is valuable in a fruit room, and by keeping the temperature uniformly near freezing, decay by too much heat and freezing and spoiling by too low a temperature will be prevented.

BUCKSKIN lining in shoes is nice for ladies and girls who suffer with cold feet. Thin soles of cork ought also to be placed between the leather soles, to keep dampness out. If not too lazy go out on the porch and hop around for fifteen minutes; this for those who suffer from chronic cold feet. If you have headache it comes most likely from cold feet, defective vision that needs rectifying glasses, or disordered stomach from eating too much rich food. (Which is it in your case?)

WHEN a pump-tube freezes solid, do not pour in hot water in the common way with the hope of thawing. The hot water will stay at the top, and that will be the end of it. But procure a lead tube, or any other kind of pipe, place the lower end directly on the ice in the pump, and with a funnel pour hot water in at the top. The weight of the water in the pipe will drive it hot against the ice, the pipe settling as fast as the ice melts, and the whole will be cleaned out in an incredibly short time.

Every person should have it distinctly and durably impressed on the mind, that as soon as a house is found to be on fire, every door should be kept carefully closed. Air-currents are thus prevented and the flames shut out for a time from one room to another, and time is allowed to extinguish the fire or to secure the furniture. Some time ago a two-storey house of wood was found to be on fire after midnight, when the inmates ran frantically from one room to another, leaving all the doors open, and in ten minutes the whole building was in flames and nothing was saved.

SOMETHING new in cake is devoutly desired by most housekeepers. Here it is: Bake in a large tin one cake, which, when risen and baked, shall be not more than two inches deep. Take from the tin carefully, and frost thickly over the top with boiled frosting in which, directly after taking it from the stove, you have stirred English walnut meats. Chop the meats, not so fine, however, that they may not be readily distinguished. Cut in pieces about two inches wide and four long. For the cake itself use any good white cake receipt. Flavour with lemon vanilla. This is said to be delicious.

HORSES AND CATTLE.

A VERY SELF-WILLED HORSE.

There is an old nursery rhyme which teaches that kindness and patience are the best methods to pursue in the case of a "donkey that wouldn't go." An English gentleman relates that he had a horse that "wouldn't go," but when he came to try the patience remedy he found that the horse had a larger supply of that virtue than he himself possessed, which, as will presently be seen, was considerable.

The English gentleman's horse was a confirmed "balker." One Saturday afternoon, when he was returning home in his dog cart, the horse balked, as it had often done before, and its master thought that this time he would try what calmness and patience would do. Accordingly he sat still in the dog-cart, and addressed the animal in soothing tones and kindly words; but to no purpose. It was exactly ten minutes past four on Saturday afternoon when the horse stopped in the middle of the road.

The afternoon wore away, the sun sank beneath the horizon, darkness settled down over the landscape, and yet the man and horse remained to fight out the battle between obstinacy and patience. Through the long night they stayed there, the whip remaining quietly in the socket, and when the sun arose after his voyage around the world he found the contest still going on.

At six o'clock in the morning the owner bade his groom fetch a cart-rope and tie it to the horse's fore-leg; but when the groom did so, and pulled with all his might, the only result was that the horse stood with his fore-leg stuck out as if it were a bronze statue. At seven o'clock the horse became perfectly furious, seizing the shaft with his teeth, and shaking it, kicking and stamping with rage the while. At half-past seven the groom tried to tempt him with a measure of oats, but the angry beast would have none of it, notwithstanding that it was twenty hours since he had had a mouthful of food or a drop of water.

Then his master had to confess himself beaten in the trial of patience, and having procured some tough shoots of ground-ash, he applied them to Mr. Horse's back so vigorously that that self-willed quadruped was obliged to confess himself beaten so far as his hide was concerned. It was then twenty minutes before eight on Sunday morning, the contest having lasted *fifteen hours and a half*, during which the horse did not budge an inch, nor his owner stir from his seat in the carriage.

This is probably the most remarkable exhibition of obstinacy on the one side and of patience on the other that was ever known, and the story as told here is exactly true.—*Harper's Young People*.

ARE SHORTHORN CATTLE HARDY?

Yes, we answer, unhesitatingly, as much so as any other breed of cattle in existence, when properly reared. They have only become delicate when foolishly stuffed from birth, with an excess of rich food, kept shut up from healthy out-door exercise, and housed alike from summer heat and winter cold. There are thousands of thoroughbred and high grade Shorthorns in the western States that have been reared without an hour's shelter of any kind, and had no other food since weaning, than grass, from spring to autumn, and the run of a corn-field in the winter; and these prove so superior when full-grown as to win the highest prices often over all other cattle at the various stock exhibitions throughout the country. Shorthorn bulls when delicately bred, taken to the great western plains, and turned

out there among a herd of half-wild cattle to "shirk" for themselves, as a matter of course, could not long endure such a life; but had they been reared and kept in a proper manner, as some few of the wiser ranchmen have latterly done, these bulls would have served well and lived to a fair old age.

The grade progeny of Shorthorn bulls out of Spanish or Texas cows, one of the largest of the ranchmen says, "unite the heavy qualities of the former with the power and activity of the latter." And to this they undoubtedly add the further merit of maturity two years earlier than their female ancestors. They consume no greater quantity of grass, and turn out a quality of beef worth from fifty to seventy-five, and perhaps 100 per cent more than the Spanish or Texas bullocks. The same story is told in Great Britain, where Shorthorns and their grades have spread rapidly during a century past, from their original home in Durham, to the severe winter climate of the north of Scotland and the very mild one of the south of England; and throughout the country they are now successfully competing in thrift (and at a greater profit in breeding and raising) with many of the various sorts of the natives.

The celebrated African traveller, Livingstone, wrote, that in one large district of that excessively hot country, he found a native breed of cattle as large as and closely resembling the English Shorthorns in all their points. A similar native breed has existed from time immemorial, in the cold mountainous cantons of Switzerland.

Give the Shorthorns plenty of healthy food and pure water, and they will do as well as other beasts; but we say, all ought to be well sheltered from winter storms, by day and night, and have shade to go into at will during the extreme hot summer. On thin pasture, and rough, hilly, mountainous land, smaller and more active breeds are more profitable, and these should be kept in such districts in preference to Shorthorns, Herefords, and other large animals.—*American Agriculturist*.

HORSE MAXIMS.

1. Never allow any one to tickle your horse in the stable. The animal only feels the torment and does not understand the joke. Vicious habits are thus easily brought on.
2. Don't beat the horse when in the stable. Nothing so soon makes him persistently vicious.
3. Let the horse's litter be dry and clean beneath as well as on top. Standing on hot, fermented manure makes the hoofs soft, and brings on lameness.
4. Change the litter partially in some parts, and entirely in others, every morning, brush out and clean the stall thoroughly.
5. To procure a good coat on your horse, use plenty of rubbing and brushing. Plenty of "elbow grease" opens the pores, softens the skin, and promotes the animal's general health.
6. Never clean a horse in the stable. The dust fouls the crib, and makes him loathe his food.
7. Use the curry-comb lightly. When used roughly, it is a source of great pain.
8. Let the heels be well brushed out every night. Dirt, if allowed to cake in, causes grease and sore heels.
9. Whenever a horse is washed, never leave him till he is rubbed quite dry. He will probably get a chill if neglected.
10. When a horse comes off a journey, the first thing is to walk him about till he is cool if he is brought in hot. This prevents him taking cold.
11. The next thing is to groom him quite dry, first with a wisp of straw, then with a brush.

This removes dust, dirt and sweat, and allows time for the stomach to recover itself, and the appetite to return.

12. Also let his legs be well rubbed downwards by the hand. Nothing so soon removes strain. It also detects thorns or splinters, soothes the animal, and enables him to feel comfortable.

13. Let the horse have some exercise every day. Otherwise he will be liable to fever or bad feet.

14. Let your horse stand loose, if possible, without being tied up to the manger. Pain and weariness from a continuous position induce bad habit and cause swollen feet and other disorders.

15. Look often at the animal's legs and feet. Diseases or wounds in these parts, if at all neglected, soon become dangerous.

16. Every night look and see if there is any stone between the hoof and shoe. Standing on it all night the horse will be lame the next morning.

17. If the horse remains in the stable his feet must be "stooped." Heat and dryness cause cracked hoofs and lameness.

18. The feet should not be "stooped" oftener than twice a week. It will make the hoofs soft, and brings corns.

19. Don't urge the animal to drink water which he refuses. It is probably hard and unwholesome.

20. Never allow drugs to be administered to your horse without your knowledge. They are not needed to keep the animal in health, and may do the greatest and most sudden mischief.

Mr. C. F. NURRING, Randolph, Vt., has invented, but not patented, what he calls "a step-mother for calves," which the *N. E. Farmer* describes as follows:

"To build one, erect a shelf in some convenient corner of the calf-pasture about as high above ground as an ordinary cow's udder, or a little higher. Cut out round holes in the shelf of sufficient size to receive the bottom of a milk-pail or other tin vessel. In the bottom of such vessel prick a small hole with an awl, and directly beneath it sodder on a piece of lead pipe or other small tube, an inch or more long. Over this tube draw a piece of rubber hose and wire it tightly to the tube. With warm milk poured in the pail, insert the rubber teat into the calf's mouth and let him suck. To make the deception still more perfect, strips of old buffalo skin may be tacked to the under side of the shelf for receiving the hunts of the calf, before he learns that bunting is a superfluous operation, which he soon will, as the flow of milk is constant till the supply is exhausted. This artificial mother allows the calf to take the milk in a more natural way, the usual amount of saliva is swallowed with the milk, and the calf is not as likely to acquire the disagreeable habit of sucking the ears of its mates."

CARROTS FOR HORSES AND COWS.

From several years' experience in feeding horses and cows, we have become fully satisfied that there is no other food that can be given to the milch cows and horses, during the winter months, that is so beneficial as good, clean carrots; given with other feed, about a peck a day to horses; and half a bushel a day to milch cows, will be more beneficial than the same cost of any other feed that can be given them, during the season when they are otherwise confined to dry feed—without pasture or ensilage.

Horses will be kept in better health, their hair smooth and bright, while it promotes better health and digestion of other food. Carrots may be mixed with grain and cut-hay, or separately as may be most acceptable to animals.

SHEEP AND SWINE.

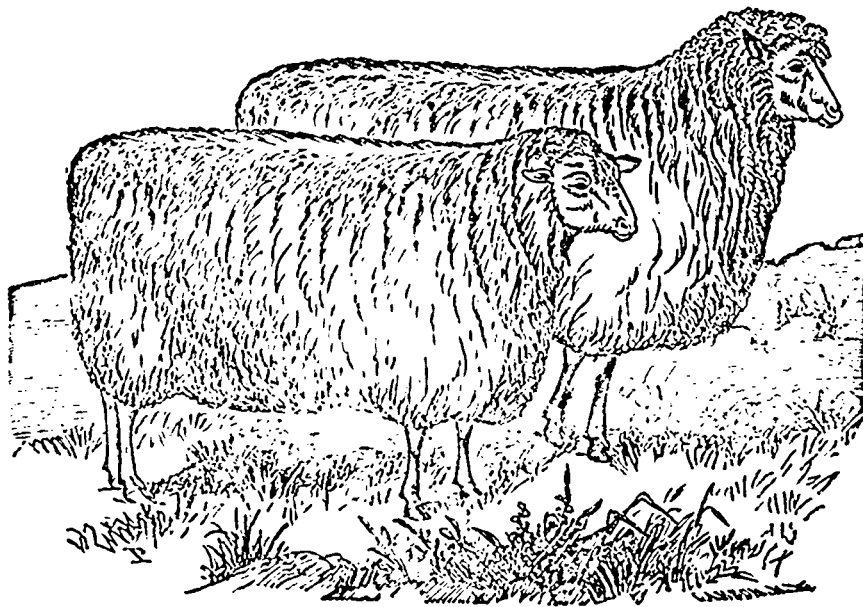
THE MUTTON BREEDS AND THEIR ORIGIN.

Randall classes the mutton breed as follows: The Leicesters, Cotswolds, New Oxfordshires, Southdowns, Hampshire Downs, Shropshire-downs, and the Oxfordshire Downs. The Leicesters, under the most favourable circumstances for their development, perhaps excel others in earliness of maturity, and none make better returns for the amount of food consumed by them. But they require better shelter, keep and care than any other variety. The ewes are not so prolific nor so good nurses as those of the other mutton families, and their lambs, when first dropped, demand a good deal of attention. The mutton is only medium in quality, and, owing to its great amount of outside fat, is not generally sought to supply American tables. The origin of this sheep owes much of its excellence to the sagacity and skill of the celebrated breeder, Mr. Bakewell. The Lincolnshire, the Dorsetshire, the Gloucestershire and the New Oxfordshire are large, coarse-wooled and coarse-boned sheep, which have their partisans in particular districts and are much crossed and intermixed with others, but have not attained the enviable distinction of being improved so as to form a distinct and extensively popular race. The Cotswolds are a larger, hardier and more prolific sheep than the preceding, and the ewes are better mothers. They furnish available combing wool and are a decidedly favourite sheep with the breeders of long-wools in the United States. The Cotswolds, as a breed, are of great antiquity. The Southdowns, the original Sussex or Southdowns, have, probably, the purest blood, free from admixture during the long period which covers the rise and development of the British wool manufacture and the increase of meat production of any British sheep. Their improvement has been long continued, and is still continuing, apparently without the necessity of recurrence to any foreign blood for amelioration of a single objectionable point. The Hampshire Downs—this family is the result of a cross between the Southdown and a short-wooled English variety of greater size and better constitution. Some writers conjecture that they have also a slight infusion of Cotswold blood. They are coarser in appearance than the Southdowns, and their mutton sells half a cent less per pound in the market, but they possess nearly all the good qualities of the former and are hardier. They are favourites in many parts of England, but have not been introduced extensively into the United States. The Shropshire-Downs, like the preceding, have been produced by a Southdown cross, are very hardy, short-wooled stock, and most of the flocks have also a dip of the Leicester and Cotswold blood. They are nearly as large as the last-named families, and they promise to unite to an uncommon degree the good qualities of the short and long wools, being larger than the former and hardier, and the ewes are highly prolific and are excellent mothers. Superior specimens of them are to be found in the United States and Canada. The Oxfordshire-Down is comparatively a modern family, is of a cross between the Hampshire-Down or the Southdowns and Cotswolds, and the statements above made in respect to the Shropshires will apply equally well to them, though the two families

vary in appearance and in several of their minor qualities. The Cheviot and black-faced sheep of Scotland have some peculiarities which entitle them to a brief notice. Both kinds are of moderate size and good shape, weighing, when dressed, from twelve to twenty pounds to a quarter. Their wool, especially that of the black-faced, is of very inferior quality. They are thrifty and their mutton is of the best quality, commanding a high price, from its resemblance in taste to venison, and is much sought after by epicures. They are both well adapted to cold and mountainous regions of the country they inhabit. On the upper part of the hill in Northumberland, which is properly termed the Cheviot, is the central locality of the sheep called by that name. They have been there from time immemorial.—*From a Paper by Hon. Robert Mitchell, of Princetown, Indiana.*

THE PIG IN WINTER.

The great importance of this class of stock commercially, and the large extent to which its flesh is used for home consumption, demands thorough discussion of its management in all its phases. The proper system of winter-feeding requires to



LEICESTERS.

be better settled. The old "storing" system, by which a pig is simply kept alive during the winter, that it may be ready to grow next summer, has not yet been wholly given up, but may be found in full operation in many parts of our country. It does not seem as if every feeder should have discovered the utter imprudence of this practice. If pigs were like a waggon, a bin grain, or a mow of hay, that might be kept over winter without expense, there would be some excuse for it, but when we reflect that two-thirds of a full ration is used merely as the food of support, without adding anything to the weight or value of the pig, this practice of keeping pigs through the winter, or at any other time, without constant growth, seems absolutely indefensible.

As we have shown in previous chapters, time is a most important factor in the problem of pig-feeding. Every week that a pig is kept without growth, the feed is worse than thrown away, because it takes time to overcome the unthrifty habit, and all the food is lost till growth begins again. It is thus evident that the skilful feeder must strive after continued and unremitting growth.

The winter season should be no exception to this steady growth, although it will require more food to put on a pound of gain in winter than in summer, unless the temperature of the pig-pen is raised to near summer warmth. All animals must keep up their heat by consumption of food, and it makes a great difference whether the surrounding

air is at zero or sixty degrees above. It would seem, therefore, that, while thrift is as necessary in winter as in summer, the feeder may control the temperature and save a large percentage of food in winter growth.

We have just discussed the importance of grass as a part of the ration of the pig. It might reasonably be supposed that the pig would require some fibrous food in winter as well as in summer; and if green clover is good in summer, why not nicely cured clover hay in winter. Having established the necessity of grass in its season, for promotion of health, the writer experimented also on the use of clover hay in winter as an addition to the grain ration.

Having four pigs of the same age, and about the same weight, they were divided into two lots of two each. Each lot weighed 150 pounds at the commencement of the experiment. One lot was fed cornmeal, wet with warm water, and allowed to stand some ten or twelve hours. The other lot was fed about two quarts each of short-cut clover hay, mixed with cornmeal, wet with hot water, and allowed to stand the same length of time. Each lot was fed without stint upon its ration, and the experiment continued for 120 days. As the experiment with grass, the lot on clover-hay and meal had the best appetite, ate the most steadily and showed greater thrift; but the lot on meal alone were apparently healthier than those on meal alone in the other experiment; but they were older, and the weather being colder, were not so feverish. This latter lot gained 110 pounds per head; whilst the lot on clover-hay and meal gained 148 pounds each, or thirty per cent. more. Since this we have often fed pigs on fibrous food in winter, and always successfully. Feeding clover-hay in winter may be novel; but why should it not be considered as appropriate to feed pigs clover hay in winter, as to feed cattle and horses clover-hay in winter? The pig eats green

clover in summer, if he can get it, as profitably as the cow or horse; and when farmers understand the true system of feeding, clover-hay will generally make part of the winter ration of pigs.

—*From Feeding Animals, Stewart.*

FEED FOR PIGS.

Make the cobs into neat winrows about a foot high, and after the wind has swept through them an hour or so set fire to them. When charred rake them down and sprinkle water on the mass, stir them again, and sprinkle again to be sure they do not go on burning and go to ashes. If now a seasoning of salt be thrown over the pile there will be a lot of feed for the pigs and hogs, which they will enjoy hugely.—*Thoroughbred Stock Journal.*

It is a matter not sufficiently known, that sheep give material assistance in keeping land free from weeds. Many of the most pernicious weeds with which farmers have to contend are generally relished by sheep, in their early or soft state, and ultimately eradicated in this way.

It is not well to keep sheep too closely housed even in winter, for they will stand a very low temperature if they are kept dry; but if left out for any length of time while it is raining or snowing the fleece will retain the moisture, and the animal will suffer from cold even in moderate winter weather.

GARDEN AND ORCHARD.

THE FRUIT GARDEN.

BY THOMAS DEALL, LINDSAY.

"What soil, and what conditions of the surface soil would best conduce to the proper development of apple trees?"

While the apple tree is being so generally and often so successfully cultivated throughout the country, it seems unnecessary to give any minute description of a suitable soil for that purpose. The general intelligence of our people has led to the establishment of the idea that land, which will produce a good crop of wheat or barley, ought to be suitable for an orchard, and in this they are mainly correct, as the cause of failure is not so much in the kind of soil selected as in the lack of knowledge as to the preparation and after-treatment of the surface soil.

A large portion of the surface soil in Ontario is of a clayey formation, and is usually described as clay, clay loam, sandy loam, loamy clay, etc., but which may be described generally as calcareous clay, with a greater or less quantity of humus or vegetable admixture.

The fertility of such a soil depends largely on its physical properties, perhaps more so than on the chemical combination of its elements. In its natural state, where clay predominates—and it generally does with us—its power of cohesion is so great that it will not readily permit water to percolate through it; it has but little power to absorb moisture by capillary attraction, to absorb gases, or to retain heat. The physical properties of this soil must, therefore, be materially changed before apple trees can make such healthy and vigorous growth as to make their cultivation remunerative.

The conditions of the soil which seem to offer the best promise of success are: first, that it shall contain the necessary combination of chemical elements, and then that the surface soil should, by mechanical means, be made incohesive, permeable, friable and mellow, to the depth of eighteen inches or two feet, and that it should be dark coloured, and also that ample provision be made by under-draining or otherwise, for the percolation and carrying off of all superfluous water, then it will readily appropriate from the atmosphere the three great desiderates of vegetable growth, air, heat and moisture. Trees planted in such a soil will have ample room for the ramification of their roots for a very long period of time, and if the soil, by mechanical means, is kept in the state indicated for eight or ten years after planting, the trees will not decay through loss of a large portion of their lower roots, by rotting in stagnant water, as is frequently the case in undrained soil.

In the spring of the year the season of growth will commence much earlier in land so prepared. The under-drains will have carried off all superfluous water early, and, therefore, its warmth will not be lessened by evaporation from the surface. On the contrary, it will be enabled to absorb and digest the warm spring rains and the sun's rays from two to three weeks earlier than soils left in a state of nature, or if only cultivated to the depth of a few inches. As a proof of how readily a suitably prepared soil will absorb moisture even in the early spring, I may mention that, on the 26th of April, 1880, between four and five o'clock in the afternoon, and while the thermometer stood at about 60° Fah., rain fell to the depth of twenty-nine inches, which will be about thirty-two tons of water to the acre; every drop of this, which fell on a portion of my garden that had been, for some years, in a high state of cultivation, was entirely absorbed, while

uncultivated land, but a few rods distant, did not absorb any perceptible portion. Here then, was a large quantity of water, heated by its passage through the atmosphere to nearly 60° Fah., passing quickly into the soil, taking with it a portion of the soluble part of the manure which had been liberally applied to its surface, thereby assisting greatly to raise the temperature of the soil to the point at which the germination of seeds and growth of rootlets commences; namely, to about 58° Fah. The next day this piece of land was sufficiently dry for working.

Colour too has much to do with the temperature of the soil, and it is easily shown that a dark soil will absorb heat and retain it much better than a light one. If two flower pots of equal size and quality, but one white and the other black, be filled with dry, calcareous clay, taken from some cool place and exposed to the rays of the sun, it will be found that the temperature of the soil in the white pot will not increase more than sixteen degrees, while that in the black one will increase twenty-four degrees. Therefore, if the surface soil is too light in colour, it should be darkened, and this can readily be done by applying a sufficient quantity of barn-yard manure, but where such an application is not desirable, as in a young orchard, probably swamp muck might answer a better purpose.

Well cultivated and thoroughly under-drained soil will withstand our occasionally severe summer droughts much better than soil not so prepared. Perhaps it may not be generally known that a very large proportion of the moisture necessary for the support of vegetation, during the season of growth, is obtained from the subsoil. Many proofs may be given in support of this theory. One of the most obvious is the numberless springs which abound throughout the Province, at points much higher than the general level of the surrounding neighbourhood. Another proof is the fact—which may not be quite so obvious, although more satisfactory, when obtained—that, after a few days' heavy rain, subsequent to a long season of drought, water, or the subsoil saturated with water, can often be found in undrained land at a depth of two or three feet below the surface; while the rain water which had lately fallen had not penetrated the soil more than eight or ten inches. The intermediate stratum being absolutely dry, and this in places where, had an examination been made before the rain fell, the subsoil, to the depth indicated, would have shown no sign of moisture. If a supply was not obtained from this source, many of our own trees and most of our agricultural crops would have been utterly ruined during the prolonged draught of the last summer. As it is I am afraid much permanent injury may result to fruit trees in undrained soil from this cause. The tiny rootlets penetrate the earth in search of the retreating moisture during a dry season, to a much greater depth than during a wet one. When heavy rains set in, the subsoil becomes unduly saturated, and the rootlets, not having the power to retrace their steps, must of necessity remain buried in the cold, wet subsoil until late in the following summer, and before that time the roots become diseased by cold, excessive moisture, and the lack of the needed stimulants of heat, air and other gases. The poison is absorbed into the tree in early spring, generally causing permanent injury, often proving fatal to the tree.

Ten acres of land planted with healthy, well-grown apple and other trees, carefully set in rich, loamy soil, overlying a calcareous gravelly clay (such as largely predominates throughout this Province), properly subsoiled to the depth of two feet, thoroughly under-drained by drains at least four feet deep, and carefully cultivated every year

for seven or eight years, by growing potatoes and mangolds or other root crops will, in my opinion, from that time forth, prove to be a more profitable (permanent investment than can possibly be realized from fifty acres of land devoted to any agricultural purpose whatever.

WINTERING CELERY.

Of all the crops of the garden, that of celery is the most uncertain, the most laborious and most expensive to raise. It is more than these: it is the most difficult to keep in a good, sound condition through the winter and to the middle of April at least as it ought to be, to compensate the producer fully. We profess to have had a good deal of experience with the celery crop, and we have usually as successful a yield as is to be found in any well-managed garden.

In storing the crop for the winter, we have usually pursued two modes which have answered well. The first is to remove the celery to high and dry ground, dig a straight trench spade deep, stand up a row of plants singly, then another row, with some earth between, and so on until about half a dozen rows are finished, when commence another bed, and so on. The soil should be packed in firmly and then banked up, so that the tops of the celery are just covered, then spank off roof fashion to turn the rain. Over this two wide boards, nailed together, should be placed as a security against moisture, or straw can be bent over and secured at the bottom with bean poles, and a little gutter to carry off the water at each side. Celery put away thus carefully ought to keep till May.

Another plan is to sink barrels into the earth so that the tops are two or three inches below the surface, then stand them compactly full of celery without any soil; put tight covers upon them, so as to exclude all moisture, and then a couple of inches of soil.

For early consumption—that is to say in December or January—it can be preserved in rows where it is grown, properly covered and protected against moisture.

SEASONABLE PARAGRAPHS.

A BLANKET of good manure during the winter will start rhubarb off lively in the spring.

IN shipping apples in winter line the barrels well with newspapers and they will stand a greater degree of cold without injury.

BURY hard cabbage heads down. Stand the soft heads on their feet in the trenches, and they will likely harden up before spring.

WHEN the temperature of the fruit cellar is likely to run below 32° set therein a big coal oil lamp, or a bucketful of boiling water.

A TREE that is covered with scale lice is unhealthy, and its restoration to health by proper cultivation, manuring and draining, will remove the cause of the lice.

IN buying trees from the nursery inspect closely the roots. No matter if the stem be crooked and the top sprawly. If the roots be right the other end will come right.

OF the two or three thousand varieties of apples, four or five are enough for any one orchard (for market), and those should be the ones which have proved themselves the best in ones own neighbourhood.

IN selecting fruit trees or any others, be careful to choose those with smooth, healthy-looking bark, which have entirely shed their leaves and have plenty of small fibrous roots. Trees on which the leaves remain after frost sets in, and stick to the branches in the spring, may be regarded as not healthy, and some way lacking stamina.

MISS MARY CAMPBELL, Elm, writes: "After taking four bottles of Northrop & Lyman's Vegetable Discovery and Dyspeptic Cure, I feel as if I were a new person. I had been troubled with Dyspepsia for a number of years, and tried many remedies, but of no avail, until I used this celebrated Dyspeptic Cure." For all impurities of the Blood, Sickheadache, Liver and Kidney Complaints, Costiveness, etc., it is the best medicine known.

A FAILURE IN CROPS.—A species of worm is eating all the leaves from the chestnut and hickory nut trees in many sections, and the crop will be a failure. Worms that afflict children or animals will prove a failure if Dr. Low's Pleasant Worm Syrup is used. It is a safe and sure cure for all worms that lurk in the human system, tape worm included.

ONE trial of either Graves' Worm Exterminator will convince you that it has no equal as a worm medicine.

Hard and soft corns do not withstand Holloway's Corn Cure; it is effectual every time.

HOUSE PLANTS.—Many a beautiful rose had been nipped in the bud by an undiscovered worm, and many a young life has been sacrificed to the destructive power of worms in the human system. If you would save those other tender house plants, "your children," give them Freeman's Worm Powders, they are safe and Pleasant, and are warranted effectual.

JABESH SNOW, Gunning Cove, N. S., writes: "I was completely prostrated with the asthma, but hearing of Dr. Thomas Electric Oil, I procured a bottle, and it done me so much good that I got another, and before it was used, I was well. My son was cured of a bad cold by the use of half a bottle. It goes like wild-fire, and makes cures wherever it is used."

A LITTLE BEHIND HAND.—Some people are always a little behind hand in all undertakings; delays are dangerous, and none more so than in neglecting what seems a trifling cold. Prudent people break up the ill effects by timely use of Hayward's Pectoral Balsam, thus preventing serious lung troubles.

MR. WM. BOYD HILL, Cobourg, writes: "Having used Dr. Thomas' Electric Oil for some years, I have much pleasure in testifying to its efficacy in relieving pains in the back and shoulder. I have also used it in cases of croup in children, and have found it to be all that you claim it to be."

XMAS FAT STOCK SHOW

To be held in the commodious stables of the Commercial Hotel, on Jarvis street, close by the market, in THE CITY OF TORONTO, ON FRIDAY & SATURDAY, DEC. 14 & 15, under the auspices of the Agricultural and Arts Association of Ontario, and the Toronto Electoral Division Agricultural Society.

\$1,500 GIVEN IN PRIZES.

The buildings to be illuminated by electric light. Arrangements have been made with the railways for return tickets at one fare and a third. Prize lists and entry forms can be had on application to the secretary by post-card or otherwise. A. SMITH, V.S., Chairman; J. P. EDWARDS, Treasurer; HENRY WADE, Secretary, Toronto, cor. of Queen and Yonge Sts.

RELIABLE BREEDERS.

Cards of four lines or less inserted in this column, and a copy of the RURAL CANADIAN sent for one year, for \$6 per annum. Each additional line, or part of a line, \$1.50 per annum. Terms: Cash in advance.

WM. SMITH, Columbus, Ont., breeder and importer of Clydesdales, Cotswolds and Shorthorns. Choice young stock for sale. Satisfaction guaranteed.

JAMES GRAHAM, Port Perry, Ont., breeder of Durhams, Cotswolds and Berkshires of the most approved blood. Choice young stock for sale.

THOMAS GUN, breeder of Ayrshire Cattle, Lincaster and Southdown Sheep and Berkshire Pigs, Sydenham Farm, Oshawa, Ont.

THOMAS IRVING, Logan's Farm, Montreal, breeder of Ayrshire Cattle, Clydesdale Horses, Yorkshires and Berkshires Pigs, and Lincaster Sheep.

W. M. SHIER, "Clear Spring Farm," Sunderland P. O., Ont., breeder and dealer in Shorthorn Cattle and Shropshire-downs.

Scientific and Useful.

CUSTARD PIE.—Three beaten eggs, three tablespoonfuls sugar, a little nutmeg and salt, and two large cupfuls rich milk.

APPLE CREAM PIE.—To the above mixture add a cupful of grated sweet apple, leaving out one-fourth the quantity of flour.

ACID PIE.—Two tablespoonfuls flour, one scant cupful water, one-third cupful molasses, one-third teaspoonful tartaric acid, set on the stove and stir until it boils, and bake with one crust.

CREAM PIE.—Stir smooth two large tablespoonfuls of flour in a cup of new milk, add another cupful of very rich sweet cream, three tablespoonfuls of sugar, a dash of salt and a little flavour. Bake with one crust.

NOVEMBER SAUCE.—To one quart of cranberry sauce add a handful of chopped raisins; it improves the flavour. It is best to improve the season, also, when cranberries are cheap, by putting them up with a little sugar for fruit tarts or poultry sauce. Use glass or stone jars, not tin.

A QUICKLY MADE DESSERT.—Is an imitation custard pie. Beat three eggs, three large spoonfuls of sugar, a bit of nutmeg, half a teaspoonful of salt, and two scant tablespoonfuls of flour. Add to these enough rich milk to fill a well-buttered square pie tin. Stand five minutes and bake. Or bake without sugar, and eat with sugar and cream.

CAKE WITH NUTS.—The hickory nut season is here now, and the following way of making cake can be tried: Two teacups of sugar, half a cup of butter, one cup of thin cream, three and a half cups of flour, two teaspoonfuls of baking powder mixed with the dry flour, three eggs, the whites and yolks beaten separately, and one large cupful of the hickory nuts chopped or broken in small bits.

CHRISTMAS PUDDING.—Well stir three-quarters of a cup of butter and the yolks of four eggs together. Add one cup of molasses and two cups of warm milk with two teaspoonfuls of soda dissolved in a tablespoonful of boiling water and added to the milk. Season with a teaspoonful of cinnamon, half a teaspoonful of cloves, a little nutmeg and salt. Add flour to make it as stiff as pound cake, and lastly two pounds of raisins stoned and chopped fine, one quarter of a pound of citron and the whites of four eggs beaten to a stiff froth. Tie in a floured bag, leaving room for the pudding to swell, and steam six hours.

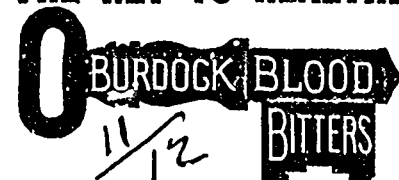
BROWN FRICASSEE OF CHICKEN.—Clean, wash and cut the chicken into comparatively small pieces. Chop a quarter pound of fat salt pork and half a small onion. Put the chicken with these into a pot with a pint of cold water, and stew slowly until the meat is tender. Take out the chicken, put into a colander and keep hot over a pot of boiling water, throwing a cloth over the colander. Strain the gravy back into the pot, season with parsley, pepper and salt. Thicken with a tablespoonful of browned flour, boil up once, return the chicken to the gravy, simmer ten minutes and serve.

MR. W. A. WING, Westport, writes: "I wish to inform you of the wonderful results which follow the use of Northrop & Lyman's Emulsion of Cod Liver Oil and Hypophosphites of Lime and Soda. A cough of six months' standing had reduced me to such an extent that I was unable to work. I tried many remedies without effect; at last I used this Emulsion, and before three bottles were used I am glad to say I was restored to perfect health."

IRISH STEW.—About two pounds of the neck of mutton, four onions, six large potatoes, salt, pepper, three pints of water and two teaspoonfuls of flour. Cut the mutton in handsome pieces. Put about half the fat in the stew-pan, with the onions, and stir four eight or ten minutes over a hot fire; then put in the meat, which sprinkle with the flour, salt and pepper. Stir ten minutes, and add the water, boiling. Set for one hour where it will simmer, then add the potatoes, peeled and cut in quarters. Simmer an hour longer, and serve. You can cook dumplings with this dish if you choose. They are a great addition to all kinds of stews and ragouts.

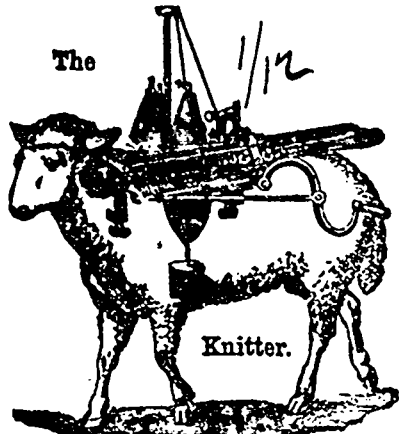
INDISCRETION in diet brings on dyspepsia and irregularity of the bowels. Eat only wholesome food, and if the trouble has become permanent—as it is very prone to do—try a course of Northrop & Lyman's Vegetable Discovery and Dyspeptic Cure. The combined effects astonish and delight the sufferer, who soon begins to digest well, regain functional regularity and improves in appetite; the blood becomes pure, and good health is restored.

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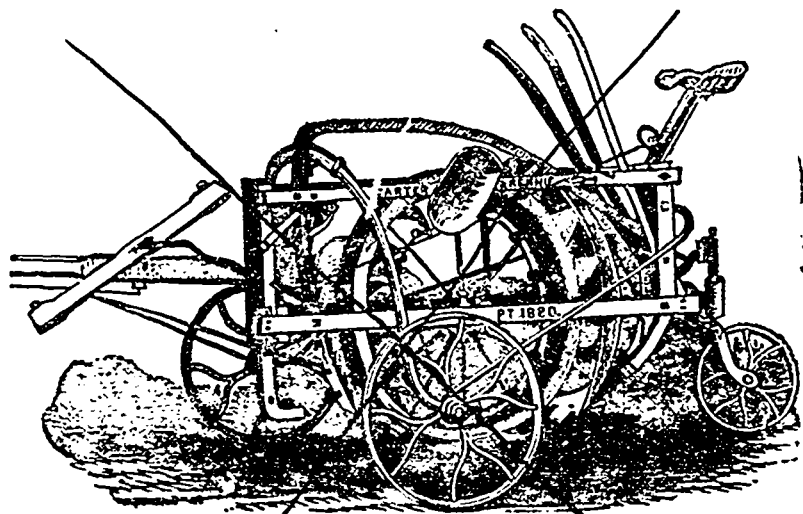
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Jordan Street, Toronto. Publisher.

The Rural Canadian.

TORONTO, DECEMBER, 1883.

THE RURAL CANADIAN FOR 1884.

THIRD YEAR OF PUBLICATION.

THE RURAL CANADIAN will shortly enter on its third year, and, we are pleased to be able to say, with very encouraging prospects for the future. It is unnecessary to specify the features of the paper for the coming year. No efforts will be spared to make its visits interesting and useful to those who farm, to those who grow fruit, to those who raise poultry, to those who breed stock, to those who make butter and cheese, and to those who keep house. The young ladies of the household will find in each issue, a piece of music which, during the year will be worth a good deal more than the subscription: while "Young Canada," a favourite department in the past, will be continued. Illustrations will only be inserted as found necessary to add value to the letter press. Single copy one year, \$1. The publisher offers the following

INDUCEMENTS TO CLUBS:

Clubs of five with free copy to getter-up of club, \$4.
" seven " " " " \$5.
" ten " " " " " \$7.

In every case the paper will be furnished from this out till the end of 1884, on above terms. Money must accompany order; registered letters at our risk.

May we ask our friends to commence work at once? An hour's canvassing now will give better results than a whole day later on. Begin with your neighbours. In many cases they only require to be asked in order to secure their names.

Specimen numbers sent free on application.

C. BLACKETT ROBINSON,
5 Jordan Street, Toronto. Publisher.

A SHORT CROP OF CLOVER SEED.

Two or three causes have combined to produce a short crop of clover seed in Ontario this year. First, the wet weather in July hindered haying operations, and the second crop made a late start. Secondly, the midge has been very destructive in nearly all parts of the Province, and especially in the districts where the bulk of our clover seed is grown. Thirdly, the early frosts did much harm to all late crops, destroying every field that escaped the ravages of the midge. And it is no doubt true, also, that the clover crop matured more slowly than usual this year, partly on account of rank growth and partly on account of low temperature. The loss is a very serious one, and all the more so for following the one of last year. Our readers will remember that by the severity of winter and spring frosts last year the clover was either killed or rooted out, and consequently that there was no seed crop worth mentioning. Farmers who sowed this year were obliged to go to the market for seed, and as the price was high and the clover came out of winter quarters, looking healthy and vigorous, it may be doubted if an average area has been sown. It is at all events reasonable to suppose that many would be encouraged to trust appearance, and take the risk of losing a season's

crop. We say losing one season's crop, for, as every farmer knows, the clover is a biennial plant and dies after ripening the second year's seed. Whoever, therefore, has taken the risk this year, confiding in the prospect of an abundant harvest of seed, must either make up his mind to sow next year or to abide the result. In any case seed must rule high in the market for some time, even assuming that there is not a recurrence of injury by frost or of destruction by the ravages of the midge. The value of clover, both for forage and fertilization, can hardly be over-estimated in the system of farm culture which prevails in Ontario, and any useful suggestions that may be offered on the subject now cannot fail to prove of great value. There is little doubt but that the midge has come to stay for a few years, unless human ingenuity can cheat it out of existence. What can be done? We know this much of its natural history—that two broods are brought forth each season, the eggs of which are deposited in the flower of the clover in the months of June and August. It is the second brood that works havoc to clover seed, and the only way to escape its ravages is to bring the clover into flower either too early or too late to suit the purpose of a hatchery for the midge. A plan that has worked very satisfactorily this year is to pasture the clover up to the 10th or 15th of June; then, taking off the cattle, leave it to mature a crop of seed. Those who tried this method have found that the seed was so far advanced before the eggs of the August brood were laid that little or no harm was done. The fact that the clover midge has this year extended to nearly all parts of the Province makes it imperative that every farmer should know its habits and take intelligent means to minimize the loss which it causes.

A COURSE OF READING.

It is quite possible for a man to be a successful farmer without the knowledge of "book-learning," as it is called. But all other things being equal, the most successful farmer will be found to be the man possessing the highest average of intelligence. Experience is worth a great deal in tilling the soil, growing field crops, producing fruits, or breeding and feeding live stock. But experience is a dear schoolmaster, and the greater the number of useful ideas we get from other men the better we are equipped for fighting the battle of life, whatever our pursuit or occupation may be. It is not possible that every farmer's son can take a course at our Agricultural College; perhaps it is not even desirable. We would not, if we could, have all our farmers trained to follow one system, for it is largely by independent enquiry that new methods and results are obtained. The professors know a good deal, but they don't know all that is worth knowing; and we would back the aggregate of common-sense intelligence on the farm against all the schools. The individual, whoever he may be, has a great deal to learn before he can presume to reach that aggregate, but the nearer he comes to it the better fitted he will be to fill his sphere. A judicious course of reading, covering the general field of agriculture and giving sound information based on a wide range of experience, would be invaluable to every young man who intend to make his living out of the farm. The Council of the Agricultural Association, we think, have shown much wisdom in proposing such a course, including a regular yearly examination thereon, conducted at the same time and on the same plan as the High School Intermediate Examinations. The prizes and the standing which may be obtained by the sons of farmers who take

the course of reading recommended and go up for examination will be of certain worth; but far greater will be the benefit from the knowledge thus acquired. The long winter evenings on which we have now entered cannot be better spent than in the study of the standard text-books named in the Council's circular. An educated yeomanry will make for Ontario an enduring place in the agricultural annals of the world, and if the Council but succeed with its scheme it will have established for itself a new and valuable claim to public gratitude. Whether it succeed or fail depends on the resolve of farmers' sons.

Information as to the course will be found in the circular on Agricultural Education which appears in another column.

ASHAMED OF THIR IDENTITY.

PICTURESQUE CANADA.—Mr. Belden, agent for "Picturesque Canada," has had an interview with the Customs Department with respect to the printed material for the book brought into Canada. He desires a lower valuation for duty than the regular one, on the ground that the expensive plates were manufactured in Canada, though the printing has been done in New York. The Department will meet his views to a considerable extent.

The above extract from a recent batch of the *Mail's* Ottawa correspondence, contains more absolute untruth (though chiefly by inference) than any press paragraph which has ever come under our notice. It may have been published in good faith, but either the Customs Department or the correspondent, or both, have been "stuffed" by the precious Mr. Belden—the *Agent* (as he wishes to make himself appear) of "Picturesque Canada." (1) Mr. Belden is the *owner* of the work and is the same Belden so notorious in the Atlas business; hence his desire to appear to the public only as *agent*. (2) The present, a recent valuation was enforced by the Minister of Customs some months since, after examining into and confirming statements of fraud, smuggling, and false entries by the Beldens, in bringing in their stuff. (3) Every particle of work on the plates is and has always been done in New York, as has everything else in connection with the book, except the drawing of a few pictures by Mr. O'Brien, and some half-dozen pictures by as many other Canadian artists. Even many of the drawings (which were guaranteed by the prospectus to be "original and prepared expressly for the work") are sketches of scenery in Connecticut, or the Adirondacks, bought, "ready made," from the collections of some American artists, palmed off on subscribers as Canadian scenes.

No wonder the Beldens wish to retain their *incognita* in connection with "Picturesque Canada."

THE GRAPES OF A SEASON.

BY ANNIE L. JACK.

"Only one bunch left of our three thousand pounds," I say, as we are talking of grapes when near Christmas. "And what kind may that be?" inquires a friend. I answer "Duchess," and add, that I wish instead of one vine I had a hundred in fruitage, for it well repaid my faith in purchase and planting.

The fruit keeps well, is free from fox-vines, and the clusters, long and large, close on the stem, and of a bright-yellowish green, clear and fair. It was ripe before the Concord in this Province of Quebec. Among fifteen varieties that fruited with us, it stood first for white, while Brighton for red, and Moore's Early for black, took first rank. We also fruited the new white grape, "Niagara," and with us it proved all that was represented. But the flavour of Duchess was found superior. Several of Charles Arnold's seedlings, that have fruited with us for years, al-

ways commend themselves by their very good quality of resisting injury from early frost, the Othello being improved a little by a "nip" from that icy breath. This is a valuable quality for our short summers and uncertain autumns.

AGRICULTURAL EDUCATION.

The Council of the Agricultural and Arts Association of Ontario, believing that a more general study of the science of agriculture by those engaged in the active work of the farm would prove beneficial to those engaging in such studies, and conducive to the progress of agriculture in Canada, have decided to inaugurate a scheme of annual examinations in subjects bearing directly upon the work of the farm, accompanied by the granting of certificates of merit to all whose examination papers shall come up to a predetermined standard of merit, somewhat similar to those already in vogue in England and Scotland, and which have been followed by the most beneficial results in these countries.

The consent of the Minister of Education having been obtained thereto, the first of these examinations will be held at the same time, at the same places, and subject to the same rules, regulations and supervision as the High School Intermediate Examinations of July next, and of the place and date of which due notice will be given through the local press.

The examination papers therefor will be prepared by persons appointed by the Council, subject to revision by a special committee appointed for that purpose. Every precaution will be taken during their preparation, printing and distribution, to keep a knowledge of their contents from intending candidates until they are placed before them by those in whose presence the examination is conducted, and the candidates' answers returned to the examiners appointed by the Council of the Association, who will be kept in ignorance of the names of the candidates whose papers they are examining.

Intending candidates are required to send in their names, accompanied with a statement as to whether they have ever attended any agricultural school or college in Canada or elsewhere, and also of the place at which they desire to present themselves for examination, to the secretary of the Association at Toronto, before the 1st April, 1884.

At the first examination only second and third-class certificates will be issued, and for these the following course of reading is required:

COURSE OF READING FOR THIRD-CLASS CERTIFICATES.

1. Different kinds of soils; their properties; variations in their composition, texture and condition; essential differences between good and poor soils. Substances found in plants; and sources whence they are obtained. Exhaustion of land; causes; how prevented; best modes of restoring exhausted lands. Necessity for manure; production and waste of farm-yard manure, use of artificial manures; lime, salt, gypsum, bone dust, and mineral superphosphates as manures.

2. Tillage Operations.—Ploughing, harrowing, rolling, etc.; respective advantages and disadvantages of deep and shallow, fall and spring ploughing; sub-soiling; fallowing; drainage, where necessary and how done; effects of thorough tillage on lands; times and methods of sowing; after cultivation; harvesting.

3. The crops which each kind of soil is best adapted to produce; succession or rotation of crops; importance and necessity of rotation; rotation suitable to different soils and climates in Ontario; good courses of cropping; bad courses of cropping.

4. Live Stock.—Best kinds of stock for various farms and localities; summer and winter management; economy of good management; general rules for guidance in breeding; conditions and circumstances favourable to cattle farming, sheep farming, dairy farming, and mixed husbandry.

5. Food.—Chemical elements and compounds found in the most important kinds of feed and fodder which can be successfully grown in Ontario; different materials necessary for growth, maintenance of heat, and laying on flesh; feeding and fattening of animals.

COURSE OF READING FOR SECOND-CLASS CERTIFICATES.

1. The Fish.—Relations of the mineral, vegetable, and animal kingdoms to each other; nature and sources of

plant food; composition of the most important crops grown in Ontario; period of highest nutritive value; chemical changes in the ripening of fruit, grain, and fodder crops; influence of climate on perfection of growth.

2. The Soil.—Physical and chemical properties of soils; classification of soils as determined by these properties; comparative fertility of different varieties of soil; active and dormant ingredients of soils; best means of converting dormant into active.

Chemical and physical conditions affecting the barrenness and fertility of soils, causes of unproductiveness; power of different soils to hold manures; influence of frost, aspect, elevation, and climate on the productiveness of soils.

3. Manures.—Production, management and application of farm-yard manure; conditions which influence its quality, comparative values of cattle, sheep, and horse manures; green crop manuring; composts.

Properties and uses of artificial manures—lime, plaster, salt, bone-dust and mineral superphosphates as manures; circumstances under which each should and should not be used; times and modes of application; how to avoid the waste of such manures in the soil; their action on seeds and young plants; favourable and unfavourable action at different stages in the growth of crops; action of nitrates and ammoniacal manures on cereals, roots and grasses; special action of salt when used alone, and also in connection with other manures.

Night soil and animal manures; combination of manures for certain purposes; manures which impoverish the soil; quantities of manures to be used on various soils with different crops; general principles regulating the selection of manures.

4. Tillage Operations.—Deep and shallow ploughing, fall and spring ploughing, sub-soiling, rolling, fallowing, etc.; advantages and disadvantages of each, preparation of land for different crops, as fall wheat, spring wheat, barley, oats, peas and maize, differences in cultivation of light and heavy soils.

5. Seed and Sowing.—Quality of seed; importance of using clean and pure seed; effect of age on the character of crop, its rapidity of growth, and liability to disease; quantity of seed per acre; methods and depths of sowing; change of seed, why necessary.

6. Roots.—Cultivation of roots and tubers—turnips, mangolds, carrots, beets, and potatoes.

7. Green Fodders.—Oats and peas, tares, lucerne, sainfoin, prickly confrey, clovers, etc.; their comparative values; the management most appropriate for each; management of pastures.

8. Rotation of Crops.—Crops which each kind of soil is adapted to produce; succession or rotation of crops; importance and necessity of rotation; principles underlying it; rotations suitable to different soils, climates, and system of farming in Ontario; their effects on the land.

9. Drainage.—Principles of drainage; effects on soil and sub-soil; laying out and construction of drains.

10. Exhausted Lands.—Causes of exhaustion; how avoided; best means of restoring and enriching impoverished land.

11. Breeding of Animals.—Principles for guidance in stock-breeding; reproductive powers—how strengthened or weakened; pedigree influence—how intensified or reduced; loss of size in pedigree stock; how to control good or bad qualities; maintenance of constituted vigour; common causes of barrenness in male and in female; special aptitudes of certain breeds for different conditions of soil and climate; principles which regulate special peculiarities, such as early maturity, rapid production of flesh, production of milk, growth of wool, etc.

Horses.—Most valuable breeds of horses for this Province; the leading characteristics of each; type of horse required for farm work; breeding, feeding, and general management; common diseases and their treatment.

Cattle.—Characteristic points—merits and demerits of Short-horns, Herefords, Polled Angus, Ayrshires, Jerseys, Devons, Galloways, and Holsteins; in and in breeding; cross breeding; breeding in the line; results of each system; grade cattle; milk cows—points of a good milk cow; general management, economy of good management; conditions affecting quantity and quality of milk. Common diseases and remedies.

Sheep.—Characteristics of different breeds; long-woolled, medium-woolled, and short-woolled sheep; crosses between different breeds compared; influence of breed, climate, food, soil, and shelter on the quantity and quality of wool—evenness, lustre, yield, fineness of fibre, felting power, etc.; feeding; winter and summer management; management of ewes before, during, and after lambing season; rearing of lambs.

Pigs.—Characteristics of the most important breeds of pigs; management of sows and stores.

12. Food and Feeding.—Composition and properties of the most important varieties of feed and fodder available to the Ontario farmer; classification of foods; chemical results in the use of different foods; "heat-producing" and "flesh-forming" ingredients in food; best methods of combining these in feeding, so as to secure desired results; points to be observed in order to obtain the full value of natural and artificial foods; increase of value by preparation of food, shelter and warmth as means of economizing food; "good and bad systems of feeding."

13. Diseases of Crops.—When plants are most liable to disease; causes of disease; chlorosis; fungoid diseases, as blight, smut, rust and mildew; remedies.

14. Orchards.—Planting, cultivation, pruning, grafting, etc.; best varieties of fruit-trees for different soils and climates of Ontario; diseases and insect pests.

15. Forestry.—Planting and cultivation of forest trees, shade and ornamental trees, etc.

16. Entomology.—Common insects injurious to vegeta-

tion; their habits, and the best means of checking and preventing their ravages.

Besides the certificates already mentioned, the following money prizes will be paid by the Association, viz.:

1st. To the three candidates for second-class certificates obtaining the greatest number of marks, \$25, \$20, and \$15, respectively.

2nd. To the three candidates for second-class certificates who have never attended any agricultural school or college in Canada or elsewhere, obtaining the greatest number of marks, \$25, \$20, and \$15, respectively.

3rd. To the four candidates for third-class certificates who have never attended any agricultural school or college in Canada or elsewhere, obtaining the highest number of marks, \$30, \$25, \$20, and \$15, respectively.

As the object of the Association is to promote the development of a taste for reading and the acquisition of valuable information on the subjects mentioned in the syllabus, the examination questions will not be based on any particular book or books, nor are text-books on any of the subjects prescribed. They, however, for the convenience of candidates, subjoin the following lists of books of reference which contain a few of the works that may be studied with advantage, and from which a selection can easily be made which will meet their present requirements. List No. 1 is for all candidates, and No. 2 for those intending to write for second-class certificates:

1. "First Principles of Agriculture" (Tanner); "Hand Book of Agriculture," embracing soils, manures, rotation of crops and live stock (Wrightson); "Canadian Farmer's Manual of Agriculture" (Whitcombe); "Soil of the Farm" (Sir J. B. Lawes and others); "Catechism of Agricultural Chemistry and Geology" (Johnston)—new edition by Cameron.

2. "New American Farm Book" (Allen); "Talks on Manures" (Harris); "Chemistry of the Farm" (Warrington); "Elements of Agricultural Chemistry and Geology" (Johnston & Cameron); "Stock-Breeding" (Miles); "The Complete Grazier" (Youatt & Barn); "American Cattle" (Allen); "Manual of Cattle-Feeding" (Armshy); "The Shepherd's Own Book" (Youatt, Skinner and Randall); "Treatise on the Pig" (Harris); "Veterinary Adviser" (Law); "Insects Injurious to Vegetation" (Harris); "Insects Injurious to Fruit" (Saunders).

D. P. MCKINNON, South Finch, HENRY WADE,
President. Secretary.
Agricultural Hall, Toronto.

"PICTURESQUE CANADA" AGAIN.

CAUTION TO THE PUBLIC.

(From the Rural Canadian, for November.)

We, the undersigned farmers of the county of Peterboro', Ontario, take this means of warning our brother farmers throughout the Dominion of a cunning swindle which is being perpetrated throughout the rural sections, of which we, as well as others within our knowledge, were victims.

The fraud is conducted in the following manner. The agent of Belden Brothers of the Art Publishing Co., of Toronto, came to our county and employed an old resident to ride around and introduce him to the farmers. He showed us a sample of an illustrated part-book, containing about twenty-four pages, called "Picturesque Canada," bound in a paper cover, price sixty cents per part, to be delivered at our residences, one part every two months. The delivery was to begin January 1st, 1884. He represented the work to be "purely Canadian—all manufactured in Toronto," where he asserted the "Art Publishing Company" (the publishers) resided, with their artists, engravers, printers, presses, etc. He also exhibited letters from the Marquis of Lorne, who, he said, had taken \$12,000 worth of stock in the company. Earl Dufferin, L. R. O'Brien and other distinguished men, whom, we were lead to believe, were the stock-holders. As trial numbers, we consented to take from one to six parts, with the understanding that we could discontinue the work at any time at our option. He presented a book and asked us to write our names, lot, con., and p.o. address.

This agent had scarcely left our township when three oily tongued representatives of this company came along, each with a waggon-load of books, and informed us we had subscribed for the work and they had brought the first twenty parts, for which they wanted \$12. We protested we had only ordered one or two parts as "trial numbers." The agent then drew from his pocket a "cast-iron contract," with our names thereon, the conditions of which obliged us to take thirty-six parts at a cost of \$21.60. For the first time we saw we had

been trapped into a contract we little dreamed of. The \$12 demanded by the agent was really only the first instalment, according to the terms of the precious document. All explanations and protestations on our part were useless. We offered to pay for the few trial numbers, provided the contracts the agents held were returned to us. This they refused to do. They threatened "to sue," and succeeded in bulldozing a few persons into paying. But the most of us declined to be swindled in this manner, and now propose to let them bring the matter into the court, and we shall abide the decision of the judge or a jury of farmers selected from our county. From a recent issue of the RURAL CANADIAN we learn that this so-called "Art Publishing Co." is composed of H. Belden and R. B. Belden, the notorious Yankee Atlas publishers, whose former swindling in the Atlas business among the farmers of Ontario and Quebec made it necessary for them to disguise their real names under the title of "Art Publishing Co.," in order to do further business among Canadians, and also that nearly the entire work, "Picturesque Canada," has been manufactured in New York, where the senior member of the firm permanently resides. We, therefore, warn our brother farmers throughout the Dominion of the manner by which this swindle is being perpetrated, that they may be on their guard if any agents of this company give them a call which they, no doubt, will do within a few months, as they are now operating in other counties.

Wm. Ray, Lakefield; Thos. Blezard, M.P.P., for East Peterboro', refused; Hugh Davidson, farmer, Peterboro', bulldozed; James Sanderson, farmer, Lakefield, refused; S. Nelson, farmer, Lakefield, refused; J. Garbet, farmer, Peterboro', refused; Samuel Rosborough, farmer, Peterboro', bulldozed; James McGibbon, farmer, Peterboro', refused; W. R. Norish, farmer, Lakefield, refused; Thomas Dugan, farmer, Lakefield, refused; Robt. Moore, farmer, Selwin, bulldozed; R. H. Braden, farmer, Selwin; Thomas Hetherington, farmer, Young's Point, refused; Richard Freeborn, farmer, Selwin, bulldozed; Mordecai Blewett, farmer, Young's Point, refused; Robt. Nugent, farmer, Selwin, refused; Joseph Nugent, farmer, Selwin, refused; Nathan McMoyl, farmer, Selwin, refused; Wm. Preston, farmer, Selwin, bulldozed; Gerald Fitzgerald, Selwin, refused.

I hereby certify that the farmers who have signed the above letter are among the most responsible and trustworthy in the County of Peterboro'.

W. C. SAUNDERS,
Clerk of the Municipality of Lakefield.

Below will be found a fac-simile of the "cast-iron contract" used by Beldens' agents. When persuading the farmers they only want their names and addresses to send them sample copies of "Picturesque Canada," as explained in a communication in another column. In laying the facts of this disgraceful business before our readers, we have no intention or desire to interfere with the sale of the above work. We simply wish to prevent imposition. The plea that the canvassing agents are alone responsible is not tenable. We have ample proofs that in many instances these agents have been specially instructed by the individual members of the firm to get the names anyway they could, and they (the Beldens) would assume the risk of forcing the contract. Knowing this it seems a duty to inform our readers—who are chiefly among the farming community—that when they place their name on those contracts, they are, in effect, signing a note for \$21.60, payable on demand; so they may not be deceived by the representations held out to them when visited by the Beldens' agents. When the work, "Picturesque Canada," was first projected, those who knew the Beldens predicted it would be

another "Atlas" trick before it was ended. The late experience of unwilling "subscribers" has proven that the leopard cannot change his spots. Farmers will do well to preserve this paper for future reference.

The Art Publishing Co., Toronto, Ont.

OFFICE No. _____

No. _____

Name _____

Occupation _____

P. O. Address _____

Township _____

Lot _____

Con. _____

Year _____

City _____

State _____

Country _____

Please deliver to my address as below, PICTURESQUE CANADA, in parts, for which I agree to pay 60 Cents per part when delivered, to be completed in from 24 to 30 parts. No agent being allowed to vary these conditions, to give credit, to receive pay in advance or to contract any liability for the Publishers. Each part to contain not less than twenty-four pages. Subscriptions received only for the entire work.

PURE WATER.

The value of pure water for the stock, at this season of the year, cannot be over estimated. A number of careful experiments made by M. Dancel, and given to the French Academy of Science, go to show that the amount of milk obtained is approximately proportioned to the quality of water drunk, and that the yield of milk can be increased to a considerable extent without deteriorating in value, by inducing milch cows to take an abundant quantity of water. Indeed, M. Dancel maintains that a cow that does not commonly drink as much as twenty-seven quarts of water a day is necessarily a poor milker, while a cow that drinks as much as fifty quarts daily is sure to be an excellent milker. Stagnant water, and that from standing pools and small ponds, is always, more or less, foul in summer time, and even though abundant in quantity and easy of access, has an injurious effect on the flavour of dairy products. Often cows seem to prefer such liquid even to clear, running water, but experience abundantly shows that when milch cows have access to such pools, a first-class article of butter or cheese cannot be made from the milk, which is sometimes found to be absolutely unwholesome.

DRAINING is work that can be taken up or laid down and finished piecemeal, providing one goes the right way about it. And the right way is to begin at the outlet, making the drain as deep as the lay of the land allows, so as to secure a good fall. It may be finished in sections of fifty or a hundred feet, providing that care is taken to make the inlet safe, and that a record of levels and measurements is kept. In this way the work may be carried on as opportunity is given.

CREAM

Own life is but a winter's day,
Some only breakfast and away;
Others to dinner stay and are well fed,
The oldest man but sups and goes to bed;
Large is his debt who lingers out the day,
Who goes the soonest has the least to pay.

BETTER bare feet and contentment therewith than patent leather boots and a corn on each toe.

We hear of men sowing wild oats, but whoever heard of a woman sowing anything but tares?

I ALLWUSS think it is good taste, and pretty good religion too, when a man prays for the sins of the people to count himself in.

If your son has no brains don't send him to college. You cannot make a palace out of a shanty by putting a French roof on it.

"I go through my work," as the needle said to the idle boy. "But not until you are hard pushed," as the idle boy said to the needle.

MIKE—"An' what are ye diggin' out that hole for, Pat?" Pat—"Arrah, an' it's not the hole I'm after diggin' out! I'm diggin' the dirt out and lavin' the hole."

"I WOULD heartily endorse matrimony but for my observations of one married person," said a hatchetfaced misanthrope to a party of young men. "And who is that individual?" he was asked. "My wife, gentlemen."

CUSTOMER (to grocer)—"How much are those eggs a dozen?" "Dwenty-five cents." "Why, how's that? Jones sells them at twenty cents." "Und vy don't you py ov Jones den?" "Because he hasn't any this morning." "Vell, I will sell dem for dwenty cents too ven I don't got any."

"So you have got twins at your house?" said Mrs. Bezumbe to little Tommy Samuelson. "Yes, ma'm, two of them." "What are you going to call them?" "Thunder and Lightning." "Why, those are strange names to call children." "Well, that's what pa called them as soon as he heard they were in the house."

A YOUNG city fellow, dressed in a faultless suit and a pair of shoes that tapered into a point in a most modern style, was visiting in a rural district. A bright little boy looked him all over until his eyes rested on those shoes. He looked at his own chubby feet and then at his visitor's, and then looking up, said: "Mister, is all your toes cutted off but one?"

A SCHOOL of poor children, having read in the Bible the denunciation against hypocrites who "strain at a gnat and swallow a camel," were afterward examined by a benevolent patroness as to their recollections of the chapter. "What, in particular, was the sin of the Pharisees, children?" said the lady. "Aiting camels, my lady," was the prompt reply.

HE had just returned from his wedding trip, and was going down town in a horse-car with his bride, who, in all the pride of her new garments and her new husband, was disposed to look down on humanity generally, and on a poor old man in particular who sat opposite. "Who's that dreadful-looking creature, Horatio?" she said. "I'm sure I don't know," replied the apple of her eye, with a slight blush and stammer; "some tramp, I suppose, who has begged his passage." Just then the aged person alluded to awoke from his reverie, and, adjusting his spectacles, quavered: "Why, bless me, if that isn't my grandson, Horatio! and that must be his wife! Don't colour up so, boy; she's a right pretty girl, and you have no cause to be ashamed of her." There was an audible smile in that vehicle, which the happy pair did not stop to hear the last of.

BEES AND POULTRY,**MISTAKES MADE BY APIARIANS.**

I have fifteen stands of bees from four to eight feet apart. I think eight feet preferable. I have no wind breaks or sun screens yet, but am growing them. Trees are best, but until trees mature I use tomato vines and grape vines on trellis-work on the south side.

I wintered bees out of doors last winter, but hereafter shall use a large hive outside, with chaff filled in between. Mice would be troublesome but for my cat, the kingbird a little troublesome, bee-killer, called prairie-horse, also; occasionally find worms, but dig them out and kill them. I go through my apiary thoroughly once a week. Italian bees are not troubled much with insects if they are kept strong. Bees divide up too much in the spring if left to themselves.

I use a modification of the Langstroth hive, one storey and a half, with bottom fast to the body. My bee-veil is one yard of black tarlatan, with ends sewed together and a puckering string to draw it up around my neck. In moving bees I lock the frames with wedges and strips of wood; remove the cover; tack over the top wire or wire cloth screen; keep upright and handle gently. To transfer comb from box to movable hive, I drive bees out, cut out comb, lay it carefully on table covered with two or three thicknesses of cloth and cut to fit the frame, tying it with cotton twine, which I remove in two or three days, when the bees fasten them. I tip the table so as to bring the comb and frame upright before tying. Bees regulate themselves usually, in swarming, when they cluster together.

I buy my comb foundations or trade my wax for them. Have Italian bees. Have had black bees and hybrids; prefer the Italian. The black bee is probably the most hardy in summer and in good seasons, but will starve to death where the Italian will thrive. I want but one kind of bees or only one kind of hive. I control their increase by artificial swarming—cutting out queen cells and, in extreme cases, by giving a young queen in place of the old one. My bees feed on buckwheat, corn, smart-weed, willow, maple, red-bud, clover, Simpson's honey-plant, spider plant (both wild, but I have both in cultivation also), golden rod, hoarhound and catnip, besides others growing wild. Golden rod and smart-weed are the best wild honey plants. The Simpson honey plant and spider plant are the best cultivated honey plants. I have a large amount of seed of the latter, which I will distribute to bee-keepers on application. It is the best grown and easily cultivated.

The best winter feed is No. 1 "A" white coffee sugar, made into syrup; or still better, make sugar into candy with a little flour, and put inside hive. Fifteen to twenty pounds of honey for a strong hive, kept warm, will keep a swarm through winter, and give it a start in brood-raising. Do not extract honey. Have a wax extractor. Market the honey in one-pound sections. Have my wax made into comb foundations on shares. I have but one grade, A No. 1, which I market in box, twelve by eighteen inches, and nine inches deep, holding forty-eight one-pound sections. Transport carefully in buggy or spring wagon. I believe I could force a market by the superior quality and appearance of my honey, as I have a demand for all I make and loud calls for more. My market is here at home at twenty cents to twenty-five cents per pound. Good stands of Italian bees, in movable comb hives, bring from \$10 to \$25; while black bees in boxes, barrels or kegs, are worth only \$2.50 to \$5 per stand. I recognize but three drawbacks in apiculture in Kansas: winds, drought and shift-

less management; and they can all be overcome. First, windbreaks; second, stimulative feeding; third, increased energy, industry and care. The greatest mistakes made by apiarians are, too rapid increase and too much drone comb.—*Wm. Dyke, Eureka, Kan.*

POULTRY AS GLEANERS.

Now is the time for the farmer, says a French journal, to make use of portable houses to take his poultry to the fields, as also his geese and turkeys. Fowls like the charge, they enjoy roaming about; in fact, it is their holiday, and at harvest time fowls disport themselves as if they were aware that it was time to be sent into the field. A poultry yard, dry and restricted in space, with always the same food, is replaced by the open country, tender herbage, and where they feed on *friandises*, they have a thousand varieties of insects, and grain, which is often in a state of fermentation, thereby giving it an agreeable alcoholic taste, and which is seldom met with unless in the droppings of horses. Now is the time to send out into fields the fowls and turkeys. Poultry at this time of the year are in excellent condition; they can bear the fatigue of wandering about the fields to satisfy their appetites—a very useful proceeding for the farmer, not being required to go to his granary, but who finds a great saving by having the lost grain gleaned by his poultry. A little, active boy, vigorous and vigilant, is sufficient to take charge of a flock of turkeys, which he does with the help of a long stick, with which he threatens them in case they wander too far, but never strikes them with it. The boy must be very patient and gentle with them, and not hurry them on, so that they may not lose a single grain or insect. They ought to be allowed to eat as much as they like, always within an easy distance from home. On their leaving, as on their returning, the poultry woman ought to count them, and see they are not ailing, and to induce them to be regular in their return to the farm, a good feed of maize, barley, or buckwheat ought to be given to them.

PREPARATION FOR WINTER.

The "Bee Keepers' Text Book" says: See that every colony has a good young fertile queen. Unite weak and queenless stocks. See that each hive has from twenty-five to thirty pounds of good honey, with combs, which also contain bee bread, for rearing young bees. If later stores have been gathered from honeydew, cider mills, refuse from sugar refineries, or if the fall honey is very acid, they should be extracted, and the hives supplied with combs of good dark honey, set aside in summer with the honey from unsealed boxes, or they should be fed with sugar syrup. Give in such cases from five to ten pounds of sugar to each colony.

Make a syrup, putting one part of water, by measure, to two parts of sugar; let it come to a boil, to be sure that all has dissolved, and feed it in suitable feeders in the cap. Give it to them warm. Any kind of a good feeder, with floats to prevent drowning, will answer.

A good way is to fill quart fruit jars with the syrup, tie over the mouth a piece of cheese cloth, or other strong thin material, and invert directly on the top bars of the brood-nest; packing the quilts around well to keep in the heat. Sometimes two or three jars will be drained in a single night. If there is sufficient brood in the hive, feed rapidly, so as not to induce too rapid breeding. But if there is little or no brood present, the feeding should be more slowly, to induce brooding, for a *plenty of young bees* is one of the important elements in successful winter-

ing. In sections where there is little or no fall honey to stimulate the queen, we would advise extracting the honey from at least a few of the central frames, and stimulate so as to go into winter quarters with a fine supply of young bees as well as a plentiful supply of good stores. There is no better winter food than syrup made from nice A sugar. At this season out-door feeding must not be practised, because the stronger colonies which least need it will get the most, and so fill up the brood nest, that there is not a good nest of empty comb in which to begin the winter.

ARTIFICIAL EGGS.

The funny man of the *Detroit Free Press* lately published a sober account of a manufactory of artificial eggs, said to be doing an extensive business, with detailed description of the processes of manufacture, the composition of the product, etc., as if the whole thing actually existed. It is copied into the *London Mark Lane Express* simply as a burlesque, but other English papers seem to have been completely hoaxed, if we may infer from the following paragraph which appears in the *London Farmer*, and is probably going the rounds, and in which we see no symptom of the faintest perception of a joke—scarcely ven in the concluding sentence:

"The manufacture of artificial eggs across the Atlantic is largely increasing, and one establishment alone turns out upwards of one thousand every hour. The yolks are formed of a paste composed of corn flour, starch and other materials. The whites are made of albumen, and are chemically identical with the whites of real eggs; the inner skin is a film of gelatine, and the shell is of plaster of Paris, and is somewhat thicker than the original. The yolk is first rolled into a ball and frozen hard, then it is enclosed in the albumen and submitted to a rapid rotatory motion which makes it a proper ovoid form, and again it is frozen. It is then dipped into the gelatine, and after that into the plaster, which, while drying rapidly, retains the form after the contents have melted. It is said that, in point of taste, the eggs cannot be distinguished from the real article, while they will keep good for years, and are not so easily broken. They can be flavoured to resemble ducks' eggs, but up to the present it is stated that even the most assiduous hen had failed to produce chicks from these compounds."

When it is considered how rich eggs are in nutriment it must be obvious that they cannot be produced in large numbers unless large quantities of rich food are consumed by the hens. Feed the pullets well now if you expect them to shell out this winter.

One of the best things many farmers could do would be to build a long open shed adjacent to their poultry house, where the fowls could scratch and sun themselves on cold stormy days. It need not be expensive, but should be substantially built. Such a shed is almost indispensable to those who raise early chickens.

In California bees are owned largely by capitalist and are "farmed out"—that is, apiaries of one hundred swarms or so are placed on the grounds of farmer, generally from three to four miles apart. The farmers receive a fixed rent, or a share of the honey, for their compensation as may be agreed upon. On an average, one acre of ground is estimated to support twenty-five swarms of bees, and the yield of a swarm is generally about fifty pounds a year.

SUBSCRIBE for the RURAL CANADIAN, the best agricultural paper in Canada. Only \$1 per year.

HOME CIRCLE.

THE WISH-RING.

A young farmer who was very unlucky sat on his plough a moment to rest, and just then an old woman crept past and cried: "Why do you go on drudging day and night without reward? Walk two days until you come to a great fir-tree that stands all alone in the forest and overtops all other trees. If you can hew it down you will make your fortune."

Not waiting to have the advice repeated the farmer shouldered his axe and started on his journey. Sure enough after tramping two days he came to the fir-tree, which he instantly prepared to cut down. Just as the tree swayed, and before it fell with a crash, there dropped out of its branches a nest containing two eggs. The eggs rolled to the ground and broke, and there darted out of one a young eagle and out of the other rolled a gold ring. The eagle grew larger as if by enchantment, and when it reached the size of a man it spread its wings as if to try their strength, then, soaring upward, it cried: "You have rescued me; take as a reward the ring that lay in the other egg; it is a wish-ring. Turn it on your finger twice, and whatever your wish is it shall be fulfilled. But remember there is but a single wish in the ring. No sooner is that granted than it loses its power and is only an ordinary ring. Therefore, consider well what you desire, so that you may never have reason to repent your choice." So speaking the eagle soared high in the air, circled over the farmer's head a few times, then darted like an arrow toward the east.

The farmer took the ring, placed it on his finger, and turned on his way homeward. Toward evening he reached a town where a jeweller sat in his shop behind a counter, on which lay many costly rings for sale. The farmer showed his own, and asked the merchant its value.

"It isn't worth a straw," the jeweller answered.

Upon that, the farmer laughed very heartily, and told the man that it was a wish-ring, and of greater value than all the rings in the shop together.

The jeweller was a wicked, designing man, and so he invited the farmer to remain as his guest over night. "For," he explained, "only to shelter a man who wears a wish-ring must bring luck."

So he treated his guest to wine and fair words; and that night, as the farmer lay sound asleep, the wicked man stole the magic ring from his finger and slipped on, in its place, a common one which he had made to resemble the wish-ring.

The next morning the jeweller was all impatience to have the farmer begone. He awakened him at cock-crow, and said: "You had better go, for you have still a long journey before you."

As soon as the farmer had departed the jeweller, closed his shop, put up the shutters, so that no one could peep in, bolted the door behind him, and standing in the middle of the room, he turned the ring and cried: "I wish instantly to possess a million gold pieces!"

No sooner said than the great, shining gold pieces came pouring down upon him in a golden torrent over his head, shoulders and arms. Piti-fully he cried for mercy, and tried to reach and unbar the door; but before he succeeded, he stumbled and fell bleeding to the ground. As for the golden rain, it never stopped till the weight of the metal crushed the floor, and the jeweller and his money sank through to the cellar. The gold still poured down till the million was complete, and the jeweller lay dead in the cellar beneath his treasure.

The noise, however, alarmed the neighbours, who came rushing over to see what the matter

was; when they saw the man dead under his gold, they exclaimed: "Doubly unfortunate he whom blessings kill. Afterward, the heirs came and divided the property."

In the meantime, the farmer reached home in high spirits, and showed the ring to his wife.

"Henceforth, we shall never more be in want, dear wife," he said. "Our fortune is made. Only we must be very careful to consider well just what we ought to wish."

The farmer's wife, of course, proffered advice. "Suppose," said she, "that we wish for that bit of land that lies between our two fields."

"That isn't worth while," her husband replied. "If we work hard for a year, we'll earn enough money to buy it."

So the two worked very hard, and at harvest time they had never raised such a crop before. They had earned money enough to buy the coveted strip of land and still had some to spare. "See," said the man, "we have the land and the wish as well."

The farmer's wife then suggested that they had better wish for a cow and a horse. But the man replied: "Wife, why waste our wish on such trifles? The horse and cow we'll get anyway."

Sure enough, in a year's time the money for the horse and cow had been earned. Joyfully the man rubbed his hands. "The wish is again saved this year, and yet we have what we desire. How lucky we are!"

But now his wife seriously adjured him to wish for something at last. "Now that you have a wish to be granted," she said, "you slave and toil, and are content with everything. You might be king, emperor, baron, even a gentleman farmer, with chests overflowing with gold; but you don't know what you want."

"We are young and life is long," he answered. "There is only one wish in the ring, and that is easily said. Who knows but sometime we may sorely need this wish? Are we in want of anything. Have we not prospered, to all peoples astonishment, since we possessed this ring? Be reasonable and patient for a while. In the meantime, consider what we really ought to wish for."

And that was the end of the matter.

It really seemed as if the ring had brought a blessing into the house. Graneries and barns were full to overflowing, and in the course of a few years the poor farmer became a rich and portly person, who worked with his men a-field during the day, as if he, too, had to earn his daily bread; but after supper he liked to sit in his porch, contented and comfortable, and return the kindly greeting of the folk who passed and who wished him a respectful good evening.

So the years went by. Sometimes when they were alone the farmer's wife would remind her husband of the magic ring, and suggest many plans. But as he always answered that they had plenty of time, and that the best thoughts come last, she more and more rarely mentioned the ring, and at last the good woman ceased speaking of it altogether.

To be sure, the farmer looked at the ring, and twirled it about as many as twenty times a day; but he was very careful never to wish.

After thirty or forty years had passed away, and the farmer and his wife had grown old and white-haired, and their wish was still unasked, then was God very good to them, and on the same night they both died peacefully and happily.

Weeping children and grandchildren surrounded the two coffins; and as one wished to remove the ring from the still hand as a remembrance, the oldest son said: "Let our father take his ring into the grave. There was always a mystery about it; perhaps it was some dear remembrance. Our mother, too, so often looked at the ring—she may have given it to him when they were young."

So the old farmer was buried with the ring, which had been supposed to be a wish ring, and was not, yet it brought as much good fortune into the house as heart could desire.—*St. Nicholas*.

A MEDICAL VIEW.

Dr. James Edmunds, of London, England, has this to say of the habit of beer and liquor drinking:

Beer drinkers imagine that abstainers from alcohol "drink a lot of cold water;" but, in point of fact, it is the beer drinkers who drink the "lot of cold water."

Any beer drinker who goes to the food department of the South Kensington Museum will there see the constituents of beer all separated in a visible form in their proper proportions; and he will learn that out of twenty pints of beer that he buys, nineteen are water! Nearly one pint is alcohol, and the rest is treacherous residue, with salt and other unimportant constituents. The treacherous matter represents the food material or residual barley left in the beer. The alcohol may be practically oxidized in the system, but its effects are chiefly felt in taking the edge off those sensibilities by means of which the system is conscious of fatigue; and a large part of the alcohol is exhaled by the lungs and skin, as is shown by the smell which emanates from the drinker. The salt gives a certain piquancy to the flavour of the beer by irritating the nerves of the tongue, and it serves also to set the kidneys going, and bring the customer back to the public house. Beer, when taken at meal times by those whose stomachs have been trained to look for it, provokes a secretion of gastric juice, and its alcohol is rapidly washed out of the stomach, in order that the solution of the food may not be hindered.

If stronger alcoholic beverages are taken, such as wine or spirit, digestion is more completely arrested, pending their removal; and, as well known, if the glass of wine be repeated too often, digestion is altogether prevented, and a few hours afterward the food has to be returned by the way it entered. In this case it is generally said that "the salmon" has disagreed with the unfortunate diner-out; but I have generally observed that the capacity for walking straight is as much impaired as the capacity for digesting food, and unless when wine has been taken largely, I never saw "the salmon" make a man ill. Against tea or coffee not very much is to be said, and I never knew of a police court case in which the defendant ascribed his violence to having taken too much tea or too much coffee. But for the quenching of thirst tea and coffee are bad. The habit of drinking strong tea or black coffee directly after dinner is especially bad, and certainly interferes with digestion. At breakfast time a healthy man has all his sleep in him, and surely it is then unscientific for him to inflict upon his system strong tea or coffee.—*Lecter*.

COURTESY OF MANNER.

I am often sorry that the invaluable training in sitting still and maintaining the attitude of decorum toward elders and superiors, once a part of every child's education, is now missed by many. Manners do not come wholly by chance, nor are they entirely to be trusted to refined associations, though these greatly aid in their acquirement. Sooner or later most of us need the discipline of enforced rules, and conventionalities have their uses in the ease and grace they confer, the smoothness with which they oil the intercourse of society, and the friction from which they save.

Toward the aged and feeble, and toward little children and servants, the courteous person is kind and deferential. True courtesy implies re-

membrance of the Bible rule. "In honour preferring one another." If you wish an example of lofty courtesy, make a study of the life of Paul, who always bore himself with simple dignity, who never was unequal to the situation, and who was loving and pitiful to his friends and to the suffering.

Manner and manners are often confused, or, by inexact people, thought of as being almost identical. Manner is really the expression of a person's whole character, the style of one's thought, and the subtle revelation of the soul, while manners are more like clothing or decorative badges. People sometimes have ceremonious manners, while their manner is constrained, stiff and shy. A lady's manner may be brusque, aggressive and repellent, so that you are on the defensive as soon as you encounter her, yet she may have the etiquette of polite society at her fingers' ends, and never violate a single one of its arbitrary rules. And a woman may be most winning, lovable and motherly in manner, and still be quite ignorant of many little points of conventional training.

To acquire a charming manner, girls, I would advise you to guard your hearts from impure thoughts, and to live much in the good company of the best books and the most high-minded people. Truth, tenderness, affection, and unselfish charity enter into the composition of a good, because an engaging and unobtrusive, manner. Not to think too highly of self, not to be very sensitive, not to insist too strenuously on receiving attention and regard, are the negative qualities which the best womanly manner implies. As for the positive qualities, they are all wrapped up as the rose in its bud, in one beautiful word—charity, or love. The thirteenth chapter of Paul's first epistle to the Corinthians is a complete manual on the subject.

Manners are the daily product of a thousand influences. Manners at the table, in company, at school, at home, have nearly everything to do with comfort and propriety. There is a word which sums up how they are to be acquired. It is this—obedience. Conform to the laws which have been made presumably for the general convenience of the world, and conform to them willingly. When you are in doubt concerning any matter, do not be ashamed to ask advice of those who are well-informed. If you have made a mistake, do not be crushed or needlessly humiliated, but determine to do better the next time. Never despise little things. Do not consider the acknowledgment of favours, the answering of letters, and the attending to trifling details, as of small importance. It is never right to omit saying 'thank you,' to the person who helps you in even the slightest particular.—*Mrs. Sangster.*

EXAMPLES OF PRODIGIOUS MEMORY.

A conductor must have a prodigious musical memory if he can, as Herr Richter usually does, conduct such a score by heart, never forgetting to beckon to any instrument at the very second wanted. I say a prodigious musical memory, because the faculty of remembering is by no means a general, but a special one. One man may, as Richter for instance, know a number of scores by heart, another may be able to keep an incredible number of figures in his remembrance, and not be able to retain the smallest musical motif. The Emperor Napoleon III., who never forgot a man he had spoken to, could so little remember a musical theme that you might have played the same thing twice over to him and given it two names, and he never would have known it. An example of the most astounding memory is the winner of the National Chess Tournament, Mr. Zuckertort. He is capable not only of playing a game of chess by heart, i.e., without ever looking

at his board, but, being told his adversary's move, instantly replying with his countermove and keeping the position, however altered, in his head, but, further, he played sixteen games at the same time in the same way, that is to say, before each of the sixteen tables sat a player with a board, and they informed him after each other of their respective moves, he replied, and never confounded one position with another, one game with another, never made a false move, but twice detected, where on purpose false moves were made to test him, the wrong direction. He performed an especially curious feat in the house of a friend where there was a whist party, playing a game of chess by heart with some one in the adjoining room, and when the cards for whist was dealt, he looked once through his cards then put them away, and each time his turn came he mentioned the card he wished to play, all the while continuing his chess game, and never keeping either his chess or his whist partner waiting one minute for the necessary move.—*Temple Bar.*

AN IDYL OF THE KITCHEN

In brown holland apron she stood in the kitchen,
Her sleeves were rolled up and her cheeks all aglow;
Her hair was coiled neatly; when I, indiscreetly,
Stood watching while Nancy was kneading the dough.

Now, who could be neater, or brighter, or sweeter,
Or who hum a song so delightfully low,
Or who look so slender, so graceful, so tender,
As Nancy, sweet Nancy, while kneading the dough?

How deftly she pressed it, and squeezed it, caressed it,
And twisted and turned it, now quick and now slow.
Ah, me, but that madness I've paid for in sadness!
'Twas my heart she was kneading as well as the dough.

At last, when she turned for her pan to the dresser,
She saw me and blushed, and said shyly, "Please go,
Or my bread I'll be spoiling, in spite of my toiling,
If you stand here and watch while I'm kneading the dough."

I begged for permission to stay. She'd not listen;
The sweet little tyrant said, "No, sir! no! no!"
Yet when I had vanished on being thus banished,
My heart stayed with Nancy while kneading the dough.

I'm dreaming sweet Nancy, and see you in fancy,
Your heart, love, has softened and pitied my woe;
And we, dear, are rich in a dainty wee kitchen
Where Nancy, my Nancy, stands kneading the dough.
Toronto, Canada.—John A. Fraser, jr., in the Century.

WHAT IS THAT?

"What is that, mother, that comes from the urn,
Fragrant and strong, as we get it in turn?"
"An infusion of leaves from far Cathay,
Leaves of the alder and leaves of the bay.
With a twang, and full flavoured, just as it should be,
And I think that there may be some leaves of the tea."

"What is that, mother, so coldly blue,
Like a wintry sky of azure hue?"
"That is milk of the city, that mixture, my dear,
The milk of the chalk pit and pump that is near,
That would not be owned by a sensible cow,
For she never could make it; she wouldn't know how."

"What is that, mother yellow as gold?"
"Butter, my boy; not the butter of old.
In the hey-day of youth we said tit for tat,
'Twas a prophecy when we said butter for 'fat';
That is butter to those whom the scoffer calls green;
To the elect, it is eolomargarine."

"What is that, mother?" " 'Tis the pepper of trade.
But nobody knows of what it is made;
Of roasted meal, of dust and peas,
With a dash of cayenne, to make one sneeze;
It is hot and strong, but it's rather queer,
Of the ground pepper corn, were is none of it here."

LADIES THAT PLEASE.

When it was all over, my friend said, "So that is a woman in earnest. Do you suppose it is her earnestness that makes her so unprepossessing?" This is my perplexity reduced to its last equation. Was it her earnestness? My friend held that it was. "If you have observed," she said, "women are always like that. They are too superior to condescend to make themselves agreeable. Besides, they haven't time. Then they never can see but one side of a question—the side they are on. They are always dragging their own opinions

to the front, and always running full tilt against every one else's. That is where they differ most from women who haven't purposes and who have seen a good deal of the world. It is the business of a woman of the world to be agreeable. She spares no pains to make herself just as good looking as possible, and just as charming. And she is always tolerant. She may think you a fool for your beliefs, but she doesn't tell you so brutally, or try to crush you with an avalanche of argument. She tries to look at the matter from your point of view; in short she feigns a sympathy, if she have it not. Your women with a purpose think it wrong to feign anything. They won't pretend to be sympathetic any more than they will powder their faces, or let their dress-maker improve their figures. That's why they are so boring, they are too narrow to be sympathetic and too conscientious to be polite. It is earnestness does it; earnestness is naturally narrowing. It is earnestness, too, sets their nerves in a quiver and makes them so restless. They can never sit still; they are always twitching, don't you know? That's earnestness. It has a kind of electrical effect. Women in earnest have no repose of manner. But a woman of the world feigns that, just as she feigns sympathy, because it makes her pleasant to other people. Oh, there's no doubt of it; women with a purpose are vastly better than other women, but they are not nearly so nice!" My own experience corroborates my friend's opinions. Women with a purpose, women in earnest, have a noticeable lack of charm. And I regret to say that the nobility of the purpose does not in the least affect the quantity of charm. Very likely their busy lives and the hard fight they have had to wage with social prejudices and moral anachronisms may have something to do with it. But after making all deductions, I wonder if my friend's theory does not hit somewhere near the mark?

A WAR ARTIST'S ESCAPE.

I was sketching during the Carlist campaign of 1874 on the banks of the Biddason, taking a preliminary ramble along the French side of that frontier river before crossing over to follow wherever Rebel or Royalist presented the most picturesque aspect. I felt perfectly safe on French soil, the neutrality of which was sacred. Thus confident I wandered on some four or five miles by the side of the river till I came upon a quaint Posada, on the opposite bank, where several noisy Carlists were drinking to the health of the Don, while others were singing still more loudly the Spanish equivalent for "Charlie is My Darling." There was something striking about this little bit of Pasque soldier life which at once brought me to a standstill. Here I had a subject only forty yards distant (for this was about the width of the Biddason at this point), which I was at perfect liberty to sketch in all security, as long as I pleased. Opening therefore my camp stool and sketch I was soon hard at work. So little suspicion had I of danger that I was actually introducing into the foreground of my picture a Carlist, who was somewhat detached from the rest, and kneeling by the water's edge opposite me, when—ping—a sharp report, and the next instant, sketch-book, camp-stool, and your humble servant were together mixed upon the ground, and as the thin blue smoke cleared away my foreground figure shouldered his rifle and turned to join his comrades in the rear of laughter which my discomfiture provoked, not a little proud of having killed, as he supposed, an intrusive stranger. His swagger, however, was a little down when, to the astonishment of all, I rose to my feet, the bullet having done no greater damage than that of having broken the leg of my camp-stool.—*Irring Montagu, in Good Words.*

When at last we're sweet - ly sleep - ing Un - der-neath the vi - o - lets?
 Come to whis - per how they love us, To the vio - lets o - ver - head?
 When at last in peace we're sleep - ing Un - der-neath the vi - o - lets?

cres. cen. do. rit. dim. con espress. rit.....

CHORUS.

Soprano.
 Who will think of us then, dar - ling, Who will whis - per sad re - grets,

Alto.

Tenor.
 Who will think of us then, dar - ling, Who will whis - per sad re - grets,

Bass.

Piano.

When at last we're sweet - ly sleep - ing Un - der-neath the vi - o - lets?
 When at last we're sweet - ly sleep - ing Un - der-neath the vi - o - lets?
 When at last we're sweet - ly sleep - ing Un - der-neath the vi - o - lets?

cres. ... f dim. p con espress.

cres. ... f dim. p con espress.

cres. cen. do. dim. rit..... D.C.

UNDERNEATH THE VIOLETS.

YOUNG CANADA.

NOT TRUSTWORTHY.

One afternoon a gentleman was shown into Mr. Lamar's library.

"Mr. Lamar," asked the visitor, "do you know a lad by the name of Gregory Bassett?"

"I guess so," replied Mr. Lamar, "That is the young man," nodding toward Gregory.

The latter was a boy aged about fourteen.

He was drawing a map at the wide table near the window.

"A bright boy, I should judge," commented the visitor, looking over the top of his glasses. "He applied for a clerkship in my mill, and referred me to you. His letter of application shows that he is a good penman. How is he at figures?"

"Rapid and correct," was the reply.

"That's good! Is he honest?"

"O yes," answered Mr. Lamar.

"The work is not hard, and he will be rapidly promoted, should he deserve it. O! one more question, Mr. Lamar; is he trustworthy?"

"I regret to say that he is not," was the grave reply.

"Eh!" cried the visitor. "Then I don't want him."

That ended the interview.

"O uncle!" cried Gregory, bursting into tears.

He had set his heart upon obtaining the situation, and was much disappointed over the result.

"Gregory, I could not deceive the gentleman," Mr. Lamar said, in a low tone, more regretful than stern. "You are *not* trustworthy, and it is a serious failing—nay, a fault, rather. Three instances occurred within as many weeks, which sorely tried my patience, and cost me loss of time and money."

Mr. Lamar's tone changed into one of reproach, and his face was dark with displeasure.

"I gave you some money to deposit in the bank," he resumed, "You loitered until the bank was closed, and my note went to protest. One evening I told you to close the gate at the barn. You neglected to do so. The colt got out through the night, fell into a quarry, and broke his leg. I had to shoot the pretty little thing, to put an end to its suffering."

Gregory lifted his hand in a humiliated way.

"Next I gave you a letter to mail. You loitered to watch a man with a tame bear. 'The nine o'clock mail will do,' you thought. But it didn't, being a way mail, and not a through mail. On the following day I went fifty miles to keep the appointment I had made. The gentleman was not there to meet me, because he had not received my letter.

HARRY'S MISSIONARY POTATO.

"I can't afford it," John Hale, the rich farmer, answered, when asked to give to the cause of missions. Harry, his wide-awake grandson, was grieved and indignant.

"But the poor heathen," he replied, "is it not too bad they cannot have churches and school houses and books?"

"What do you know about the heathen?"

exclaimed the old man testily. "Would you wish me to give away my hard earnings? I tell you I cannot afford it."

But Harry was well posted in missionary intelligence, and, day after day, puzzled his curly head with plans for extracting money from his unwilling relative. At last, seizing an opportunity when his grandfather was in good humour over the election news, he said:

"Grandfather, if you do not feel able to give money to the Missionary Board, will you give a potato?"

"A potato!" ejaculated Mr. Hale, looking up from his paper.

"Yes, sir, and land enough to plant it in, and what it produces for four years."

"Oh, yes!" replied the unsuspecting grandparent, setting his glasses on his calculating nose in a way that showed he was glad to escape from the lad's persecution on such cheap terms.

Harry planted the potato, and it rewarded him the first year by producing thirteen, these, the following season, became a peck, the next, seven and a half bushels, and when the fourth harvest came, lo! the potato had increased to seventy bushels, and, when sold, the amount realized was, with a glad heart, put in the treasury of the Lord. Even the aged farmer exclaimed:

"Why, I did not feel that donation in the least. And, Harry, I've been thinking that if there was a little missionary like you in every house, and each one got a potato, or something else as productive, for the cause, there would be quite a large sum gathered."

Little reader, will you be that missionary at home?

NEVER fear, if you are doing right,



I lost my time, and missed all the benefit of what would have been to me a very profitable transaction. It is not too late for you to reform, and unless you do reform your life will prove a failure."

The lesson was not lost upon Gregory. He succeeded in getting rid of his heedless ways, and became prompt, precise, trustworthy.

Oh, summer has the wild bees,
And the ringing, singing note
In the robin's tuneful throat,
And the leaf-talk in the trees;
But winter has the chime
Of the merry Christmas time.

Oh, summer has the lustrous
Of the sunbeams warm and bright,
And rains that fall at night
Where roods and lilies cluster;
But deep in winter's snow
The fires of Christmas glow.