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THE  
**RURAL CANADIAN.**

The masthead is a decorative banner with the title 'THE RURAL CANADIAN.' in a stylized, outlined font. The banner is supported by ornate scrollwork. To the left, a horse is depicted pulling a plow. To the right, a farm scene with several buildings and a horse-drawn carriage is visible. The background is filled with various agricultural and rural motifs.

*Vol. II. No. 11.*

*Toronto, November, 1883.*

*\$1 per annum, in advance.*



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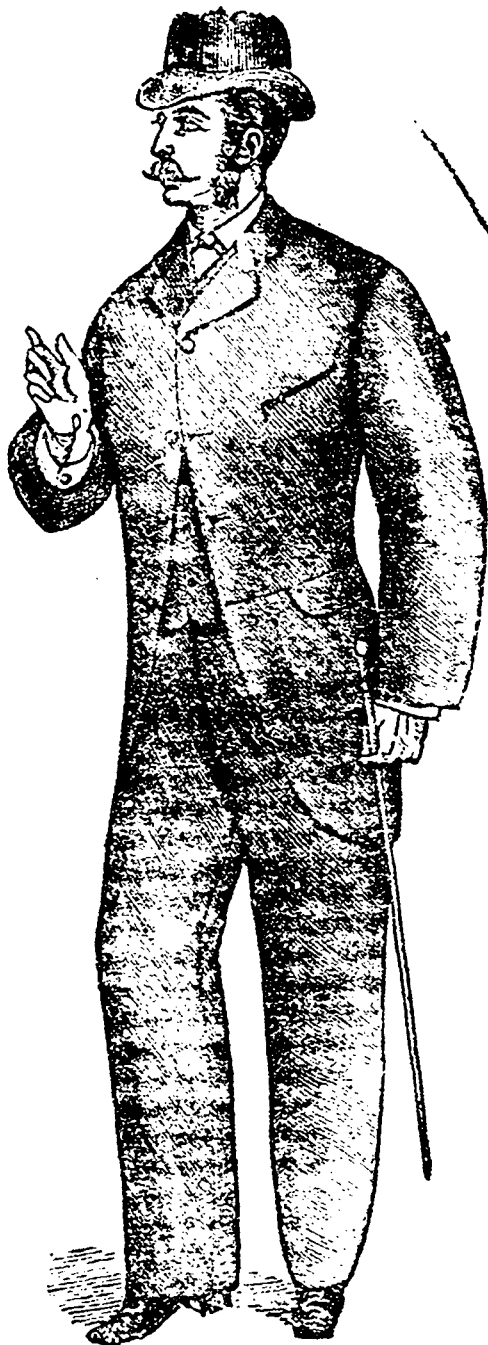
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### BOYS' AND CHILDREN'S SUITS

Is very attractive. The Prices will be found Very Low.

Just think of it! ONE HUNDRED THOUSAND DOLLARS (\$100,000) all in Fine Ready-Made Clothing for the people to select from. Without doubt the Most Extensive Stock in Canada.

We have much pleasure in informing our patrons that each succeeding season shows a

### STEADY INCREASE IN OUR SALES,

And the efforts we have made for this season's business cannot be otherwise than a crowning advance over all previous seasons.

We extend a cordial invitation to everyone to call and be shown through our immense establishment.

# THE RURAL CANADIAN.

Vol. II. No. 11.

Toronto, November, 1883.

\$1 per annum, in advance.

## RURAL NOTES.

The Kittatinny blackberry seems to be the leading favourite now. It is hardy, productive, solid, ripens in clusters, with great uniformity and is rapidly picked for the market.

The potato crop in Ontario has suffered from rot in some localities, notably on the Lake Huron coast, and in the neighbourhood of Toronto. In the United States, the crop is reported to be in a better condition than for any year since 1875.

Nearly all the best Jersey cattle bred in America are registered in the American Jersey Cattle Club Register. This herd-book has been remarkably exclusive, and a record in it means an assumed relationship to the very best Jerseys in existence.

Dr. Sturtevant, of the New York State Experiment Station, thinks that tobacco smoke is the surest remedy for the aphid. It is certainly a much safer remedy than Paris Green, which kills leaves as well as insects, if not very carefully and sparingly applied.

Every one knows that it pays to feed a milch cow well, but every one don't know how to regulate feed in order to obtain the best results. A good rule is to feed a cow up to the point at which she begins to get fat, and to stop there. What the dairyman wants is not fat but butter.

Kind treatment, clean and well-aired stables, and using each animal as if but one were kept, will surely tell in the quantity and quality of milk given by a herd of cows. Vicious ones should be got rid of, and the comfort of the herd carefully attended to. By such means dairying will pay.

Mr. S. C. Patterson, who is a good authority on the subject, says the Shropshire is the best sheep for the Canadian farmer, whether bred for mutton or bred for wool. Mr. John Dryden is of the same opinion. The Shropshires were certainly the favourites at the Toronto and Provincial fairs this year.

It is stated by the London *Live Stock Journal* that English capital to the extent of £8,000,000 (\$40,000,000) is now invested in cattle on the American continent, the bulk of it being in Texas. Canadians may well wonder why their country is shunned by the British capitalist. Probably for the same reason that it is shunned by the British tourist.

The yield of corn in the United States is computed by the Agricultural Department at 1,600,000,000 bushels, but a considerable portion of it has been hurt by frost, and is unfit for market.

The best of the season grew two hundred miles west of the Missouri River, in the heart of the great desert. The yield of wheat is estimated at 400,000,000 to 420,000,000 bushels, or about 90,000,000 bushels less than last year's crop.

It will require a succession of disasters to floor the farmer who makes the rearing of live stock the leading feature of his business. The rain and the frost may despoil his grain crops; but with cattle to graze the rich pastures and to eat up the injured grain, there is a measure of safety against loss. Besides, there is no surer way of keeping up the fertility of the soil than by maintaining a herd of cattle on the farm.

The Legislature of New York has passed an Act which imposes a penalty of \$50 (recoverable by the party damaged) for the sale of grass seed containing the seed of ox-eyed daisy, rag-weed, quack-grass, or Canada thistles. We have a somewhat similar law in Ontario, but it only extends to seeds of the last named pest. The whole law relating to noxious weeds requires revision; we have very troublesome weeds in the Province now that were unknown when the thistle Act was passed.

The first thing to be aimed at in getting together a herd for the dairy is to secure good milkers—cows that can make a good record in both quantity and quality. For this purpose each animal should be tested separately, and disposed of if it does not reach a satisfactory standard; once done thoroughly it will do for the lifetime of the herd. To neglect this work is to imperil the enterprise; for several cows of a low standard are a constant drain on profits. It costs as much to keep a poor cow as a good one.

Farmers do not often keep bulls more than two or three years, because they become dangerous as they grow old. But these immature males cannot get the best stock. The higher priced pedigreed animals have better care, are kept so long as they are serviceable, and in this, one cause of their superiority consists. There is a general impression that bulls of the Jersey breeds are apt to become vicious early, and it is suggested that this is because they are petted too much while young.

One of the greatest secrets of poultry keeping is colonization. Numerous divisions increase the chance for success, and in case of illness of any kind there is less risk of serious loss. Another of the secrets is to get the pullets laying in the fall, as soon as the old birds stop. To this end they should be put on a liberal diet of animal food—lean meat, the refuse of the butcher's shop, will answer the purpose admirably, but fat

and putrid meat should be rejected as worse than useless. Some recommend mixing the meat with crushed green bones.

Fall ploughing is not always most satisfactory when finished early. With warm weather the grasses are likely to spring up, especially couch or quack grass, when sod is turned down. With later ploughing the ground goes fresh into winter quarters, and is in better condition for working in the spring. If, however, the season is wet—which it is apt to be late in the year—the soil is likely to pack hard and to receive little or no benefit from winter frost. Everything depends on the weather and the condition of the soil, but these being favourable the work may be continued with advantage until arrested by winter.

Great care ought to be taken in selecting seed corn for next season. The injury done by frost has been so general that there is risk of getting seed with its vitality destroyed. Many farmers, too, aim to grow some one of the large varieties, and as these mature late they are more likely this year to have suffered from the early frost. It would be safer, perhaps, to grow the smaller-eared varieties, as in ripening earlier they are a more certain crop. But what is of the greatest importance just now is to procure a supply of sound seed for next year. The vitality should be tested, and if found satisfactory, stored away in a dry and reasonably warm place. Size, early maturity, number of ears on a stalk, length of kernel, etc., should be carefully considered; but, in view of the effects of the September frost, it would be sheer folly to plant seed corn next spring without knowing whether it is alive or dead.

In a test between a famous Jersey cow, owned by Mr. V. E. Fuller, of Hamilton, and a Holstein cow owned by T. B. Wales, of Iowa, for the largest yield of butter for thirty consecutive days, the latter won by one pound and fourteen ounces. The unsalted produce, as verified by affidavits, was ninety-nine pounds six and one-half ounces for the Holstein, and ninety-seven pounds eight and one-half ounces for the Jersey. The terms of the test, however, did not call for a record of the weight of milk and feed, and in this respect it was not satisfactory. Mr. Fuller's cow, under a test of ninety-three consecutive days, has yielded two hundred and ninety-six pounds six ounces of unsalted butter, or a daily average of three pounds three ounces. This record, we believe, has never been equalled. In the thirty-one days of August, the month following her test with the Holstein cow, she yielded ninety-eight pounds four and one-half ounces. Her feed consisted of pasture, cut clover, and twelve quarts of ground oats daily.



## FARM AND FIELD.

## HOW TO RAISE BIG CROPS.

It has often been asserted by advanced agriculturists that if wheat, either Spring or Winter, is sown in drills, far enough apart to admit of using a horse hoe between the rows, both to keep down weeds and loosen and aerate the soil, the yield might be increased to a marvellous extent more than it now is in this country.

In proof of this, a recent observing and intelligent traveller in Belgium gives the mode of culture there and the yield, which sometimes, with very favourable weather for harvest, reaches as high as one hundred and sixty bushels per acre. This is one of the most fertile, prosperous, and most populous countries in the world, supporting 481.71 persons to the square mile, against 18.02 in the United States and 216.02 in Germany. Winter wheat is a staple crop there on their high-priced small farms of only an acre or two. The land is highly manured in autumn, well harrowed several times, and got into the best possible condition. The grain is sown in the fall in seed beds, very thickly on the highest and best location, where it is not likely to be winter-killed, or injured by any casualty, such as over-flowing or drowning out, or smothering under the snow.

In the spring the main fields are again dressed up and marked out in drills the proper distance. When the wheat has grown sufficiently to be moved, it is thinned out by being taken up, separated from the thick stools, and planted in the drills with a tool called a dibble, which makes a hole the proper depth, into which the wheat roots are inserted, pressing the earth tight against them with the foot. This work is usually entrusted to half-grown boys and girls, a man sorting out the wheat plants in order that those of the same size may be placed together, that the field may grow even and regular.

When the plants have commenced growing, the soil is thoroughly and constantly stirred, either by means of hand or horse power. Every weed and all foreign plants are destroyed, and nothing but what is wanted, the article itself, is allowed to grow. There are very seldom any extensive failures of crops thus carefully and scientifically grown. The yield is a quantity never imagined or heard of in this country, and the crop always and surely pays the cultivator.

It is asserted that such pains would not pay to apply to crops in this country. But do we not go to the opposite extreme? Has it ever been tried here? It certainly would pay satisfactorily if applied to choice varieties in small quantities, about to be used for seed. It is certainly better to till one acre and get a crop now raised on four acres, than to try the four and only raise half a crop, which is now so often the case here.—*Milling World*.

## THE CANADA THISTLE.

There has lately been as much fuss made, in the columns of some of our exchanges, over the Canada thistle as if it were a new enemy, destined to be the death of agriculture if not instantly and utterly exterminated, instead of an old familiar one which the majority of people treat with indifference, if not with absolute contempt. The proverb that "what can't be cured must be endured," has been almost universally applied to thistles, and, pests as they are, farmers have managed to prosper in spite of them. The abundant rains of the present year have, however, caused them to spread with such rapidity that serious alarm for the future is felt; to allay which—and possibly to put a stop to the voluminous correspondence on the subject—the *Globe* recently devoted a leading article to thistles, and

promulgated a dictum to the effect that by using a cultivator with broad shares they might be killed in a few cuttings. The *Globe* probably knows as much about farming as Horace Greeley, and its advice is no doubt good; but our belief—expressed some years ago—is that the quickest way to rid the country of thistles is to set donkeys at them. At any rate, the experiment is easily tried, as there are donkeys in Toronto and thistles almost everywhere. If the animal eagerly devour the weed, as we believe he will, then the question is settled, the panacea is discovered, and it only remains to avail ourselves of it. Let every farmer become as soon as possible the possessor of a donkey; turn it loose on the road sides and waste land from spring to fall, or on the farm where it can do no damage, and in a few years the Canada thistles will have disappeared from everywhere but a few secret places, and the meek and patient ass will be eagerly hunting for stray specimens of its favourite delicacy.

## THE POTATO.

Fair esculent, what person, saint or sinner,  
But welcomes thee each day upon his table,  
Especially at noon served for his dinner,  
Fresh from thy bin or sheltering bed of sable?

How would a beefsteak look without thee, facing  
With thy mild eyes its blushes faint and tender?  
How would it taste without thy round form grazing  
The dish o'er which its savoury juices wander?

With bursting sides, dry as a roasted chestnut,  
With fine-grained starchy flesh—a piping plateful—  
What man, though opium he be, would haste not  
To do thee ample justice, and be grateful?

When dessert comes, a flaky paste or pudding—  
It follows well, I grant; oft times we need it;  
But woe to it, though plums its sides are studding,  
If thou dost not, fair tuber, just precede it.

Old Ireland lifts her heart each year and blesses  
Thee as her friend; when corn and wine have vanished  
Thou hast relieved her wants, her sore distresses,  
When, but for thee, her thousands would have famished.

On rows, in hills, thy slender stems are growing;  
They thrive alike in shine or partial shadow;  
All through the pleasant land their green is showing,  
From Maine's far coasts to plains of Colorado.

I, precious, healthful plant, for one would praise thee,  
Admire thy flower when'er I see thee blooming  
As beautiful, though common as the daisy,  
And greet thy spheres when'er I see them coming.

Give all due praise to squashes and cucumbers,  
To sugary beets, the smooth, ripe, red tomato;  
But, generous friend, to thee I write these numbers,  
Thou stalwart commoner! thou blest potato!

—*National Free Press*.

## DRAINING LAND.

It is not healthful to have wet feet. Plants suffer in this way greatly. The removal of the surplus water from the soil is one of the indispensable necessities of good farming. The story was well told by the Hon. T. W. Palmer in an address to the Western Michigan Farmer's Club, when he gave them the result of his own experience, as follows:

"I have now over 270 acres underdrained, and hope hereafter to report to you good results. The ground was so flat and the descent was so gradual that I had all the tile laid under the supervision of a surveyor, who took the level of my mains and laterals. The average depth of my laterals is two and a half feet, and, although many have said that I should have put them deeper, I have as yet seen no reason to think so. In my heaviest soils I have put them four rods apart; where the subsoil afforded a free passage to water I have put them eight rods. The result so far has been that I can get on any of my fields to plough or cultivate a short time after the heaviest rains. In former years I had to wait until June for some of the same land. The average price of my tiles and laying them has been ninety cents per rod.

The expenditure may seem large, but I came to the conclusion that I might as well try to farm on the bosom of Lake Erie as on land saturated half the year and baked the other half.

"Underdraining makes the farmer master of the situation. It lengthens the season for the plants and for the farmer. If a man cannot spare the money or the labour, which is the same thing, to underdrain more than half an acre, let him do that much. There are methods of economizing in every family which will enable him to do that. In fact, it will pay a young man to do it on moonlight nights if he can accomplish it in no other way. I am told that it pays to underdrain all lands where water will stand in a hole two and a half feet deep the wettest season of the year. That being the case, I believe there is very little land in Michigan which would not be benefited by underdraining.

"After you have your land in such a condition that the water will not retard the growth of farm products, the next thing is to add to it what will make it more productive, taking care that it does not cost more than it comes to."

## STARTING CUTTINGS.

Professor Budd, in the *Iowa Homestead*, condemns the storing of cuttings in the cellar as ordinarily practised, "in sand or earth just moist enough to preserve them in condition suitable for grafting, as thus they will fail to absorb the requisite moisture needed for changing the starch stored in the cell structure into sugar water, and the base of the cuttings instead of callousing will be found a little blackened and the bark and cambium layer at the extreme base dead or nearly so. If these cuttings are put out the upper buds will start, when the requisite heat is furnished by the sun, and exhaust all the stored nutriment in the cutting before a show of callousing is exhibited at the base. On the other hand, if the same cuttings were packed in sand in a corner of the cellar, or in shallow boxes with the base of the cuttings upward and screened from the air by not more than two inches of sand kept all the time moderately moist by sprinkling, every cutting will callous. When planted in the open air such cutting will emit roots before the top buds make much of a start and with few failures will make nice plants before fall.

"But the commercial grower should not bother with keeping ligneous cuttings in the cellar. It is far better to put them in a pit in the open air.

"Set the bundles *upside down* in a shallow pit on dry ground, as tightly together as they can be crowded. Cover over the top about five inches of earth, and as it grows cold cover the whole with fresh horse manure to mainly keep out frost. As the sun gains strength in the spring take off the manure and rake the earth fine and even. The sun heat will finish the callousing of the butts of the cuttings by the time the ground is ready to receive them. Treated in this way the farmer can root the grape, the weigelia, the tree honeysuckle, several of the spireas, the catalpa, and a greater number of trees than he might suppose possible."

## EFFECTS OF PHOSPHATE ON WHEAT.

There is more discussion than usual this year among farmers as to the effect of leaving alternate strips the width of a drill without phosphate. Very few drills will distribute the fertilizer evenly around a long "bout." In many fields there is a strip six feet wide of comparatively good wheat, and another on each side not worth the cutting. It would have been money in the farmer's pocket if he had ploughed the missing strip. The wheat it contained is thin, shrunken and unsalable. In other years the yield has been smaller, but the

quality of the berry was not notably poorer. Some farmers believe that the phosphate enables the grains that receive it to rot the adjoining rows. Such appears to be, and very probably is, the fact. The fertilizer gives the row to which it is applied such a start that the wheat roots branch out laterally, and fully occupy the soil, just as a large tree will fill with its own roots the hole made for a young tree of the same kind anywhere near it. Further than this I do not believe that phosphate can injure the land adjoining that to which it is applied. The truth is that much of our western New York soil has had nearly all its available phosphate removed by continuous cropping with wheat and other grains, and sales of timothy hay. We have to furnish a full supply for each crop, and in fact rather more than the wheat crop needs, because its roots will not reach all the fertilizer in one season. If, through fault of the drill, or carelessness, a strip of land is left unfertilized, the crop on it is not worth harvesting.—*Country Gentleman*.

#### HARVEST CALENDAR OF THE WORLD.

We are all taught that by reason of inclination of the earth's axis the several seasons happen at different times in different portions of our globe, so that seed-times and harvests do not correspond in the various zones. But probably few persons realize that if all the harvest periods of the world were grouped together they would be found to occupy altogether more than three-fourths of the whole year. As a fact, leaving out of sight altogether the equatorial and neighbouring regions, in which different seasons are actually contemporaneous, there are, perhaps, only two months out of the twelve in which the harvest is not being actually gathered some where on the face of the earth. Thus, in the greater part of Chili, portions of the Argentine Republic, Australia and New Zealand, January is the harvest month. It begins in February in the East Indies, going on into March as we come north. Mexico, Egypt, Persia and Syria reap in April, while Japan, China, Northern Asia Minor, Tunis, Algiers and Morocco, and also Texas do so in May. California, Spain, Portugal, Italy, Sicily, Greece and some of the southern departments of France, gather the harvest in June. July is the harvest month for the greater part of France, for Austria, South Russia, and the greater part of the United States of America; Germany reaps in August with England, Belgium, the Netherlands, part of Russia, Denmark, part of Canada and the north-eastern States of America; September is the time for Scotland, the greater part of Canada, Sweden, Norway, and the northern midlands of Russia, while the harvest drags on slowly throughout October in the most northern part of Russia and the Scandinavian peninsula. It would thus seem that November and December are the only months which have not a place in the harvest calendar of the world.—*London Public Opinion*.

#### TOP-DRESSING GRAIN.

If late sown grain could be lightly top-dressed just as winter set in, no doubt the manure so used would have a better effect than used in any other way. The difficulty in top-dressing wheat has been in spreading the manure so finely that it shall not fall in clods and smother the grain. With Kemp's manure spreader, this difficulty is obviated. Eight loads will comfortably cover an acre of ground, and this so applied will do more good than if put on either corn or potatoes. The hoed crops will in the end get the benefit of the manure, for the clover seeding will prevent any waste until the land is again ploughed. If manure could be only put on in large clods it

should be applied to hoed crops, either on the surface or with very shallow ploughing and let the cultivator mix it with the soil. But it is certainly better to apply the manure a year earlier, so as to insure a large clover growth, especially as the manure will thus be thoroughly mixed with the soil before ploughing.

#### STONE DRAINS.

A farm manager, writing in the *Country Gentleman*, says: I believe the best way to construct such drains is to set the flat stones carefully and firmly in the angles of the drain at the bottom, leaning them together at the top in the centre, and being careful to have the cobble stones for keys large enough so they will rest very near the tops of these flat stones, also taking care that the flat stones are of equal width, or height; then fill in above with smaller cobbles a few inches; cover well. I would rather have such a drain than tiles, provided some reliable party or company would insure it against the inroads of rats. I know of such drains which I helped to construct more than thirty years since, when I was a lad, that are apparently working as nicely as when first completed. But the time and labour required to excavate for stone drains, and for collecting and setting the stones, make them too expensive for the average farmer. Besides, few men have the "knack" of setting and wedging the stones properly, and, if not well done, like everything else, better not be done at all. Consequently, tile is best and cheapest.

#### LIMING MEADOWS.

Liming meadows or old pasture lands with, say thirty bushels to the acre, has an effect on the condition of the crop of grass that few farmers would believe without giving it a trial. In fact we do not know how the same amount of money can be expended upon land with the same profit. It is not only certain but lasting. We have known farmers to pasture meadows fifty years without being turned up by the simple application of lime once in six or ten years. These pastures which are regarded as permanent, and mostly abound in clay moulds, after being grazed down thoroughly, are restored almost knee-deep in from five to six weeks. We do not hesitate to say that no where has lime a more marked effect and can be used with better results than in the renovation of old pastures.—*Orange County Farmer*.

#### DESTROYING STUMPS.

Various modes are recommended for removing these unightly objects, such as blowing them out with dynamite, boring holes in them and filling with saltpetre and burning them out, etc. If I were troubled with stumps, I would try the experiment, with very much faith in it, of boring with a two-inch auger a hole six or ten inches deep in the top of a stump, putting in two to four ounces of saltpetre, filling up with water and then plugging up the hole. Do this, say in the fall, and the following spring remove the plug and fill the hole with kerosene and set fire to it. It is claimed that this will burn a stump and all its roots. It is certainly a cheap and easy experiment.

French mustard is thus made in America: Four tablespoonfuls of mustard, one tablespoonful of sugar, one teaspoonful of cinnamon, one-half teaspoonful each of cloves, black pepper and of flour, with vinegar enough to cover these; mix all well, and let it come to a boil; when cold add a little salad oil say one or two tablespoonfuls; this gives smoothness to the whole.

#### HOUSEHOLD HINTS.

THE reports of several sudden deaths in England lately from the stings of wasps have naturally evoked a discussion of the conditions under which an injury usually insignificant occasionally proves fatal, and have elicited many announcements of "sure cures." Several correspondents of the *London Times* agree that the juice of a raw onion has never been known to fail.

WATER in cisterns or tanks is rendered more healthy and palatable by having a little pulverized alum put into it occasionally—say a teacupful of crushed alum into an ordinary cistern, once a month, during the summer season. It is also a good plan to put a few chunks of alum into the filterer, in the partition wall of the cistern; and also into the fountains in the yard or lawn; and into the cooler in the house, from which water is to be drunk. All river, reservoir, and hydrant water should be boiled to kill poisonous animalcules in it.

SCOTCH cakes are economical so far as eggs are concerned, and, if made with care, will melt in the mouths of the children. To one pound of flour allow half a pound of butter, a quarter of a pound of sugar; let the butter stand in a basin near the fire to soften, but not melt; when soft, rub it and the flour together, then knead in the sugar. Roll out in a sheet half an inch thick; cut out cakes about two inches square; bake until they are a light brown. Put them away in a stone jar, and they will in a day or two gather moisture enough to be soft.

IT must be false ideas of neatness which demand that beds should be made soon after vacated. Let it be remembered that more than three-fifths of the solids and liquids taken into the stomach should pass off through the pores of the skin—seven millions in number—and that this escape is more rapid during the night when warm in bed. At least one-half of the waste and putrid matter—from twenty to thirty ounces per night—must become more or less tangled with the bedding, of course soiling it, and a part of this may become re-absorbed by the skin, if it is allowed to come in contact with it the next night, as it must if the bedding is not exposed for a few hours in the light. We may well imitate the Dutch example of placing such bedding on two chairs near the window, that the best purifier known—the light of the sun—may displace the impurities, or neutralize them. At least three hours on the average is as short exposure as is compatible with neatness.—*Summerside Journal*.

MOTHERS and nurses cannot be too careful about the soap they use on the little ones. Few but physicians know how many of the so-called skin diseases among children are caused by the use of adulterated, poisonous soap. An analysis of several cakes of the pretty and perfumed toilet soaps that are sold on the streets showed the presence of ground glass, silice, pipe clay, rotten stone, borax, plaster of Paris, tin crystals, magnesia, pumice stone, oat meal, and other substances which are added to give the soap weight, hardness, toughness or clearness. The common colourings are vermilion, Venetian red and carmine, ultramarine green, pot pigment green, copperas, Spanish brown, ultramarine blues, yellow and scarlet anilines, and burnt umber. Many of the perfumed ingredients, though harmless in themselves, become chemically poisonous by admixture. Adding the dangers from all these to the rancid, diseased, putrid qualities of grease used, and mothers may well be appalled at the permanent evils these neat looking, delicately scented blocks of toilet soap contain, ready to be released whenever moistened and applied to the babe's body.

## HORSES AND CATTLE.

## ADAPTATION OF BREEDS TO PARTICULAR CONDITIONS.

The profit to be realized upon feeding for either beef or pork is dependent upon various conditions. Among these are the breeds of animals fed, their capacity for taking on flesh rapidly and producing the maximum of growth from a given amount of food. This is an important consideration, and one worthy of the most careful experiment to determine which breed of either cattle or swine will produce a given weight of beef or pork at least cost, conditions being the same. Another equally important point is to determine what particular breeds of cattle are best adapted to widely different conditions, such as the stock farm in one of the prairie states, or the Texas, Colorado or Montana ranch. Because a given breed seems to meet all the requirements of the Illinois or Iowa farm, with its blue grass pastures, timothy and clover hay, and huge corn fields, it does not necessarily follow that it will prove equally well adapted to the range where, for the entire year, the animal must seek its own food, exposed to all conditions of weather, including terrific storms, frequently of several days' duration. Some breeds will, from their character and constitutional traits, be found better adapted to endure the hardships of such conditions than others, will make a better growth, reach an earlier maturity, command a better price in the markets at a given age, and thus return a greater profit to their owner. These points of comparison seem likely to reach a solution at no distant day from the attention now being given to the improvement of stock, especially on the western ranches. While for years the Shorthorns held the field as the *par excellence* beef stock, they have in the last few years met a formidable rival in the Herefords, which have pushed their claims to the front as a first-class beef stock. More recently there has been added to the list the black Polled cattle, the Aberdeen and Angus, and the Gallo-ways, for each of which is claimed special merits as beef stock, and especial adaptability to the needs of the stock ranch.

The males of all these breeds are now being so generally introduced upon the ranches that it will be but a few years before their grades will be shipped freely to the markets. When this time is reached the comparative merits of the different breeds for ranch service can be fairly ascertained. The average weight and condition at a given age, with the price they bring in open market, would be one test, though not a conclusive one, since the Polled cattle men do not claim to compete in size and weight with either the Shorthorns or Herefords, only that on a given amount of food they can produce an equal amount of beef of equally good quality. The hardiness of the different breeds and their ability to endure the extreme cold and severe storms of winter, will be a most important point in determining their relative merits, since—the ranch men who have ranches to sell, to the contrary notwithstanding—the annual mortality of cattle from exposure to the weather is at all times large, and sometimes reaches enormous proportions. Of all of the breeds named, as well as all the dairy breeds, each possesses qualities which especially adapt it to special conditions, and renders it more valuable for those conditions than any other. Each may also—as is known to be the case with some—possess qualities which in a measure adapt it to widely varying conditions.

The problem for each stock-grower or feeder to solve is, which is best adapted to his conditions? Which will give him the largest profit for either grazing or feeding?

Our country is a large one, and our cattle interests extend, to a greater or less extent, over its entire area, though the great cattle breeding country now is, and for years will be, the western territories. In pushing the merits of their particular breeds, the stock-breeders have ample scope and room. A sharp rivalry between them is every way to be desired, as such competition will tend to keep up the high quality of their stock. The newer candidates for favour will have a sharp contest before them—not to displace the older favourites, for this can probably never be done—but to win a place with them in the estimation of the public.—*Farmer's Review.*

## VALUE OF MILCH COWS.

A correspondent of the *Country Gentleman* gives some useful hints on the value of milch cows. He says: "My experience in both buying and selling cows convinces me that many farmers do not understand the true value of a milch cow, or the relative values even of those they have raised on their own farms.

"We call on a farmer with a dozen cows of common or native stock. If he wishes to sell one, unless he has a special fancy or liking for some particular cow, he will give the buyer his choice at a slight advance on the price he would ask for the poorest of the lot. The usual chances render it very probable that the poorest one is worth nothing for a milch cow, while the best one may be worth much more than the price he sets on her.

"Many farmers seem to class cows that are similar in age, size and condition of flesh, at about the same value, without sufficient regard to the important point, *how much milk or butter they yield during the year.* True, they will make the slight difference of from \$5 to \$10 where there is quite a large difference in the amount and quality of milk; while the fact is that the \$10 difference in the correct values of the two cows would require so slight a difference in daily yield that it would be scarcely noticeable.

"In estimating the value of a cow for dairy purposes, it is well to consider first whether she is worth anything at all; that is, whether the income from her will more than pay for her keeping. I am well satisfied that there are many cows kept for their milk up to a good old age, which are really worth nothing.

"Let us see if figures will not throw some light on the subject. To keep a cow during the year will cost not less than \$40, for hay, grain and pasturage. Suppose she gives seven quarts a day in the early summer, and then gives less and less until dry in the spring, making about 1,000 quarts during the year. This, at four cents per quart, would be worth just enough to pay for her keeping. Let the manure pay for the trouble and care of her, and such a cow is practically worth nothing as a milch cow, and her owner loses the interest on the money invested, and carries the risk of loss through accident or sickness, for nothing.

"Take another cow, that gives only one quart a day more than the first, during 300 days of the year. This will give an income of \$12 per year, or \$60 during the five years that she would probably be milked. This would be sufficient to pay interest on the extra cost of the cow, and make her value as a milker at least \$80 more than that of the first. And each extra quart per day of equally as rich milk adds an extra \$80 to her value.

"This estimate shows that it is necessary that there should be a difference of only one-sixth of a pint of equally rich milk at each milking, in order to make a difference of \$10 in the relative value of two cows.

"I do not give these figures as correct for all sections of the country. Even in different parts the cost of keeping a cow, as well as the price of milk, varies a great deal. But the principles which I have tried to make clear, through the use of these figures, is equally true in all parts of the country. Each farmer can take the price of milk and the cost of keeping a cow, as they exist in his own locality, and figure out the problem for himself."

## THE GENERAL-PURPOSE HORSE.

In a prize essay Leonard Rexocann says: An old country dealer has said that the American general-purpose horse is a "purposeless" horse. We do not agree with him. We know of no finer animal than the medal general-purpose horse, who has many representatives in Canada, and would have many more were it not for the hap-hazard, chance breeding of too many of our Canadian farmers.

With his clean, intelligent head, arched neck, sloping shoulders, prominent breast, short back, well sprung ribs, plump barrel, wide, thin legs and high, hollow feet, of blocky build, from fifteen and a half to sixteen and a half hands high, and weighing all the way from 1,100 to 1,500 pounds; he is a draught horse, a carriage horse and a roadster combined. He is the horse above all others for moving a load at a rapid rate. In other words, he is the farmer's horse. How are we to get him? To begin with, when you get a first-class general-purpose mare do not sell her. If she is deficient in any point, select a stallion good in that particular, or better yet, one whose colts are good in that particular. Always in selecting animals for breeding purposes, look more to their offspring than to the animals themselves. Providing they have never produced any, look to their ancestors as well as to themselves.

Avoid choosing a stallion who is low priced, and never select one simply because he is related to Dexter or Goldsmith Maid.

Do not be in a hurry to use one whose colt you have not seen. Use a stallion, if possible, a little out of season, as he is not then over-worked or over-fed.

Avoid long-legged, slim-bodied stock, no matter how rangy, stylish or speedy they may be.

Some of the highest priced carriage horses in our city are of this stamp, and if deprived of their fat they would be very inferior looking horses, and as regards their being useful, it is out of the question.

I would much sooner own the Dutchman's horse, who, when he laid down, "the sthallow full."

The first point in a No. 1 general-purpose horse is durability; he is a good feeder, has plump barrel, and, of course is easily kept in condition.

If your mares are light, use a stallion on the heavy side. Do not go to a great extreme, as we do not like too violent a cross. Do not select one that would be likely to leave flat-footed colts, or colts that are coarse in the head or legs, as this cross sometimes produces stock that are too heavy in their head and limbs for their size.—*Veterinary Journal.*

## ROOM FOR ALL.

The *Breeder's Gazette*, in a recent issue, says: It is highly amusing to observe the assurance with which one of our esteemed British exchanges prates of the downfall of the Shorthorn. Surveying the great agricultural regions of America from its London sanctum, it sees nothing but "white-faced" steers upon our pastures. The *Gazette* yields to none in its admiration of the excellent grazing and beef-making qualities of the Hereford. It likewise recognizes merit of a



high order in the Polls, both black and red. Holsteins, Jerseys and other well-established breeds have their special fields, and are heartily recommended, for certain localities, under proper conditions. No one breed of cattle can be recommended as "the best" in all cases and under all circumstances. The question as to "what kind shall I buy?" must be settled by each individual after considering the peculiar circumstances which surround his undertaking, and when this is borne in mind it is easy to discover the reason why so many different broods of cattle acquire popularity in this great country of ours. The Herefords are being highly appreciated, and deservedly so, by many of our most intelligent breeders, feeders and ranchmen. We agree with the *Mark Lane Express* that they have a grand future before them; but when it comes to the question will they supplant the Shorthorn and other meritorious breeds, we answer without the slightest mental reservation, "No." There are places, perhaps, where we would prefer Herefords to any other breed of cattle; and there are also circumstances under which we would select Polls, Shorthorns, Holsteins (Friesians) or Jerseys.

With regard to the future of the Shorthorn, we see nothing but encouragement for their breeders in the present outlook. Throughout the year drawing to a close we have not seen or heard of a good individual animal selling at a low figure. Those that are not good animals have usually sold (as they should sell in most cases), at only fair prices. This is to be counted an element of strength, which is lacking in some of the breeds for which there is great demand. The scarcity of Herefords and Polls, for instance, may lead to the use of animals for breeding purposes which are not well adapted to that end. A wise selection in this regard is necessary to maintain the quality of a breed.

#### VALUE OF BREEDING STOCK.

A point on which stock-raisers need education as much as on anything else is in the matter of putting a proper estimate upon the value of breeding stock. By far the greater part of them need to learn to better appreciate the true significance of blood and breed—to be brought to see that the quality of the sires and dams used in their flocks and herds makes all the difference in the world in the profitableness of their business—to be convinced that this is no affair of imaginary importance, but that it is most intimately connected with success or failure in stock-raising. They need to know not only that improved stock is more valuable, but why it is more valuable. The more rapidly and thoroughly knowledge of this kind is disseminated the better it will be for the breeder, the farmer, the consumer of meats and the country in general. When a man has come to understand that \$50 or \$100 invested in a good bull, in addition to what a poor one would have cost, is money well spent, or that \$10 or \$20 more paid for first-class stallion service than scrub service could have been obtained for, is a judicious expenditure, he is more fairly in the way of successfully prosecuting the live-stock business than he has ever been before. There is a point in lavish outlay in this direction where it becomes foolishness, but not one man in fifty needs a caution on this point. A score of men will perhaps fall short in failing to expend their means in this way with sufficient liberality to best serve their own interests, where one will promptly meet the full requirements of his farm breeding. The man who will work up to this point is an exception, and still more is the farmer who is disposed to throw away money with a lavish hand in the improvement of his stock. This last extreme is as bad as the other, but is

met with so seldom as to make it phenomenal. It is to the golden mean above referred to that the stock-raisers are to be educated; and every influence tending in this direction should be fostered and encouraged.

#### CHOOSING A HORSE.

The *Turf, Field, and Farm*, a most reliable authority on the subject, says that, "in buying a horse, first look at his head and eyes for signs of intelligence, temper, courage, and honesty. Unless a horse has brains you cannot teach him to do anything well. If bad qualities predominate in a horse, education only serves to enlarge and intensify them. The head is the indicator of the disposition. A square muzzle, with large nostrils, evidences an ample breathing apparatus and lung power. Next, see that he is well under the jaw, with jawbones broad and wide apart under the throttle. Breadth and fullness between the ears and eyes are always desirable. The eyes should be full and hazel in colour; ears small and thin and thrown well forward. The horse that turns his ears back every now and then is not to be trusted. He is either a biter or a kicker, and is sure to be vicious in other respects, and, being naturally vicious, can never be trained to do anything well, and so a horse with a rounding nose, tapering forehead, and a broad, full face below the eyes, is always treacherous and not to be depended on. Avoid the long-legged, stilted animal—always choosing one with a short, straight back and rump, withers high and shoulders sloping, well set back, and with good depth of chest, forelegs short, hind legs straight, with low down hook, short pastern joints, and a round, mulish-shaped foot."

#### SEVEN-YEAR-OLD HORSES.

An old farmer once said: "What a year it must have been for colts seven years ago this spring." Any person who has never attempted to buy a horse cannot appreciate this remark, but if he will let it be known that he wants to buy a good horse, he will be struck with the circumstance that all the horses that are of any particular account were born seven years ago. Occasionally there is one that is six years old, but they are not plenty. Now, those of us who lived around here seven years ago did not have our attention called to the fact that the country was flooded with colts. There were very few twin colts, and it was seldom that a mother had half a dozen colts following her. Farmers and stock-raisers did not go around worrying about what they were going to do with so many colts. The papers, if we recollect right, were not filled with accounts of the extraordinary number of colts born. And yet it must have been a terrible year for colts, because there are only six horses in Milwaukee that are over six years old, but one of them was found to have been pretty well along in years when he worked in Barnum's brickyard in 1868, and finally the owner owned up that he was mistaken twenty-six years. What a mortality there must have been among horses that would have now been eight, nine or ten years old! There are none of them left. And a year from now, when our present stock of horses would naturally be eight years old, they will all be dead, and a new lot of seven-year-old horses will take their places. It is singular, but it is true. That is, it is true unless horse-dealers lie, and we would be slow to charge so great a crime upon a useful and enterprising class of citizens. No, it cannot be, and yet doesn't it seem peculiar that all the horses in this broad land are seven years old this spring? We leave the subject for the youth of the land to ponder over. It beats us.—*Veterinary Journal*.

#### CREAM.

"No time like the present," remarks the boy with a new gift watch.

The way the golden rule is frequently rendered: Do those you are done by.

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

ONE of the largest fruit preservers in California came from Glasgow. Of course he is a canny Scotchman.

It is said that Mr. Langtry is coming to America to lecture. Langtry's lecturing, like charity, should begin at home.

THE difference between a cat and a comma is that one has the claws at the end of the paws, while the other has the pause at the end of the clause.

IS IT a dude? Yes, it is a dude. Was it always that way? Yes, natural born. What does it do for a living? It breathes, dear; don't disturb it.

AN intemperate citizen of Rochester calls his stomach "Hades," because it is the place of departed spirits. One in Cincinnati calls his "The Tomb," because it's where the bier goes.

SOME ingenious observer has discovered that there is a remarkable resemblance between a baby and wheat, since it is first cradled, then threshed, and finally becomes the flower of the family.

"YOU told me, Arthur, that your doctor advised you to drink whiskey. Has it done you any good?" "Well, I should say so. I got a barrel of it two weeks ago and I could hardly lift it; and now I can carry it about the room."

"WILL there be a hop to-night?" asked a summer sojourner of another who had loved the stock market "not wisely but too well." "Don't know about the hop; but there will be a skip if I can get my trunk out," was the reply.

WHITE Sulphur Springs is the only watering place we have heard of where there is a surplus of men. There were five beaux to one belle at this famous resort and, notwithstanding the prevalence of brimstone, it is not a great place for match-making.

PASSENGER (faintly): "O'lect fares—fore we get across! I thought we—" Mate: "Beg y'r pardon, sir; but our orders is, in bad weather to be particular careful to collect fares; 'cause in a gale like this ere, there's no knowing how soon we may all go to the bottom!"

FENDERSON has gone into the conundrum business. He wants to know why an unripe pear is more deadly than an immature apple. As nobody ever tries to guess the answer, Fenderson says (his eyes beaming with joy at his own ingenuity): "Pear is green."

ROMEO and Juliet are prominating on a beautiful autumn evening. Romeo, raising his eyes to heaven, exclaims. "What an admirable spectacle! Look at those thousand stars that sparkle!" "Yes," replies Juliet, "they remind you of the lanterns on the carriages."

"YOUR daughter? It is impossible. Why, you look more like twin sisters." "No; I assure you, she is my only daughter," replied the pleased mother. And the polite old gentleman spoiled it all by remarking. "Well, she certainly looks old enough to be your sister."

"PRAY, my good man," said a judge to an Irishman who was a witness on a trial, "what did pass between you and the prisoner?" "Oh, then, please your lordship," said Pat, "sure I sees Phelim atop the wall. 'Paddy!' says he. 'What?' says I. 'Here!' says he. 'Where!' says I. 'Whist!' says he. 'Hush!' says I. And that's all, please your lordship."



**SHEEP AND SWINE.****THE FLOCKS IN WINTER.**

It is a serious mistake to neglect feeding grain to sheep because it is dear. They should have received a moderate feed daily some time before winter came so that they might enter the cold weather in thrift. Very much depends on the healthful wintering of sheep on this care in the fall. If they are brought to the winter in good health and are strong and hearty there is very little trouble in wintering them so that they will be profitable. Begin with a moderate feed of grain and increase it gradually for the fattening flock. As they get fatter they need more food to keep them gaining. It is not only the amount fed, but the manner of feeding that needs attention. Sheep can be fed heavily and wastefully and yet not gain but grow poor. It is very important that they are never over-fed. A good shepherd will always keep his sheep with a sharp appetite; not an empty stomach longing and restless for want of sufficient food, but fed just enough to satisfy and induce healthy digestion and at the same time not to satiate. To the inexperienced we would say, never over-feed, but carefully test the appetite of the flock till he can see just how much they will bear with profit. It is not, altogether, the amount or kind of feed that tells, but the way of feeding it. It is true that sheep prefer certain kinds of feed and some are better than others for them, but the best can be made bad and the worse comparatively good by the skilful hand.

Feed regularly morning, noon and night. In all classes of domestic animals this point is necessary, but to none more so than to sheep. A sheep will gain in flesh if it can have somewhat near the amount it will consume; and, what is more important to the farmer, a sheep thus fed is getting into condition for still heavier feeding.

If a flock of sheep is poor it needs greater care to bring them up. Sometimes thin flesh is not a sign of lack of food, but of indigestion. The alternation of heavy feeding with scarcity they will not bear, whether it be regular or not. But a sheep, or any animal well but carefully fed, has a better digestion than a poor though hungry one. The internal organs need proper exercise, rest, and work as do the muscles, and are more easily disarranged and unfitted for their proper functions. Corn is the staple article of grain for fattening and even store sheen and it is not necessary, nor even best, that it be ground. Sheep thoroughly remasticate their feed, and this takes the place of grinding. Corn is very heating, and, if fed high, is better mixed with bran or a little oat-meal. A light daily feed of roots cannot fail to be beneficial. Oats are one of the best grains for sheep; mixed with corn for fattening, or alone, or one-third corn for ewes and lambs, they will be quite satisfactory.

Clover hay is the best forage the sheep can have. It is usually cheaper than timothy but it is the most profitable hay for sheep. Two hundred pounds per day is sufficient for ordinary sheep fed in equal feeds morning and night, that is if grain is fed also. This, with a feed of roots at noon with straw to nibble at through the day, will make the flock healthy, happy and fat.

The better fed on hay and grain the more palatable will be the straw, for sheep like a variety. Well-cured corn fodder is also greedily eaten, as also is pea and bean straw, the latter very nutritious. Plenty of clean water always accessible is a prime necessity. Sheep do not, like cattle or horses, drink largely at one time and enough to last for hours. They prefer to frequently take a small quantity, and while eating hay will often go to the water provided it is near by, and it should

always be under cover. Never tolerate the idea that eating snow will supply the place of water. Try it yourself if you still think so.

Sheep will endure severe cold if they are kept dry, but they do not like cold winds and wet and cold they cannot stand. The water remains in the wool and in a cold atmosphere chills them through and opens the way for all kinds of disease. An open winter is not the most favourable for feeding sheep. If they are kept housed they are too warm and they lose their appetite and if exposed the constant storms make them uncomfortable. Lambs require more care for fattening than older sheep, but they will also give a better return for food consumed and they are always salable, but it is safe to say that the novice in sheep feeding should not do his first work with lambs.

Breeding ewes require generous but not high feeding. The grain will need to be a little different than for fattening, more bone and muscle-forming food and not so much carbonaceous or heat-producing food; bran, oats, roots moderately and by all means clover hay in abundance.

Lambs from ewes highly fed on corn will be weak and flabby, and if they do not die outright will not be thrifty, but with the other food they will come strong and healthy, able to take care of themselves from the first. After lambing ewes will bear more corn and indeed of everything else. To sustain the body, keep up the growth of wool and provide milk for the lamb is a severe tax, and the best food is none too good for them at this stage. One of the profits arising from sheep feeding must always be the value of the manure made. No portion of the stock on the farm will do as well in all respects in this line as the sheep. Being housed, the manure is always under cover; it receives and retains all the liquid and slowly ferments, so that it is ready for use when it is put on the land in spring. A good supply of straw for litter is needed for sheep, and a little should be put on daily, just enough and no more than to keep the yard dry and make a comfortable bed for them to lie on, for they will not do well unless they have this. Sheep are well adapted to grain-growing farms because they can work a large amount of straw into valuable manure.—*Detroit Post and Tribune.*

**INCREASING LEAN MEAT IN PIGS.**

We may well suppose that the habit of the pig in laying on an excessive quantity of fat has been caused by long and excessive feeding of fat producing food, and it is not likely that any sudden transformation could be brought about; but it is well known that the pigs of different countries differ in respect to fat. We have only to contrast fattened pigs of this country with those in Canada. There, pork is fattened partly upon barley, but largely upon peas, a highly nitrogenous food, yielding a large proportion of muscle, and our pigs are fattened almost wholly upon corn, an excessively starchy and fattening food. The Canadian pork has a much larger proportion of lean meat and less lard. The difference is very marked, so much so that in a market supplied with both kinds, purchasers easily select the one or the other as desired. Wild hogs do not have such excess of fat, and the southern hog, which is grown much slower than those in the northern and western States, and fed much less corn, is comparatively lean.

There can, therefore, be little doubt that the habit of depositing the excess of fat is caused by long-continued feeding adapted to that end. The hog is naturally a grass and root-eating animal, and, in its domestication, is fed almost wholly, in this country, upon concentrated food. Hogs fed on skimmed milk have a less proportion

of fat than those fed upon corn. If young pigs are kept upon food that will grow the muscles and bones, and develop a rangy frame, they will possess so much muscle when half-grown, that a moderate length of time in fattening, even on corn, will not pile on an extensive amount of fat.—*National Live Stock Journal, Chicago.*

**PENNED UP PIGS.**

I never made any money out of pigs always shut up in a pen, and do not believe other people can. I have realized a profit when the pigs ran in a clover or orchard grass field, and made a considerable portion of their growth on grass or other cheap feed. Now, if my neighbour who fed out his "old corn" in the pen to his pigs would calculate ahead and have a nice range for his hogs, where they could get a good share of their living, and then give them a part of the corn, he would increase his profits. "Well," he says, "they will not grow as fast, nor weigh so much." I am not sure but they will grow as fast. A pig likes a variety of food. He will thrive on grass alone when no other food is provided. A pig wintered over will get fat on green clover or fresh growing orchard grass. A little grain will make proportionately more growth when a pig runs in a field than when it is confined in a pen. Supposing a pig will not weigh more than half as much when it runs out and helps itself, as it would if shut up in a pen and fed all the corn it would eat; it does not cost half as much, and the flesh is a hundred times better food. I do not wish to eat pigs shut up all summer in a foul pen and stuffed with corn. It is an unnatural and sickly condition for a pig which loves pure air and the food incident to a free life. He may not weigh as much. It is not a question of weight, but of health and profit. If two hundred pounds cost all it will bring, and one hundred only one half, which is the most profitable?—*Col. F. D. Curtis in Agriculturists.*

**HOW TO BUILD UP A FLOCK.**

A Michigan correspondent in writing to the *National Live Stock Journal*, "How to build up a flock," says:

"Four years ago, I bought thirty ewes—grade Merinoes—culls from a flock, for which I paid three dollars each—a pretty steep price, I thought—but they were round, heavy-bodied, and short-legged. The first season they sheared, on an average, a little over five pounds of wool, and I raised twenty-eight lambs. Could not buy such a ram as I wanted, so I gave five dollars for his service. Have done the same twice, because I could not buy such as I wanted. Have lost but nine sheep in the time (four years); have sold forty-six, for \$211, including culls, and have at present a flock c. seventy-one. Sold my wool the 29th of June, which averaged nine and three-fourths pounds per head, washed. I use none but thoroughbred rams. Have just bought one which sheared twenty-seven pound. Am not given to boasting, but my sheep are the wonder of the neighbourhood, and my success something they cannot understand. I have but one motto—Eternal vigilance is the price of success. I was offered early this spring, for all my lambs (coming one year old), \$7 apiece.

One of the advantages of keeping sheep is that qualities of lands and crops can be utilized by them which would otherwise be comparatively profitless. While they are among the most profitable stock, they actually improve the soil, so that more grass and more money are realized with less labour. A writer remarks, a pound of mutton can be raised as cheap as a pound of beef or pork, and is worth equally as much in the market, and the wool is extra profit.

Blessed Benefactors.

When a board of eminent physicians and chemists announced the discovery that by combining some well-known valuable remedies, the most wonderful medicine was produced, which would cure such a wide range of diseases that most all other remedies could be dispensed with, many were sceptical; but proof of its merits by actual trial has dispelled all doubt, and to-day the discoverers of that great medicine, Hop Bitters, are honoured and blessed by all as benefactors.

They give new life and vigour to the aged and infirm. To all whose employments cause irregularities of the bowels or urinary organs, or who require an Appetizer, Tonic and mild Stimulant, these Bitters are invaluable, being highly curative, tonic and stimulating, without intoxicating.

No matter what your feelings or symptoms are, what the disease or ailment is, use Hop Bitters. Don't wait until you are sick, but if you only feel bad or miserable, use the Bitters at once. It may save your life. Hundreds have been saved by so doing. \$5000 will be paid for a case they will not cure or help.

Do not suffer yourself or let your friends suffer, but use and urge them to use Hop Bitters.

Remember, Hop Bitters is the purest and best medicine ever made; the "Invalid's Friend and Hope." No person or family should be without them.

"I was troubled for many years with serious Kidney and Liver Complaint, Gravel, etc.; my blood became thin; I was dull and inactive; could hardly crawl about, and was an old worn out man all over, and could get nothing to help me, until I got Hop Bitters, and now I am a boy again. My blood is pure, kidneys are all right, and I am as active as a man of thirty, although I am seventy-two."—FATHER.

"For ten years my wife was confined to her bed with such a complication of ailments that no doctor could tell what was the matter or cure her, and I used up a small fortune in humberg stuff. Six months ago I saw a U.S. flag with Hop Bitters on it, and I thought I would be a fool once more, and I tried it, but my folly proved to be wisdom, and two bottles cured her; she is now as well and strong as any man's wife, and it cost me only two dollars."

—H. W.—, Detroit, Mich.

Don't take dingy or faded things when the ten-cent Diamond Dye will make them good as new. They are perfect, and cost but 10 cts.

SKINNY MEN.

"Wells' Health Renewer" restores health and vigour, cures Dyspepsia, General Debility. \$1.

It is impossible for a woman to suffer from weakness after taking Lydia E. Pinkham's Vegetable Compound.

"BUCHUPAIBA."

Quick, complete cure, all annoying Kidney, Bladder and kindred Diseases. \$1. Druggists.

Use the safe, pleasant, and effectual worm killer, Mother Graves' Worm Exterminator; nothing equals it.

BAD DRAINAGE.—There is nothing more productive of disease in a neighbourhood than bad drainage. Open the culverts and sluiceways and purify the locality. The obstructions in the human system may be remedied in a similar manner by Burdock Blood Bitters, which opens all the outlets of disease through the Bowels, Liver, and Kidneys.

HAVE you tried Holloway's Corn Cure? It has no equal for removing these troublesome excrescences.

CATARRH OF THE BLADDER.

STINGING irritation, inflammation, all Kidney and Urinary Complaints, cured by "Buchupaiba." \$1.

LET the Christian sentiment of the country insist upon the meting out of a suitable penalty upon every man, whether his position be high or low, through whose neglect of duty lives are lost, and we shall soon begin to notice a decrease in the number who die from accident.—Advance.

BE CAREFUL

The genuine "Rough on Corns" is made only by E. S. Wells (Proprietor of "Rough on Rats"), and has laughing face of a man on labels. 15c. & 25c. Bottles.



Prepared for Health Lydia E. Pinkham

LYDIA E. PINKHAM'S VEGETABLE COMPOUND.

Is a Positive Cure For all those Painful Complaints and Weaknesses so common to our best female population.

A Medicine for a Man. Invented by a Woman. Prepared by a Woman.

The Greatest Medical Discovery Since the Dawn of History.

It revives the drooping spirits, invigorates and harmonizes the organic functions, gives elasticity and firmness to the step, restores the natural lustre to the eye, and plants on the pale cheek of woman the fresh roses of life's spring and early summer time.

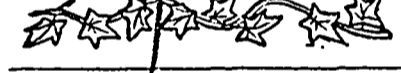
Physicians Use it and Prescribe it Freely. It removes faintness, flatulency, destroys all craving for stimulants, and relieves weakness of the stomach. That feeling of bearing down, causing pain, weight and backache, is always permanently cured by its use. For the cure of Kidney Complaints of either sex this Compound is unsurpassed.

LYDIA E. PINKHAM'S BLOOD PURIFIER will eradicate every vestige of Humors from the Blood, and give tone and strength to the system, of man woman or child. Insist on having it.

Both the Compound and Blood Purifier are prepared at 233 and 235 Western Avenue, Lynn, Mass. Price of either, \$1. Six bottles for \$6. Sent by mail in the form of pills, or of lozenges, on receipt of price, \$1 per box for either. Mrs. Pinkham freely answers all letters of inquiry. Enclose 3c. stamp. Send for pamphlet.

No family should be without LYDIA E. PINKHAM'S LIVER PILLS. They cure constipation, biliousness, and torpidity of the liver. 25 cents per box.

Sold by all Druggists.



WEBSTER'S UNABRIDGED.

In Sheep, Russia and Turkey Bindings.



THE STANDARD. Webster—it has 118,000 Words, 3000 Engravings, and a New Biographical Dictionary.

Standard in Gov't Printing Office. 22,000 copies in Public Schools. \$10 20 % of 1 of any other series. Said to make Family Intelligent. Best Help for SCHOLARS, TEACHERS and SCHOOLS.

Webster is Standard Authority with the U. S. Supreme Court. Recommended by the State Sup'ts of Schools of 36 States.

"A LIBRARY IN ITSELF." The latest edition, in the quantity of matter it contains, is believed to be the largest volume published. It has 3000 more Words in its vocabulary than are found in any other Am. Dic'y, and nearly 3 times the number of Engravings. The Unabridged is now supplied, at a small additional cost, with DENISON'S PATENT REFERENCE INDEX.

"The greatest improvement in book-making that has been made in a hundred years." G. & C. MERIAM & CO., Pub'rs, Springfield, Mass.

JUST PUBLISHED.

44 pp. Price 10 Cents.

DOCTRINES OF THE PLYMOUTH BROTHER.

By Rev. Professor Crosby, M. A., Hales College, Londonderry.

A comprehensive and very complete exposition in short space of the Errors of Plymouthism.

Mailed to any address, postage prepaid, on receipt of price.

Wherever Plymouthism is trying to get a foot-hold within the bounds of Presbyterian congregations parties would do well to circulate copies of this pamphlet.

In quantities, \$3 per 100.

C. BLACKETT ROBINSON,

Jordan Street Toronto. Publisher.

Scientific and Useful.

SPICED PLUMS.—To eight pounds of plums allow four of sugar, one teaspoonful each of cinnamon and cloves, one small cup of vinegar. Cook until they are thick as jelly.

TO CLEAN BLACK CASHMERE.—Wash in hot suds, with a little borax in the water; rinse in bluing water, very blue, and iron while damp. It will look almost equal to new.

THE LAUNDRY.—A tablespoonful of black pepper put into the first water in which gray and buff linens are washed, will keep them from spotting. There is no objection to it, and it softens the water like soda.

BLUE OINTMENT and kerosene, mixed in equal proportions and applied to bedsteads is an unfailing bug remedy, and a coat of white-wash is equally good for a log house.

SODA AND WINDOWS.—If you put soda in the water with which you are to wash windows, you will find that finger marks, putty stains, etc., will be much more easily removed than if clear water alone is used.

PIPPEN CAKE.—Flour, one pound; sugar, half a pound; two eggs, a little salt, and one yeast wder. Grate six large apples, and rub them well into the other ingredients; add milk sufficient to make a dough. Cut into thin cakes, and bake quickly.

A BOILING solution of sulphate of copper applied to a floor on 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.

CHEESE CLOTH FOR COMFORTS.—Cheese cloth, or, as it is sometimes called, cotton bunting, in scarlet, blue, or cream colour, is good material for lounge quilts and comforts for the guest chamber. The cloth is light, but very firm, and wears well; it is also much used for lining lace spreads, lambrequins, etc.

A PRATY cushion can be made by embroidering a spray of old-fashioned pinks on a ground of blue. Around the edge of the cushion put a full puff of pale satin. Where the puff is joined to the blue satin sew a good-sized pink cord. The cushion, when completed, should be about half a yard long, but not quite so wide.

SOFA PILLOWS.—Silk neckerchiefs make very pretty coverings for sofa pillows, canton flannel being used for the reverse side. Those which have a design in one corner are sometimes chosen, and when this is done the ornament is turned back towards the centre, and its place is filled by a triangle of black velvet, but the kerchiefs which have borders are the easiest to use.

FRESH PORK PIE.—Boil lean, fresh pork, and make the paste as for beefsteak pie; add to the pie, after putting in the meat, two potatoes cut fine, which have been boiled before, season with pepper, salt, and a dust of summer savoury. If there is not fat enough in the pork, add butter, thicken the gravy with a little flour. Plenty of gravy is required. It is good cold or hot.

CORN BREAD WITHOUT YEAST.—Corn bread without yeast or soda is sometimes desired as an article of food. Sift three quarts of meal, add a tablespoonful of salt, and mix with just enough water to make a thin batter; cover this with a cloth and let it stand until it begins to rise, and little bubbles make their appearance on the top; then pour it into a well buttered tin, and bake slowly in a moderate oven.

TO CLEAN BRASSWORK.—Make a paste of two ounces of rotten stone, half an ounce of oxalic acid, three-quarters of an ounce of sweet oil, and a little turpentine. Apply with a soft piece of old cloth, moistened with water. Brass ornaments will look as bright as when new, after they have been washed with rock alum boiled to a strong lye, in the proportion of an ounce to a pint, and rubbed when dry with fine tripoli.

LEMON PUDDING.—A very good lemon pudding may be made from one small cup of butter, two full cups of sugar; mix very smooth, adding then the grated rind of two lemons, the yolks of six eggs, six small Boston crackers dissolved in one pint of sweet milk. Bake, and use the whites of the eggs to make a meringue for the top of the pudding. When the whites are beaten stiff, add six tablespoonfuls of powdered sugar, mix well; spread on the top of the pudding, and brown nicely.

A GOOD INTRODUCTION.—J. Kennedy, a merchant in Dixie, about three years ago introduced Hagyard's Pectoral Balsam to his customers by trying it in his own family for Coughs and Colds. Being pleased with results, large sales followed, and it is now the favourite remedy in that neighbourhood.

A GREAT many people in this world praise goodness and then do as they have a mind to. They follow the advice of George Herbert, to "Praise the sea, but keep on land."

MESSRS. MITCHELL & PLATT, druggists, London, Ont., write Dec., 1881: We have sold Dr. Thomas' Electric Oil since its first introduction, and we can safely say, no medicine on our shelves has had a larger sale, or gives better satisfaction. We always feel safe in recommending it to our customers.

LOOK OUT FOR FRAUDS!

The genuine "Rough on Corns" is made only by E. S. Wells (Proprietor of "Rough on Rats"), and has laughing face of a man on labels. 15c. & 25c. Bottles.

THE sort of Bible study which is alone sure of answering the highest ends is that which, in a right and true meaning of the word, is study.—Interior.

H. GLADDEN, West Shefford, P.Q., writes: For a number of years I have been afflicted with rheumatism. Two years ago I was attacked very severely. I suffered a great deal of pain, from which I was not free for a day, until last spring, when I began to use Dr. Thomas' Electric Oil, and I rejoice to say it has cured me, for which I am thankful.

A QUERY ANSWERED.—People often ask when is the best time to take a blood purifier? We answer, the best time is now. Burdock Blood Bitters does its work of purifying, regulating, and toning the system at all times and all seasons. Purity in all things is always in order when required.

THAT HUSBAND OF MINE

is three times the man he was before he began using "Well's Health Renewer." \$1. Druggists.

THERE are scores, if not hundreds, of churches, of which it may be boldly declared, "There was a time for them to be born: it is now time for them to die."—Independent.

LIKE all sterling remedies, Northrop & Lyman's Vegetable Discovery and Dyspeptic Cure deserves a fair trial. It would be absurd to suppose that this or any other medicine of kindred nature could produce instantaneous effects. For the thorough removal of Chronic Dyspepsia, Constipation, Liver Complaint, and other ailments to which it is adapted, its use should be continued some time, even after the chief symptoms are relieved. That it then effects complete cures is a fact established by ample and respectable evidence.

"ROUGH ON RATS."

Clears out rats, mice, roaches, flies, ants, bed-bugs, skunks, chipmunks, gophers. 15c. Druggists.

WHAT Toronto's well-known Good Samaritan says: I have been troubled with Dyspepsia and Liver Complaint for over 20 years, and have tried many remedies, but never found an article that has done me as much good as Northrop & Lyman's Vegetable Discovery and Dyspeptic Cure.

CLARA E. PORTEE.

If we attempt to civilize as well as Christianize a people there will be danger of transplanting an exotic form of civilization, which will hardly take root.—Watchman.

DR. W. ARMSTRONG, Toronto, writes: "I have been using Northrop & Lyman's Emulsion of Cod Liver Oil and Hypophosphites of Lime and Soda for Chronic Bronchitis with the best results. I believe it is the best Emulsion in the market. Having tested the different kinds, I unhesitatingly give it the preference when prescribing for my consumptive patients, or for Throat and Lung affections."

HOLIDAY BOOK! WALKS ABOUT ZION.

BY REV. JOS. ELLIOT.

179 pages. Cloth, 50 cents; in paper, 30 cent

Mailed to any address, free of postage, on receipt of price.

"Among good books for devotional or practical religious use we mention with commendation 'Walks About Zion,' a service of brief interesting and practical addresses on religious topics."—New York Independent.

"These addresses are brief, pointed, eminently practical. Mr. Elliot is well known in this community as an accomplished expounder of the Word of God, and with the gift of saying much in little, much meaning, few words. This is the characteristic of these addresses which we most cordially commend to the thoughtful reader. We confess to be reminded by these brief and terse discourses of our dear old favourite, John Foster."—Presbyterian (Halifax) Witness.

Usual discount to the trade.

C. BLACKETT ROBINSON,

5 Jordan Street, Toronto. Publisher.

**GOOD PAY TO AGENTS.**

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

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

**The Rural Canadian.**

TORONTO, NOVEMBER, 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.*

**GOING AHEAD.**

There is a steadily growing disposition on the part of cattle breeders in this country and in the United States to improve in the direction of greater beef and dairy products. The native cattle have served a useful purpose, and they possess some excellent qualities, but they no longer satisfy the go-ahead man whose motto is "excelsior." There are few localities in Ontario, especially, in which the infusion of Short-horn and Ayrshire blood has not improved the native stock, and the process of grading up has been going forward steadily. The Short-horn cross has given beef, while the Ayrshire has given milk. The gain to this extent has been very marked during the past twenty years, but within a more recent period the Herefords, the Galloways and the Aberdeen polls have been making considerable headway. There are at the present day a number of large and very fine herds of these breeds, and they too are of valuable service in grading up the natives. In twenty years more we may look for great progress along these lines; the vast majority of our cattle will doubtless be high grade, if not first class, the native will not have become extinct. The shipment of live stock to the English markets, which had its beginning only a few years ago, has already given a wonderful impetus to breeding for beef; and we may be

sure that so long as the present high prices of meats are maintained breeding for beef will suffer no check. But progress is not confined to the rearing of cattle for the meat markets. The dairy interest is not being forgotten, and possibly our farmers will find before long that this is a more profitable field than the other. It is a question whether the greater cattle ranches of the western and north-western prairies may not soon begin to effect the trade, especially when we see the same means adopted to improve the breeds. Within the last two or three years hundreds of Short-horns, Herefords, Aberdeen polls and Galloways have been sent west, and our own experience shows what results may be looked for. Is it possible for us in Ontario to compete with the rivalry of the prairies when it has taken this shape? Time will tell. But we think that in breeding for the dairy, Ontario farmers may rely on holding their own against all rivals. The produce of our cheese factories is nowhere surpassed, and with proper methods an equally good reputation may be established for our butter. Jersey cattle are steadily increasing, and this year, for the first, a number of Holsteins have been introduced. Let us go on in this direction. With a few enterprising men in every county to establish herds of Ayrshires, Jerseys and Holsteins, and with creameries to do for butter what factories have done for cheese, the gain to the country would speedily become manifest. It is just here that we need to cultivate a spirit of enterprise.

**SHELTER FOR STOCK.**

With the approach of winter weather every good and humane farmer will see that suitable provision is made for the shelter of his live stock. This is quite as essential for the sake of economy as for comfort. An animal under cover requires less food to keep up the standard of natural heat than one that is exposed to wintry winds and storms. We know from the experience of too many farmers that cattle can be brought through our severest winters with no other shelter than a straw stack or a rail fence, but common sense tells us that it must be at a large expense of constitutional vigour. Hardiness in horses and cattle is a desirable thing, but it is not a quality worth cultivating by the practice of cruelty and extravagance. We are told in the narratives of Parkman and others that the Indians who occupied the country between Lake Simcoe and Georgian Bay, two hundred and fifty years ago, withstood the rigours of winter often without fire or clothing, their naked children having no better shelter than was afforded by rude bark wigwams. Such a degree of human endurance we know to be possible, but does any sane man believe that it would be wise to practise it with a view to improve the hardiness of the race? Every body knows better. Food, clothing and shelter are felt to be necessary for man's comfort, and it is only in a less degree that food and shelter are necessary for the brute's. If it is not possible to have stables for cattle and horses and a properly enclosed shed for sheep, the least that can be done is to provide covers to which they can retreat during showers of rain, sleet or snow. But, with lumber so plentiful as it is in Ontario, there is hardly an excuse for the farmer who neglects to erect substantial buildings for his stock, or who suffers such buildings to go to wreck. The cities have their societies for the prevention of cruelty to animals. It is almost a pity that societies with a similar object could not be formed in the rural sections, to work out a much needed reform by precept and example.

Specimens for the RURAL CANADIAN. Only \$1.25 year.

**PICTURESQUE CANADA.**

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 those 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.

**OFFICE NO.**

**The Art Publishing Co., Toronto, Ont.**

Go Subscribers of Picturesque Canada: 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.

Lot	Con.	Name	Occupation

**P. O. Address**

Township

As winter approaches, the question is naturally asked: Where shall we get our winter clothing? Many will at once answer, at Oak Hall, opposite St. James' Cathedral, Toronto; but yet there are many who are not aware of the extent and variety, and cheapness of their stock, and, therefore, these people should not spend a dollar until they have paid a visit to this, the largest clothing house in Canada, where they cannot fail to be suited. The address is, Oak Hall, 116-121 King St. East, Toronto.



## "PICTURESQUE CANADA" AGAIN.

## CAUTION TO THE PUBLIC.

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 Blowett, 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.

## THE MANURE.

Winter is the time for making manure, says *The Farm & Garden*. Every farmer knows that when large quantities of absorbent material is thrown into the cattle yards, the snows and rains, with the constant trampling of the stock, make it not only in good condition for being handled, but rots it sooner. The manure, however, should be put up in large mounds in order that heat may be created, which reduces it in fineness, but while the inner portions may get too hot and "fire-fang," the outside parts may remain coarse and unrolled. In order to avoid this difficulty, the manure should be occasionally handled, not only to change the position of the matter, but to mix it thoroughly and allow the air to penetrate the mass, which is a decided benefit.

The labour of handling manure is such as to deter a great many from so doing, but winter work is seldom of an urgent nature, and the extra time should be devoted as much as possible to the manure. It is the preparation that gives value to manure, for the best quality will be of but little service unless it is decomposed. It must decompose before the plants can use it, and the object should be to hasten the process before seeding-time arrives, as every advantage gained now is just that much progress made in the spring work. The labour, therefore, will bring back its cost in the crop upon which the manure may be used; and looking at the matter in that light, it is easy to reconcile all seeming losses made in winter. The better the feed, the better the quality of the manure. Bulk is quantity, but concentrated food and good preparation give quality, and the work should be done when there is no crop to take the time.

So far as spreading the manure is concerned this should only be done in winter on heavy soils. It is not economical to broadcast manure at this season on sandy soils. Hauling it to the fields, to be left in heaps, destroys the uniformity of the appearance of the crops in many respects, owing to the extra fertilization of the occupied places by the manure. Besides these objections, it is best to keep the manure at the barn until early spring in order to work it over, which largely adds to its value.

## SHELTER FROM STORMS.

Our excellent contemporary, the *Breeders' Gazette*, has the following on a too frequently neglected subject: "We do not believe we can be too persistent in again urging the necessity of providing shelter for stock. With railroads affording convenient shipping facilities to almost every township, high-priced labour and high-priced land, the days have gone by when the farmer can afford to use the product of his soil as fuel, either to burn

in stoves to keep himself warm, or consume in the stomachs of his animals to keep them warm. All these products should be economized, either for sale or for the most profitable use to which it is possible to apply them at home. And providing shelter for stock, simply as a question of economy in the consumption of food, can not be considered in any sense an undue pampering calculated to render animals less hardy, or to detract, in the least, from their constitutional vigour. On the contrary, we believe suitable shelter, to which stock can resort in case of storms, will tend to promote these very qualities. An animal can, perhaps, endure the full force of a regular blizzard, but it is only at the expense of a certain amount of vital force, which must leave it in a worse condition than an animal which has not been called upon to endure this strain. There is much of the time when it makes but little difference whether an animal has shelter or not. In clear, cold, dry weather, healthy live stock appear to be to a large degree insensible to ordinary extremes of temperature; but the snows accompanied or followed by winds which sift it into the hair, where it slowly melts from the effect of animal heat, tell very severely upon the condition of the stock. We have often observed that the storms coming late in the season or toward spring, when the snows are damp and often mingled with rain, are more deleterious than those of midwinter. When the hair is damp or wet there is a constant evaporation of moisture which robs the animal of the natural heat and puts its powers of endurance to the severest test; and animals that have been subjected to all sorts of extremes and exposure during the whole winter, approach the close of the season, the most critical period of all, with depleted strength and vigour, and in the worst possible condition to withstand the severer trials which are then before them. As has been before suggested, it is not necessary that permanent or expensive structures be provided, but if nothing else can be afforded, poles and straw make a shelter very good while it lasts."

THE DIO LEWIS' MONTHLY for October is full of useful reading for the household. The articles on the Check Rein, House Drainage, About Nursing, etc., will repay careful perusal. The price of the *Monthly* is only \$2.50 per year. New York, Frank Seaman, 68 and 71, Bible House.

JUDGING from the many close inquiries which are being made about the potato crop, we have every reason to suppose that the tubers are going to be valuable this fall. It is a little too early to give advice, but we would say that our farmers had better study the market well before they obligate themselves to deliver at any stated figure.

AN exchange claims that a full feed of hay to horses, following the feeding of concentrated food, is wasteful, for the reason that it crowds the first out of the stomach before proper digestion has been accomplished. And so, in order to secure best results, hay should be fed at first and the concentrated food afterward, which leaves it to become digested with no danger of it being crowded away or out of the performance of its desired purpose.

SIR J. B. LAWES, the eminent English authority on wheat growing, estimates the product of this year's harvest in the United Kingdom at 70,000,000 bushels, being an average of twenty-eight bushels per acre. To bread the people until next harvest will require an additional 182,000,000 bushels; but as there is a heavy stock of foreign wheat in store, it is likely that less will suffice. It was estimated last year that the requirements of foreign wheat would amount to 128,000,000 bushels. The effect of this large reserve is doubtless to keep down prices for the present.



## GARDEN AND ORCHARD.

### MANURES FOR THE GARDEN.

It is almost folly to try to raise fine vegetables without a heavy application of manure, and the gardener should use every sensible means to accumulate it from every source. Stable manure, of course, is his main reliance, but is often held so high in some markets that it must be handled economically and applied judiciously to make it profitable to purchase it. Commercial fertilizers are valuable, but by the time the purchased price and freightage is paid, it is doubtful whether they are profitable to purchase. As the gardener's outlay is heavy, and he often meets with losses and difficulties, it is very important that he use economy at every point to make his business profitable. Great care should be used in saving manure, or else you may have a great amount and of but little value. The fall and winter is the main time for collecting manure. Manure, in its broadest sense of the word, is anything which added to the soil, either directly or indirectly, promotes the growth of plants.

In view of the above facts, and as I have had considerable experience in composting manures, I will give a few hints by which the gardener may acquire a fine chance of excellent manure, independent of risking too much on high-priced fertilizers.

Forest leaves, when well rotted, seem to be especially adapted to the gardener's wants. Two-thirds leaf-mould to one of stable manure, composed together, kept moist and well covered, forked over occasionally to make it fine and to regulate the moisture, will be found rich in plant food, and well adapted for any crop.

To form a compost of the following materials, which are a nuisance to any place after they are well decomposed, makes an excellent fertilizer for vegetables. For a base, rake forest mould and leaves all up together, and put at a convenient place. Upon this throw all the animal matter found about the premises. The carcasses of small animals, offal of every kind, woollen rags, bones, old boots, old shoes, waste leather of every description, the droppings of the hens, soap suds, salt brine, slops from the sink, ashes, chamber lye, night soils, in fact any thing that will decompose. Green weeds and grass of every description will aid in giving moisture, which it must have. As often as needed, to keep down the bad odour and hold escaping gases, grass sod, soil from the woods, and sides of fences should be thrown over the compost heap. When thoroughly rotted, this will be a fertilizer of excellent quality.

### ROSES IN POTS.

The ever-blooming roses are the best for house culture in pots, because they bloom quicker and more continuously than any of the others; and, besides this, their style and habit of growth are more bushy and better adapted to the purpose. They could be kept nicely with other growing plants, and with proper attention to their requirements will bloom freely. (1) Do not use too large pots. If possible, not more than three or four inches. The rule is one size larger than the plants have been growing in. The smaller the pot (provided, of course, it is large enough to contain the plant) the quicker and stronger the plant will start. It is very difficult to get a small plant to live and grow in a large pot. A rose will not bloom much till the pot is well filled with roots. Therefore, small pots facilitate quick bloom. If the pots are old they should first be thoroughly washed. If new they should first be thoroughly soaked in water; otherwise they will absorb the moisture from the plant. (2) Have good rich

soil, mellow and friable. That made from old, decomposed sods is the best. If manure is used, it should be old and thoroughly composted. Fresh manure is injurious. (3) Put some bits of broken crockery, charcoal, or other similar material in the bottom of each pot, to facilitate drainage; then enough fine earth to raise the plant to a proper height. It should not be much deeper than it was before. Next put in the plant and spread out its roots as near their natural position as possible; then fill in earth and press firmly down with the hand. When done, the pot should not be quite full; a little space is needed for water. (4) When first potted water thoroughly, and if the sun is strong shade for a few days; then give full light and air. Though the plant should not be allowed to wither for want of water, the earth should get moderately dry before watering again. Too much water is worse than not enough. Very little water is needed until the plant starts to grow.—*Guide to Rose Culture.*

### FRUIT NOTES.

*Quinces.*—The quince is a fruit that has but few enemies, and as they are always in demand, we hope to see them more extensively cultivated. There is no fruit crop that pays better with the same proportion of labour.

*Diseased Branches.*—Fire is the best remedy for many evils that beset fruit trees. Diseased limbs are just as dangerous in the operation of infesting an orchard as direct contact, for spores and parasites are tenacious, and propagate in any place, or on any kind of material that is suitable.

*Dead Wood.*—Old vines and canes are of no use to the new ones, nor to the ground, and they should be cut out at any time after the cold weather sets in. Most agricultural journals are recommending that such be cut away low, but the best time for so doing is when the earth is frozen hard and stiff. You will then also have more time for so doing.

*The Yield of Strawberries.*—If a person should be informed that an acre will produce five or six times as many strawberries, in bushels, as wheat, it would scarcely be credited, and yet such is the fact. Nor is this all, for the price per bushel is more than twice that of wheat, the crop being thus equivalent to at least ten crops of wheat. Or, put in another shape, an acre of strawberries will produce as much as ten acres of wheat in money. But, in order to do this, labour must be expended, and no reluctance should be given to anything that pertains to the crop. It is the labour that pays, and not altogether the strawberries, and every farmer and fruit-grower should endeavour to familiarize himself with the methods that permit him to do as much with one acre as he formerly did with a larger area.

### THE COLOURS OF FLOWERS.

Hitherto it has been supposed that the colours of flowers were due to so many different materials, each colour being a combination having no relation with the others. But now, however, Professor Schenztler, in a communication to the Vaudois Society of Natural Sciences, shows that, when the colour of a flower is extracted by placing the latter in alcohol, the addition of an acid or alkali will give all the colours that plants exhibit. Flowers of peony, for example, give, when put in alcohol, a violet-red liquid. If to this solution binocalate of potassia (salt of sorrel) be added, the colour becomes pure red. Soda causes it to change, according to quantity used, to violet, blue, or green. In the latter case the green liquid appears red by transmitted light, just as a solution of chlorophyll (the green colouring matter of leaves) does. The sepals of peony, which are

green, bordered with red, become entirely red when put into a solution of binocalate of potassia. These changes of colour, which may be obtained at will, may well be produced in plants by the same causes, since in all plants there are always acid or alkaline matters. Moreover, it is quite certain that the change from green to red observed in leaves in autumn is due to the action of the tannin which they contain on the chlorophyll. Consequently, without wishing to affirm it absolutely, Professor Schenztler believes that *a priori* there is in all plants but one colouring matter—chlorophyll—which, becoming modified by certain agents, gives all the tints that flowers and leaves exhibit. As for white flowers, it is well known that their want of colour is due to the fact that their cells are filled with a colourless fluid, and that their opacity proceeds from the air contained in the interspaces. When such flowers are placed under the receiver of an air pump they are seen to lose their opacity, and become transparent as the air is exhausted.

### FRUIT TREE CULTURE.

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

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

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

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

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

Remember that tobacco is a poison, and will kill insects rapidly if properly applied to them, and is one of the best drugs for freeing fruit trees rapidly of small vermin.—*National City Record.*

The currant requires, for best results, depth of soil, moisture and fertility. It succeeds best when treated to composts in which muck, leaf-mould and barn-yard manure abound. Bonedust and wood-ashes are also good, and the fruit will be all the better if the bush occupies a cool, half-shady exposure.

SEEDS of many kinds of plants are best collected by cutting off the stems and letting them dry. The seeds meantime have matured and are saved, while if left upon the plants longer they would in part be scattered over the ground. This is the case with such flowers as columbine hardy, geraniums, portulaca, phlox, etc. For this reason such weeds as purslane should be carried from the ground and never thrown upon the manure.

A HINT to some reader of the RURAL CANADIAN may be found in the following: "On one occasion I shipped twenty barrels of apples to a customer, during the holidays. The weather was mild when I shipped, but fearing it might turn cold, I lined each barrel with two thicknesses of paper. They were detained by mismanagement in transit, for over two days and nights on the track, and the second day the mercury went down to twelve degrees below zero. There was no fire in the car, but they went through safe. The dealer acknowledged receipt, with draft, and wrote: 'I have been dealing in apples for years, but never knew how to pack apples until I saw this lot.' This was my first shipment to him, and he has continued to buy of me ever since, when I have any to sell."

**BEEES AND POULTRY,****BEE QUACKERY.**

In most every department of business or professional life, we find a vast amount of quackery. It is generally supposed that the term quackery belongs exclusively to the medical profession; this supposition is erroneous, as a quack is one who pretends to teach or practice that which he does not understand, and a man may be ever so skilful a physician and still be a quack in some other business or profession. In no business save the practice of medicine, has so much injury been done by quackery as in bee-culture. There are some persons who have simply read a work on the subject of apiculture, no matter whether an old or a recent edition, self-suppose themselves to be able to teach the public, and to criticize generally in regard to the best plans and methods, and, that, too, without ever having owned a colony of bees or being sufficiently conversant with their manipulation to be able to distinguish a queen from a drone, to tell a capped brood cell from one filled with honey. To such a practical knowledge of the subject is deemed of little importance, and if they wield a facile pen, they consider themselves fully capable of and are the most ready to criticize the methods that practical men (who perhaps have not the ability to write fluently, yet have experimented largely) have given to the public. By thus criticizing, and by ridiculing ideas of real practical worth, which are somewhat roughly presented, much injury is done, the man of experience is deterred from giving the results of that experience from fear of further ridicule, and the novice is led into mistakes which cause him serious loss, by reason of following the teachings of the quack rather than the man of experience. We all know that a well-written article, clothed in choice language, and filled with beautiful figures and metaphors, is more apt to take than a plain, practical, and common-sense statement of the same matter, but written in a prosy style.

In no one thing is more injury done than by articles on fall feeding. Every apiarist knows that late feeding, if done judiciously, is of great value and importance, but in no one thing is there so great a liability to cause injury, and the greatest care must be taken not only in the choice of food, but in the way and manner of giving and the quantity to be given. To advise generally, that we should feed regularly every day a certain fixed quantity of honey or syrup, may, and in many cases certainly will be the means of destroying the colony thus fed. To the bee-keeper of experience advice when and how to feed is not needed; to the novice the advice should not only be given, but all particulars connected therewith should be given also. The feeding for stimulation which would benefit a strong colony, or even a medium sized one, would most certainly destroy a weak one, consequently general advice on the subject is worse than useless. I, for one, most sincerely hope and trust that the day will come when quacks and pretenders will no more exist in the land, and more especially that our apiaries will be rid of these their worst enemies. I make no personal allusions, and believe that all practical bee-keepers will echo to the full the hope I have expressed.—*J. E. Pond, jr., in Home Farm.*

**MANAGEMENT OF POULTRY.**

An acre can produce \$600 in poultry, and the capital required returned by the poultry in a short time with profit. With a systematic method of cleaning and feeding, more profit with less labour can be derived from poultry on one acre of land than from the best regulated dairy under the soiling method. An acre devoted exclusively to poul-

try will return a greater profit with less cost in labour than ten acres in wheat or any cereal crop. The poorest and lightest of sandy soils are more suitable for poultry than the best pastures, as they are freer from disease. That yards free from grass and clean in every corner, are better than grass runs, has been demonstrated; but shade of some kind should be supplied. No poultry house can be kept absolutely clean without a board floor. In setting hens, the nest should be in warm, dry location in cold weather, and in cool, moist places in summer. In selecting for breeding purposes plumage and points of marking should not give way to robust constitution, vigour and activity. Feeding steeped clover hay and linseed meal assist in the formation of the white of eggs, by supplying nitrogenous matter. The house should be freely ventilated in summer, and warm in winter. All soft food should be freshly mixed. Yellow-legged fowls sell better than those with dark legs. All non-setters lay pure white eggs. No male should run with over twelve hens, a less number is better. Eggs from two-year-old hens are preferable for setting purposes. Exercise should be furnished by throwing a quantity of corn into a bundle of loose straw or hay for the hens to scratch. Keep a good dust bath always. Spade up the ground as often as possible. When a rain is threatened see to the young chicks. Early hatched pullets are the winter layers. Keep no fowl for beauty if profit is the object. Use pure bred males always. Large males bred on small hens produce leggedness in chicks, but small males on large hens produce closer bodies and shorter legs. Never use a male with his own offspring. It is a saving of time to let a hen set in preference to breaking, as hens lay but few eggs when deprived of setting, and go at it in a week or two. Breed your own fowls, and never bring them to your yards from other places. Young chicks, when feathering, undergo severe natural strain on the system, therefore never omit a meal. Use only the freshest of eggs under setting hens. Hot whitewash containing carbolic acid, liberally applied, will kill or keep off vermin. The rough scales on fowls legs are easily removed by a mixture of lard and sulphur and coal oil. Finally be as attentive to fowls as to horses, cattle, hogs or sheep, and be in your yards from morning until night.

**THE SENSES OF BEES.**

Sir John Lubbock recently read to the members of the Linnean Society an account of his further observations on the habits of insects made during the past year. Two queen ants which have lived with him since 1874, and which are now, therefore, no less than eight years old, are still alive and laid eggs last summer as usual. His oldest workers are seven years old. Dr. Müller, in a recent review, had courteously criticised his experiments on the colour-sense of bees; but Sir John Lubbock pointed out that he had anticipated the objections suggested by Dr. Müller, and had guarded against the supposed source of error. The difference was, moreover, not one of principle, nor does Dr. Müller question the main conclusion arrived at or doubt the preference of bees for blue, which, indeed, is strongly indicated by his own observations on flowers. Sir John also recorded some further experiments with reference to the power of hearing. Some bees were trained to come to honey which was placed on a musical box on the lawn close to the window. The musical box was kept going for several hours a day for a fortnight. It was then brought into the house and placed out of sight, but at the open window, and only about seven yards from where it had been before. The bees, however, did not find the honey, though when it was once shown them they

came to it readily enough. Other experiments with a microphone were without results. Everyone knows that bees, when swarming, are popularly, and have been ever since the time of Aristotle, supposed to be influenced by clanging-kettles, etc. Experienced apiarists are now disposed to doubt whether the noise has really an effect; but Sir John suggests that even if it has, with reference to which he expresses no opinion, it is possible that what the bees hear are not the loud, low sounds, but the overtones at the verge of or beyond our range of hearing. As regards the industry of wasps, he timed a bee and a wasp, for each of which he provided a store of honey, and he found the wasp began earlier in the morning (at four a.m.) and worked on later in the day. He did not, however, quote this as proving greater industry on the part of the wasp, as it might be that they are less sensitive to cold. Moreover, though the bee's proboscis is admirably adapted to extract honey from tubular flowers, when the honey is exposed, as in this case, the wasp appears able to swallow it more rapidly. This particular wasp began work at four in the morning, and went on without any rest or intermission till a quarter to eight in the evening, during which time she paid Sir John 116 visits.

**PREPARING FOR MARKET.**

Much of the profit of poultry-raising is absolutely thrown away by carelessness in fattening and preparing for market.

When the frame-work of a chicken, the bones and muscles, are built up, the cost of putting on an additional pound or two of nice, juicy meat is comparatively little. What folly then to send to market stringy fleshed, sinewy-legged fowls. Purchasers cannot be expected to give good prices for poultry of this sort.

If farmers do not have grain of their own raised to spare, it will pay to buy it for the purpose of putting their fowls in good marketable condition. This may provoke a smile, but it is true, nevertheless. We have known persons who have had all their feed to buy to make money raising chickens.

But poultry, however well fattened, may be spoiled in dressing. There are some persons who still scald their fowls in dressing and by this means lessen its selling price by so much per pound. The excuse for scalding is that it is easier and saves time. To which we answer that it does not save time when a person has learned the proper method of picking dry. And certainly every poultry-keeper should learn to put up all his products in the best manner, endeavouring to suit as far as possible the demands of his own market, and even the fastidious eyes of his customers.

There are minor matters also that should receive attention, such as not feeding fowls for at least twelve hours before killing, carefully removing all pin feathers, washing all filth from legs and feet, wiping off all blood from the carcass and then putting up in neat clean packages.

KEEPERS of poultry often make a mistake in reserving too many breeding hens. A great many chickens can be raised in the course of the season from a flock of twenty-five.

The farmer's flock of poultry should be composed of choice specimens only, the very best of the season's raising. Why should he save the best wheat, corn and potatoes for seed and not select the best fowls for breeding?

Fowl houses should be so constructed as to be cool in summer, warm in winter and dry all the time. The latter point can be secured by having a good roof, and an earth floor raised six inches or a foot above the surrounding surface.

## THE DAIRY.

### PRACTICAL SUGGESTIONS IN WINTER BUTTER MAKING.

#### TEMPERATURE FOR THE DAIRY.

By the dairy is meant some room set apart for the milk, for churning and working the butter. In this room the temperature is everything, and the successful churning and making of the butter will depend very much on the temperature of the milk and the cream, when the latter is being churned, since the transformation of the cream into butter is chiefly a chemical process brought about by the agency of heat in connection with the breaking up of the butter-cells by the dashers of the churn. With most farm dairymen the common practice is to set the milk in shallow pans, especially in winter, and, if this be done, the temperature of the room should be from fifty-eight to sixty-two degrees; possibly sixty would be the best. However, if deep pails are used and set in water, the temperature of the room should be about forty-five degrees, this temperature being sufficient to throw the cream up quickly and also completely. The temperature of the cream in the churn should be from fifty-five to sixty degrees. Many a "hard" churning might be avoided by having a good thermometer in the room, and also one for testing the temperature of the cream. We must lay aside our old-fogy ideas about churning "as it happens" and bring common sense into action.

#### "WHITE CAPS" IN CREAM.

Flecks, white caps, or false butter, as these specks are variously called, are more common in fall or winter, when cows are "drying up," or in the heat of summer, when their udders are liable to become inflamed. In stating this we have given one of the probable causes of the origin of these specks—viz., some irregularity of the milk-secreting organs of the cow, which produces faulty milk; for they never appear, it is said, in milk that is in a perfectly normal condition. Again, white caps are most likely to appear in milk that is not artificially cooled, so to speak—i.e., by any other agency than the temperature of the room. When the cold-setting system is practised, they scarcely ever appear. From what has been said it will appear that keeping the cows in good, healthy condition and setting their milk in deep pails, in water, are the surest preventives for the trouble. Then the cream should be gently stirred every day after skimming, previous to the churning, which assists in preventing formation of the flecks. If, by chance, any of these flecks get into the butter, the latter ought not to be packed for market with that which is free from them and otherwise in good condition. Just what these specks are cannot be definitely stated; but the nucleus or centre of each little mass contains some organic germ, which, by the action of warmth and from other causes, undergoes a putrefactive decay. They develop in milk, as well as in cream.

#### THE USE OF ANNATTO.

We are all aware that when we speak in favour of "colouring butter," there will be many who will object to the practice, saying they do not believe in changing what nature ordains; yet, whatever one may think concerning the butter he uses on his own table, that which goes to the market will bring him a little better price if it has somewhat the appearance of June butter, instead of that of lard or tallow. As the feed of the cow is changed from grass to dry hay and grain, the colouring pigment which she secretes takes its departure, and the butter grows whiter every day, until, as one writer expresses it, a man "soon finds that he tastes quite as much

with his eyes as with his tongue." The harm in using annatto to colour butter lies in using it to excess. Pure annatto is made from a seed or berry of a South American plant or tree called the Aniotto tree (*Bixa orellana*) or, rather, from the pulp surrounding the seeds. That which is most pure appears in commerce in small lozenges, and some comes in cakes or balls of two to four pounds weight. In using this to colour butter the object should be to bring the butter up to a certain colour-standard; hence, care is necessary. The old recipe is: dissolve four ounces of lump annatto in a half gallon of water; then dissolve four ounces of carbonate of potash and two ounces of sal soda in three pints of water, and mix the two solutions (annatto with potash and soda). After twenty-four hours, pour off the liquid and throw away the sediment, keeping the mixture cool. Use about one tablespoonful of the liquid to a gallon and a half of cream.

#### RESTORING RANCID BUTTER.

Take as much care as we may, it will not be strange if, during the winter, the butter becomes rancid from any one of several causes. This rancidity is due to the presence in the butter of butyric acid; and, as soon as it is discovered, the butter should be washed in good, new milk. It may be cut up into slices and put in a rotary churn, with a good quantity of the milk, which will dissolve and wash out the acid. After this is thoroughly done, wash the butter in pure cold water. The late Mr. Willard also recommended the following: Beat up a quarter of a pound of fresh lime in a pail of water, and after it has stood for an hour, pour off the clear portion and wash the rancid butter in that. In resalting the butter this is recommended: Take ten ounces of fine salt, add to it two ounces of saltpetre and as much sugar. Mix these ingredients well, and work from a half ounce to an ounce into each pound of the butter. This will improve its flavour and cause it to pass as a very fair article. No one should fail to try these methods, if he is so unfortunate as to have a lot of rancid butter. It may not be at all necessary to made waggon-grease of it, as we have known people to do.

#### DRYING UP COWS.

Should dairy cows be dried off, or should they be milked up to calving time, if they are disposed to yield milk up to that time? To answer this question pat, yes or no, would only betray the ignorance of the speaker on the subject of dairymen's practices and prejudices. We know of no subject that needs intelligent airing at the meetings of our dairymen's association this winter as much as this. It is well known to all that no matter how great may be the flow of a cow's milk when she first calves, if she goes dry too soon she will not prove a profitable milker. Indeed, most dairymen would take a large-sized surprise party if they would only test the question as to the yearly yield of the two cows that yielded the most and least at the time of calving. This could be approximated by keeping the dates of dropping calves and going dry of the different cows in the herd with their various yields weighed and recorded.

What we started out to say was that the strange part of this subject relates to the practices and prejudices of dairymen. In the country we find farmers almost universally drying up their cows with the fear of hurting them if milked up to calving time. Near the cities, where milk is sold to consumers no attention whatever is paid to the time a cow is due to calve. She is simply milked as long as she will give it, and sold if she goes dry too long before calving.

Breeders of dairy cattle who handle high priced

cows are in grave doubt on the subject of drying off. They all know it is a dangerous practice if not done with care and diligence. If the cow is neglected and forms milk in her udder that is not drawn off, she is sure to suffer from the neglect, while good milkers are almost certain to give milk up to the day of calving, with a pretty general opinion that it injures the calf and creates too heavy a drain on the cow. Can our dairy exponents at the convention lay down a safe rule to pursue in this matter? Let them try it by all means.—*American Dairyman.*

### THE CHAMPION BUTTER-MAKING COW.

Mr. Valancey E. Fuller, of Hamilton, has subjected Mary Ann, his celebrated Jersey cow, to another test, which was supervised by a committee of practical men of the Canadian Jersey Breeders' Association. The test began on the 23rd ult., ending on the evening of the 29th, the cow being milked twice daily in the presence of the committee, who watched every operation connected with the milk until it was churned, when they weighed the butter. The result of the week's test was twenty-six pounds and nine ounces of unsalted butter and twenty-seven pounds and nine and three-quarter ounces of salted butter, an amount which has never been equalled by any cow in the world. Mary Ann is only four years old, and was bred near Montreal. She was purchased by Mr. Fuller last spring for \$500, and he has refused an offer of \$10,000 for her. She has been continuously tested since May, the milk and cream always being retained and churned separately twice a week, and has made in four months no less than 417 pounds and two and three-quarter ounces of butter, a record which has never been approached by any cow of any breed. During the last official test she made four pounds and one-half ounce of butter per day for three days. This is the second official test of this cow, and on each occasion she has surpassed any previous test.

#### CAUSE OF GARGET.

The foundation for a great many cases of garget is laid in the fall or winter, when cows are being dried off, by going too long without thoroughly milking out the bag. The long detention of milk produces swelling and inflammation, which linger till the bag begins to enlarge, preparatory to another birth, and the consequence is an extraordinary hardness and swelling, accompanied with inflammation and soreness that keep up for a long while, and often prove the ruin of a part or the whole of the udder. Garget is generally curable, but not always. In mild cases the treatment may be frequent bathing in tepid water, with friction after each bathing. In severe cases the water used had better be as hot as the animal can endure. When very severe, fomenting with hot water has proved efficacious. Cathartics should always be given when the swelling is obdurate, and frequent and thorough milking in all cases, and a spare diet allowed. Rubbing the bag frequently with some penetrating oil, like oil of turpentine diluted with linseed oil to a strength that will not be injurious, or anointing with iodine salve, are valuable aids, and are often all that need be done. The daily use of a little saltpetre administered in the water drunk, or in the feed, is recommended by some high authorities, and has proved useful.—*Prof. L. B. Arnold.*

Milk cows will give more and better milk, yielding more cream and yellower butter, when fed on plenty of carrots.



## HOME CIRCLE.

## COALS OF FIRE.

Farmer Dawson kept missing his corn. Every few nights in was taken from his crib, although the door was well secured with lock and key.

"It's that lazy Tom Slocum," he exclaimed one morning, after missing more than usual. "I've suspected him all the time, and I won't bear it any longer."

"What makes you think it's Tom?" asked his wife, pouring out the fragrant coffee.

"Because he's the only man around who hasn't any corn—nor anything else, for that matter. He spent the summer at the saloons while his neighbours were at work. Now they have plenty, and he has nothing—serves him just right, too!"

"But his family are suffering," rejoined his wife; "they are sick and in need of food and medicine; should we not help them?"

"No," growled the farmer; "if he finds his neighbours are going to take care of his family it will encourage him to spend the next season as he did last. Better send him to gaol and his family to the poor-house, and I'm going to do it, too. I've laid a plan to trap him this very night."

"Now, while Tom is reaping the bitter fruits of his folly, is it not the very time to help him to a better life?" suggested his wife.

"A little course of law would be most effective," replied the farmer.

"In this case coals of fire would be better. Try the coals first, William; try the coals first."

Farmer Dawson made no reply, but finished his breakfast and walked out of the house with the decided step of one who has made up his mind and something is going to be done.

His wife sighed as she went about her work, thinking of the weary, heart-broken mother with her sick and hungry babes around her.

The farmer proceeded to examine his cribs, and, after a thorough search, found a hole large enough to admit a man's hand.

"There's the leak," he exclaimed; "I'll fix that," and he went to work setting a trap inside.

Next morning he arose earlier than usual, and went out to the cribs. His trap had caught a man—Tom Slocum, the very one he had suspected!

He seemed to take no notice of the thief, but turned aside into the barn and began heaping the mangers with hay, sweet-scented from the summer's harvest field. Then he opened the crib door and took out the golden ears—the fruit of his honest toil.

All the time he was thinking what to do. Should he try the law or the coals? The law was what the man deserved, but his wife's words kept ringing through his mind. He emptied the corn into the feeding troughs, then went around where the man stood with one hand in the trap.

"Hello! neighbour, what are you doing here?" he asked.

Poor Tom answered nothing, but his downcast, guilty face, confessed more than words could have done.

Farmer Dawson released the imprisoned hand, and, taking Tom's sack, ordered him to hold it while he filled it with the coveted grain.

"There, Tom, take that," said the farmer, "and after this when you want corn, come to me and I'll let you have it on trust or for work. I need another hand on the farm, and will give you steady work with good wages."

"Oh, sir," replied Tom, quite overcome, "I've been wanting work, but no one would hire me. My family was suffering, and I was ashamed to beg. But I will work for this and every ear that I've taken if you'll give me the chance."

"Very well, Tom," said the farmer, "take the

corn to the mill, and make things comfortable about home to-day, and to-morrow we'll begin. But there's one thing you must agree to first."

Tom lifted an enquiring gaze.

"You must let whiskey alone," continued the farmer; "you must promise not to touch a drop."

The tears sprang into Tom's eyes, and his voice trembled with emotion, as he said:

"You are the first man that ever asked me that. There's always enough to say, 'Come Tom, take a drink,' and I've drunk until I thought there was no use in trying to be a better man. But since you care enough to ask me to stop drinking, I'm bound to make the trial; that I will sir."

Farmer Dawson took Tom to the house and gave him his breakfast, while his wife put up a basket of food for the suffering family in the poor man's home.

Tom went to work the next day and the next. In time he came to be an efficient hand on the Dawson place. He stopped drinking and stealing, attended church and Sunday school with his family, and became a respectable member of society.

"How changed Tom is from what he was!" remarked the farmer's wife one day.

"Yes," replied her husband, "t'was the coals of fire that did it."

## PLANTATION PROVERBS.

W'en a niggah's slow an' shif'less den his chances run to seed,  
Kase yo' nebber pick de cotton from de 'noxious bottom wood.

Allus fix up fur de winter wid provision 'bout de house,  
Kase a cat kin nebber trabble fro a hole wot scrapes a mouse.

W'en yo' double up in harness nebber play de reckless fool,  
Kase an ox don't wuk to 'vantage w'en he's yolked 'long-side a mule.

Nebber try to fill a bar'l f'um a scant ten-gallon keg,  
Nor to win a prize at dancin' w'en yo' own a wooden leg.

Nebber turn yo' back on heaben cos yo' habent cash or lan's.  
Dar's a heap ob pure religion in a pair ob horny han's.

Nebber try to preach a sarmint w'en yo' trade is hoein' corn,  
Nor to pass for Marsar Gabr'l cos yo' owns a dinner horn.

W'en yo' lookin' fur a dinner nebber hold yo' head so high  
Dat yo' miss de roasted possum racin' arter pigeon pie.

—J. Russell Fisher, in *Toldo American*.

## HOUSE BUILDING.

House-building should take into large consideration the evils of stair climbing. So many lives are shortened by it. To the women who do their own work the stairs are a constant menace. If buildings are to be carried up so high, somehow it must become feasible to carry the inmates up also. The security of light and air to rooms is admitted to be indispensable; yet the provisions are so often inadequate. A single window or two on one side of a room may admit light, but is totally insufficient for air. Circulation of air in a room cannot be secured by windows on one side, unless where there are doors on the other side, which can be opened at the will of the occupant. This is a very serious embarrassment to the health in many houses. Thorough airing means far more and requires far more attention than is imagined. Physicians called to attend patients in the corner of some well-lighted room have found the air in that corner close and foul when the parts near the outside window were well aired.

A central shaft carried through the centre of these larger and closely located houses, seems to be a necessary addition, in order that air may have outflow and inflow. Even this same form of apparatus for causing draught is not infrequently essential. Pure circulating air in houses freed from dampness, and sunshine in each room, are capable

doing wonders for the health of the people. No wonder that children so often wither or grow like sickly plants. We draw the attention of those even of our smaller cities and towns to the need of such care over house construction as shall secure the blessings of a well-aired and dry and well-lighted, healthy home to our people. Our home-life needs this kind of precaution or else we shall suffer moral and social not less than physical evils.

## THE STRONGEST DRINK.

Rev. O. H. Spurgeon says to the boys: Water is the strongest drink. It drives mills; it's the drink of lions and horses, and Samson never drank anything else. Let young men be teetotalers, if only for economy's sake. The beer money will soon build a house. If what goes into the mash-tub went into the kneading-trough, families would be better fed and better taught. If what is spent in waste were only saved against a rainy day, workhouses would never be built. The man who spends his money with the publican, and think the landlord's bow and "How do ye do, my good fellow?" means true respect, is a perfect simpleton. We don't light fires for the herring's comfort, but to roast him. Men do not keep pothouses for labourers' good; if they do they certainly miss their aim. Why, then should people drink "for the good of the house?" If I spend money for the good of any house, let it be my own, and not the landlord's. It is a bad well into which you must put water; and the beer-house is a bad friend, because it takes your all, and leaves you nothing but headaches. He who calls those his friends who let him sit and drink by the hour together is ignorant, very ignorant. Why, Red Lions, and Tigers, and Eagles, and Vultures, are all creatures of prey, and why do so many put themselves within the power of their jaws and talons? Such as drink and live riotously, and wonder why their faces are so blotchy and their pockets so bare, would leave off wondering if they had two grains of wisdom. They might as well ask an elm tree for pears as look to loose habits for health and wealth. Those who go to the public house for happiness climb a tree to find fish.

## A CONSTITUTIONAL WALK.

Few people walk enough in winter, yet it is precisely at that season that people of close sedentary habits should walk. How grateful the crisp air is to the lungs! How clear and sweet it is to the nostrils! How it inspires and sustains one in a swinging gait of four or five miles an hour! How the cheeks glow, and the eyes shine, and the muscles tingle with delightful vigour, after such a walk through the winter sunshine! A chaise-ride is not half so good, for it robs the trip of the necessary exercise. Try it, you who seek health and strength. Winter walking as a "nervine," is a million times better than medicine, and for improving the complexion it is worth a whole harbour full of lotions and washes. It will put an edge on appetite that you can't buy at the doctor's, and in promoting digestion it is better than a corner drug-shop's entire stock of bitters and pills. If you have never tried it, take a walk. Keep your mouth closed, your shoulders well thrown back, your head up, and remember that your legs—especially your hips—were given you to walk with. Some people walk with their knees, bodies and shoulders—and no wonder they don't like it. We don't like to see them. There is an art in walking as in other things. If you don't believe it, observe the motion of some shapely woman who knows how to walk or study the gait of a man who has some spring and lighthness in him. It is never too late to learn how to walk by walking.



# A BROKEN RING OF GOLD.

## SONG

Words by GEO. COOPER.

Music by L. LAWRENCE.

*Allegretto.*

The first system of music consists of a treble staff and a bass staff. The treble staff begins with a treble clef and a 3/4 time signature. The music is marked *sf* (sforzando) and *f* (forte). The bass staff begins with a bass clef and a 3/4 time signature. The music is marked *f* (forte).

The second system features a vocal line on a treble staff and piano accompaniment on a grand staff (treble and bass staves). The lyrics are: "We meet no more as once we met, when life was  
It brings me back the vis-ions sweet, that nev-er

The third system features a vocal line on a treble staff and piano accompaniment on a grand staff. The lyrics are: "bright and fair, Our lives are sha-dowed with re-gret, our hearts are  
now may be, A-gain I hear your lips re-peat, their words of

The fourth system features a vocal line on a treble staff and piano accompaniment on a grand staff. The lyrics are: "filled with care..... Though far a-part, our paths are cast, one  
love to me..... But why re-call the past a-gain with

trae - sure dear I hold, That binds me to the hap - py in  
 all the joys and tears, Its hap - py mo - ments lost in

past, the bro - ken ring of gold..... I wear it fold - ed up -  
 pain, its dark and wa - ry years..... Oh, like the gift

*marcato.*

on my heart, Your tre - sure gift of old,..... Oh, death a -  
 on my heart, Our sev - ered lives of old,..... Yet death a -

*f* *p*

lone - lone from me shall part this bro - ken ring of gold.....  
 lone - lone from me shall part this bro - ken ring of gold.....

*sf* *f*

A BROKEN RING OF GOLD.

## YOUNG CANADA.

## MODERN GIANTS.

The London *Tid Bits* has gathered the following list of giants who have lived in the later days:—

Samuel McDonald, a Scotchman, nicknamed "Big Sam," was six feet ten inches in height. Was footman to Prince of Wales. Died 1802.

Alice Gordon, Essex, England, giantess, seven feet. Died 1737.

Henry Blacker, seven feet four inches and most symmetrical. Born at Cuckfield, in Sussex, in 1724. Generally called the "British Giant." Was exhibited in London in 1751.

Edward Bamford, seven feet four inches. Died 1768. Buried in St. Dunstan's churchyard, London.

Louis Frenz, Frenchman, seven feet four inches. His left hand is preserved in the museum of the College of Surgeons, London.

Martin Salmeron, a Mexican, seven feet four inches.

Heinrich Osen, born in Norway, seven feet six inches; weight 300 pounds.

Edward Melon, seven feet six inches. Born at Port Leicester, Ireland, 1665, and died 1684, being only nineteen years of age.

James McDonald, seven feet six inches. Native of Cork, Ireland; died 1760.

Robert Hale seven feet six inches. Born at Somerton, England, in 1820, and often called the "Norfolk Giant." Died 1862.

Francis Sheridan, an Irishman, seven feet eight inches; weight, twenty-two stone; girth of chest, fifty-eight inches. Died 1870.

Bradley, seven feet eight inches at death. Born at Market Wheaton, in Yorkshire, England. His right hand is preserved in the museum of the College of Surgeons. 1798-1820.

Joseph Brice, seven feet eight inches. At the age of twenty-six years he was exhibited in London, 1862-5. His hand could span fifteen and a half inches. Born at Ramonchamp, in the Vosges, France, 1840. Was sometimes called Anak.

Cornelius Magrath, seven feet eight inches. He was an orphan and reared by Bishop Berkley, England. Died at the age of twenty years. 1740-1760.

John Busby, of Darfield, seven feet nine inches. His brother was about the same height.

Captain Bates, of Kentucky, seven feet eleven and one-half inches. Exhibited in London, 1871.

Gilly, a Swede, eight feet. Exhibited as a show early in the nineteenth century.

William Evans, eight feet at death. Porter to Charles I. Died 1632.

Charlemagne, nearly eight feet. He could squeeze together three horse shoes at once in his hands.

J. Toller, of Nova Scotia, Eight feet. Died 1819.

Maximilian Christopher Minor, eight feet. His hand measured twelve inches and his forefinger was nine inches long. Called the "Saxon Giant." Died in London. 1674-1734.

Chang-Woo-Goo, of Tychou, Chinese giant,

eight feet two inches. Exhibited in London 1866-67, and again in 1880.

J. H. Reichart, of Friedburg, Sweden, eight feet three inches. His father and mother were giants.

Charles O'Brien, of Byrne, Irish giant, eight feet four inches. His skeleton is preserved in the museum of the College of Surgeons. 1761-1873. Patrick, his brother, was eight feet seven inches.

Loushkin, Russian giant, eight feet seven inches; drum-major of the Imperial Guards.

A human skeleton, eight feet six inches, is preserved in the museum of Trinity College, Dublin.

## DO YOUR BEST.

I'm only an insignificant broom,  
Good to sweep an untidy room  
And then to be hidden away.  
It's very trying I cannot be  
Something dainty or sweet to see  
Where the light and the sunbeams stay.

I'd like to be the dear little chair  
That holds the bonny wee baby, there;  
Or rather, if I were able  
To have my wish, I would proudly stand  
With bric-à-brac, cards and flowers, a grand  
Magnificent marble table.

For there is the looking-glass, you know,  
Which everybody admires so;  
You can always see the smile,  
With which they peep as they pass it by.  
How aristocratic to hang so high  
And be looked at all the while!

And there is a splendid thing to hold  
The books with covers of red and gold,  
Exceedingly dignified;  
Or that old sofa where children crowd  
And shout and frolic and laugh aloud  
At play on its cushions wide.

But what is the use of wishing to be  
Anything else but just plainly me?  
I'd better be trying to do  
My best, I think for a homely broom,  
And see to it that I sweep my room  
As well as I can. Don't you?

Nor ever grumble, though only made  
To live and work in the quiet shade;  
For any with eyes may see,  
That if we each of us do no more  
Than keep in order a single floor  
A very clean world 'twill be.

## THE YOUNGEST DRUMMER-BOY.

But the Twelfth Indiana Regiment possessed a pet of whom it may be said that he enjoyed a renown scarcely second to that of the wide-famed Wisconsin eagle. This was "Little Tommy," as he was familiarly called in those days—the youngest drummer-boy and, so far as the writer's knowledge goes, the youngest enlisted man in the Union Army. The writer well remembers having seen him on several occasions. His diminutive size and child-like appearance, as well as his remarkable skill and grace in handling the drum-sticks, never failed to make an impression not soon to fade from the memory. Some brief and honourable mention of "Little Tommy," the pride of the Twelfth Indiana Regiment, should not be omitted in these "Recollections of a Drummer-boy."

Thomas Hubler was born in Fort Wayne, Allen Co., Indiana, October 9, 1851. When two years of age, the family removed to Warsaw, Indiana. On the outbreak of the war,

his father, who had been a German soldier of the truest type, raised a company of men in response to President Lincoln's first call for 75,000 troops. "Little Tommy" was among the first to enlist in his father's company, the date of his enrollment being April 19, 1861. He was then nine years and six months old.

The regiment to which the company was assigned was with the Army of the Potomac throughout all its campaigns in Maryland and Virginia. At the expiration of its term of service, in August, 1862, "Little Tommy" re-enlisted and served to the end of the war, having been present in some twenty-six battles. He was greatly beloved by all the men of his regiment, with whom he was a constant favourite. It is thought that he beat the first "long roll" of the great civil war. He is still living in Warsaw, Indiana, and bids fair to be the latest survivor of the great army of which he was the youngest member. With the swift advancing years, the ranks of the soldiers of the late war are rapidly being thinned out, and those who yet remain are fast showing signs of age. "The boys in blue" are thus, as the years go by, almost imperceptibly turning into "the boys of gray," and as "Little Tommy," the youngest of them all, sounded their first reveille, so may he yet live to beat their last tattoo.—*St. Nicholas, for October.*

## BETTER WHISTLE THAN WHINE.

As I was taking a walk early last month, I noticed two little boys on their way to school. The small one tumbled and fell; and though he was not very much hurt, he began to whine in a babyish way—not a regular roaring boy cry, as though he were half killed, but a little cross whine.

The older boy took his hand in a kind and fatherly way, and said:

"Oh, never mind, Jimmy, don't whine; it is a great deal better to whistle."

And he began in the merriest way, a cheerful boy whistle.

Jimmy tried to join in the whistle.

"I can't whistle as nice as you, Charlie," said he, "my lips won't pucker up good."

"Oh, that is because you have not got all the whine out yet," said Charlie; "but you try a minute, and the whistle will drive the whine away."

So he did; and the last I saw or heard of the little fellows, they were whistling away as earnestly as though that was the chief end of life.

WE hear of men sowing wild oats, but who ever heard of a woman sowing anything but tares?

AN hour a day gained by early rising gives us, in forty years, five full years or eight hours a day for work—enough to make authors or inventors or masters of languages out of the entire class of those ordinarily endowed.

"UNCLE," asks little Paul, "when I am big will I still be your nephew?" "Always, my boy; thus, when you are sixty you will still be my nephew, the same as to-day." Little Paul, after a moment's reflection: "Yes, but you will not have been my uncle for a long time."

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