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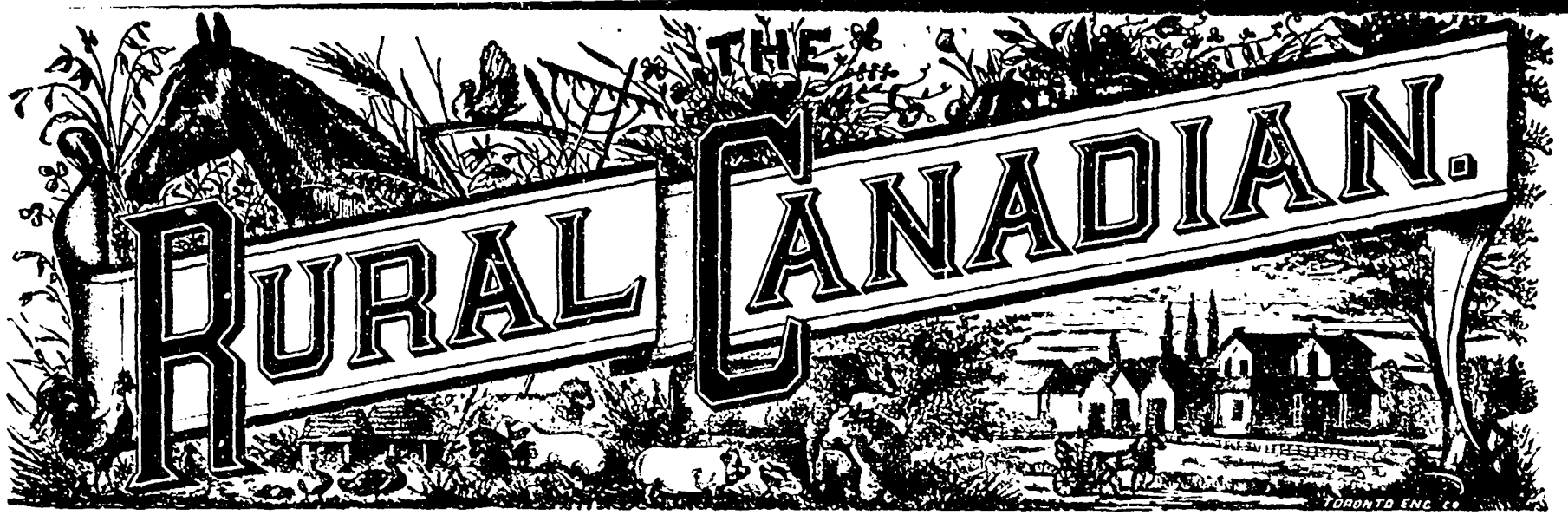
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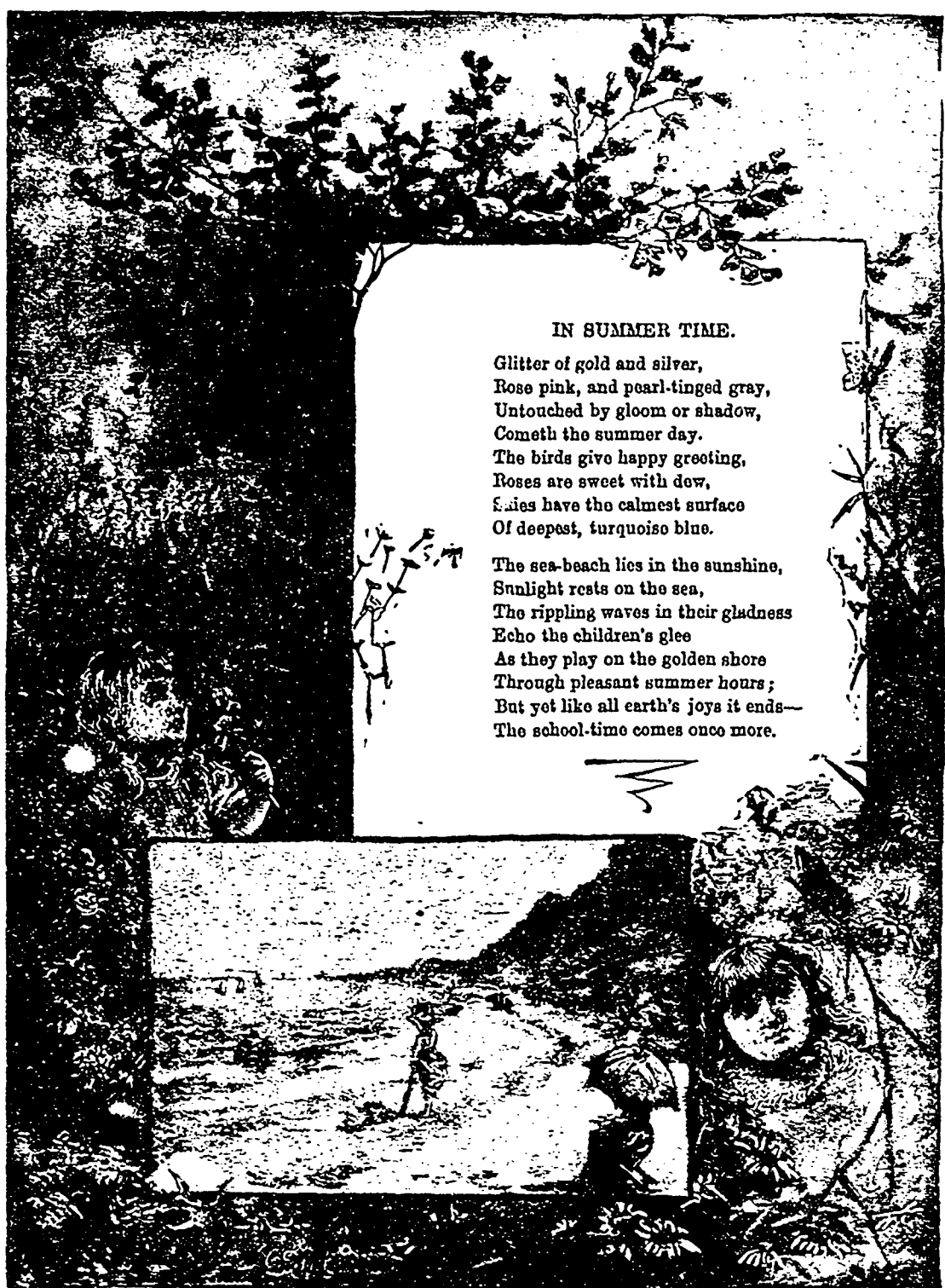


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Toronto, August, 1884.

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Glitter of gold and silver,
 Rose pink, and pearl-tinged gray,
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 The birds give happy greeting,
 Roses are sweet with dew,
 Lakes have the calmest surface
 Of deepest, turquoise blue.

The sea-beach lies in the sunshine,
 Sunlight rests on the sea,
 The rippling waves in their gladness
 Echo the children's glee
 As they play on the golden shore
 Through pleasant summer hours;
 But yet like all earth's joys it ends—
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- 508 I Think of Thee... Redhead 20
509 Star of the East (duet)... Scotch 20
504 'Tis Nightfall on the Sea... 20
609 Jerusalem the Golden Old Popular Tune 20
510 The Lord is My Shepherd (Quartet)... Martin 35

Duets.

- 493 All's Well... Graham 20
349 Come When the Soft Twilight Falls... Schumann 33
220 Don't Thou Love Me, Sister Ruth? Perry 25
231 Emblem of Certainty (duet)... Turney 30

Quartettes and Choruses.

- 523 Bridal Chorus (from Lohengrin) (quartet)... Wagner 25
524 Good is Clear (quartet)... Meyer 25
477 Farewell... Gounod Violated 10
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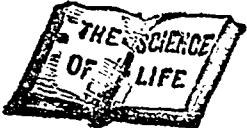
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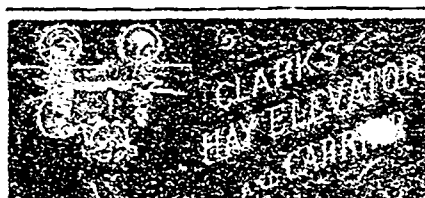


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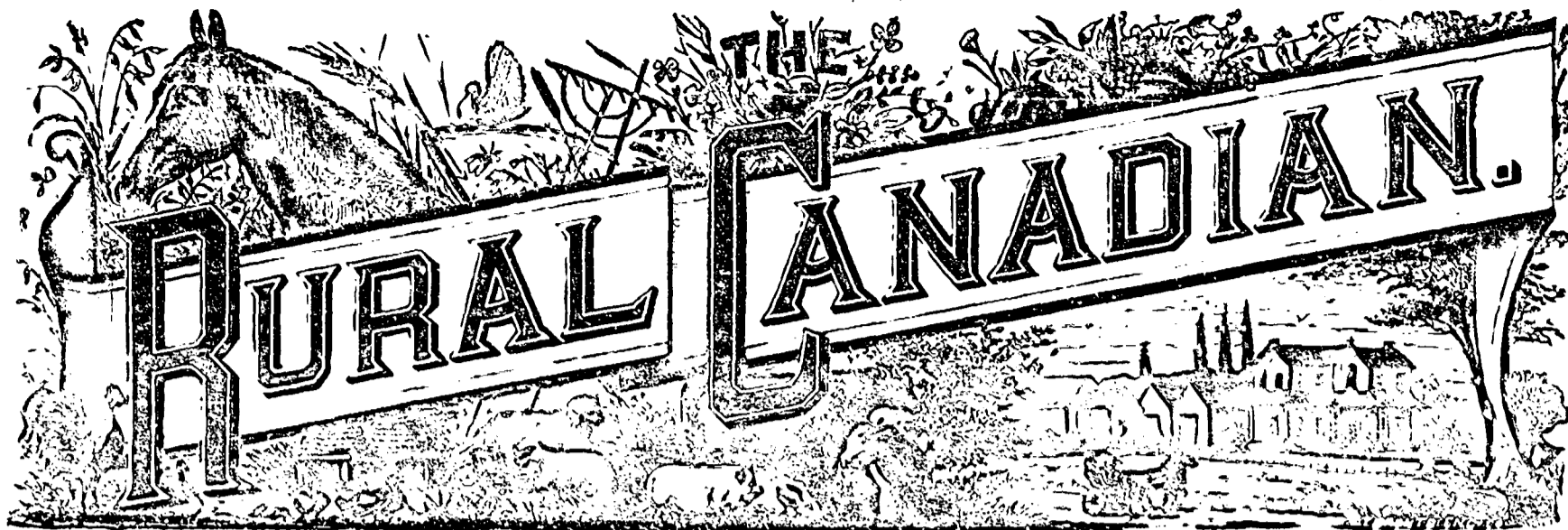
Illustration of a bottle of medicine. Text: SORE THROAT, FROST BITES, BRUISES, ECZEMA, DERTNESS.

DEDERICK'S HAY PRESSES. Illustration of a hay press. Text: the customer keeping the crop this year.

A BOON TO MEN. Illustration of a man. Text: All those who have suffered from various ailments...

Fast Potato Digging. THE MURRAY POTATO DIGGER. Illustration of a potato digger. Text: Harvest cost yearly, 17.2 times more to every farmer.

GRAPE VINES. Illustration of a grapevine. Text: My first vintage was 27 years ago. 1879 vintage was the best...



Vol. III. No. 8.

Toronto, August, 1884.

\$1 per annum, in advance.

RURAL NOTES.

The peach crop in Delaware is an abundant one this season, there being estimated fully ten millions of baskets on the trees.

If horses are working hard on the reaping machine let them drink a little at a time and often. It will be better for them than to drink heartily three times a day.

An Iowa man says that the dogs of that State eat enough annually to feed 100,000 working-men; and that they cost the State, counting in damage done to sheep, a total of \$9,000,000.

An intelligent and observant man says he has proven the case so often that he wants no more evidence to convince him that scab in potatoes is caused by wire-worms. What we want now is an effective and safe remedy, can any of our readers furnish it?

Red ants may be easily trapped with lard for bait. Spread it on a plate, and place a few bits of wood so that the ants may easily climb to it. When it is well covered, dip it into hot water or turn it over a fire. Repeat the operation a few times and the ants will cease to trouble you.

It is found in practice that beans are not a good crop to precede wheat. The chief reason of this probably is that they rob the soil of its phosphate and nitrogen, the food which the wheat plant requires. The bean field of this summer should be given a rest until next spring.

The officers of the Industrial and Provincial Exhibitions are making energetic efforts for the success of the coming show. The Toronto one will doubtless surpass all previous shows held in the Province, but Ottawa is too far away from the best farming districts to allow of the Provincial Society eclipsing its record this year.

The great mistake in the feeding of young calves is to give too much, as by overloading the digestive organs exhaustive diarrhoea is produced. Three quarts a day is sufficient for a calf up to a month old, and this may be gradually increased to four or five quarts at the end of the second month, with the addition of a little hay or grass.

We are in receipt of the initial number of the *Canadian Dairyman*, published at Montreal, by the Canadian Dairyman Co.; monthly, 50 cts. per annum. This new candidate for public favour makes a neat appearance, and promises to be a very useful periodical, while the low price at which it is issued places it within the reach of every one.

A writer in the *Boston Cultivator* says he has this year tried a plan for restoring shrivelled turnips and preserving them for summer eating. He buried a basketful in his garden, and when taken up they were found to be as firm and rigid as when gathered last fall. Even their fresh and natural colour was restored. Beets and carrots are said to give similar results under the same treatment. The plan is certainly worth knowing.

The ranch-men of Wyoming, are making a strong effort in England just now for obtaining the privilege of shipping live cattle into that country by way of Canada—direct American imports being prohibited for fear of introducing any one of its several plagues affecting cattle in the Middle, Southern and Western States. If Wyoming only proceeded to annex herself to the Dominion, her ranch-men would find an easy way out of their difficulty.

The finer the soil is made the more readily the tender plant takes root and finds nourishment. For this reason it is desirable to have the land intended for fall wheat thoroughly summer-fallowed,—not merely ploughed once, but repeatedly harrowed and cultivated, so that when the seeding season arrives it will be found mellow, free from weeds, and in good heart for the grain to take root and grow. If we are sparing of labour, seed or manure, we shall reap as we sow.

If we look at the grass on the roadsides we may learn a useful lesson in the growing of grass crops. We shall find several varieties growing together, one maturing early and the others later all through the season. It is by mixing several kinds, and so following the example of nature, that success in cultivating pastures is obtained. Mixed grasses, perfect preparation of the soil, liberal seeding, and sowing without any robber crop to destroy it, will give the best of grass fields.

Fruit growers are beginning to attach considerable importance to the planting of pine trees in orchards. It is a good wind-break, it throws off a large amount of caloric in cold weather, and its odor drives off many of the destructive insects which prey on apples and apple trees. Such, at least, are the merits claimed for the pine tree among the trees of the orchard, and at all events the subject is deserving of closer study. The plan is a good one for appearance sake, if for no other.

It is well known to farmers, as it should be, that under an arrangement made with the railway companies of Ontario by the meteorological office, weather signals are now carried to all

parts of the Province by the morning trains,—the only exception being on lines controlled by the Canadian Pacific Railway. In the harvest season especially, this arrangement is a valuable one, for it is a great boon to farmers at such a time to know what the weather for the next twelve hours is likely to be. Of course it is only those who are contiguous to railways who are likely to be benefitted by it, but with so many lines traversing the Province in all directions "Old Probabilities" cannot fail to convey information to a very large number of people.

It is useless in enriching orchard ground to pile the manure around the trunks of the trees. The feeding roots, are about as far from the trunk as the extremities of the branches, hence the bulk of the manure intended for the tree should be spread in the line of the outer branches. "If you have money to fool away," says Prof. Beal, "seed down your young orchard to clover and timothy, or sow a crop of wheat or oats. If you want trees to thrive, cultivate well till they are seven or ten years old. Spread ashes, manure or salt broadcast. Stop cultivating in August, weeds or no weeds. This allows the trees to ripen for winter." The condition of the tree is known by its leaves, its fruit and the wood it makes in a season. If the leaves are pale, the fruit small and poor, and the growth on bearing trees less than a foot a year, the tree needs both manure and cultivation.

MARKET gardeners, who are usually the first to introduce any new system of cultivation, are generally following the plan of level culture for celery, earthing up once for all at the latter part of the season. The trench and the level system have been the subject of careful experiment at the New York agricultural experiment station, and the results are so nearly equal that the advantage of the trench cultivation is regarded as altogether too little for the increased labour involved. Averaging our results obtained in seventeen samples in which the varieties from the two rows are separately noted, the director reports: "We find that, omitting fractions, plants grown under level culture averaged 177 pounds per hundred plants, while those under trench culture averaged 178 pounds per hundred plants. The length of the bleached stems was rather greater and the suckers were rather more numerous upon the plants grown in the trenches; but, on the other hand, the bases of the stems were more often split and deformed than occurred in the plants grown upon the level." With such results from the simpler method we may naturally look for a much more general cultivation of this excellent and popular salad plant.

FARM AND FIELD.

ADVANTAGES OF MIXED FARMING.

Success in farming consists in knowing how to conduct a farm in the most intelligent manner. In the virgin soil of the West less knowledge is required, as the land is more uniform in its character, and is in condition for successful cultivation without the necessity of enriching it for the time being. The Western farmer has, therefore, a certain advantage over the farmer of the older States, where the original fertility of the soil has been exhausted. Yet the latter may be, and often is, the more successful cultivator of the two, owing to the diversified character of the soil, which, by proper management, can be made to yield a greater profit than that of the West. This is done by mixed farming.

The advantages of this system are many, but they are far from being as well understood as they ought to be. They are based chiefly upon the variety of the soil, of which we have the upland clays and the alluvial loams of the valleys, besides calcareous and sandy soils and reclaimed peat lands. It will be seen that there is a great contrast between the clays and the peat lands, with considerable intermediate variety, each kind of soil requiring for its fullest development a different treatment and crops peculiarly adapted to it. With the land in good condition, underdrained where needed, deeply and well cultivated, and rich enough to grow full crops, wheat will do best on clay, corn on the alluvial soil of the valleys, and rye and potatoes on the lighter soil, while barley and oats may be grown successfully on almost all, and best on the strong alluvial and clay loams. The pea will thrive here also, but it seems to do better on limestone soil.

As to the grasses, timothy (*Phleum pratense*) and red top (*Agrostis vulgaris*) succeed best in clay, as they require land somewhat moist, and should hence never be put on light sandy soil. Blue grass (*Poa pratensis*) is noted for its great growth on the rich calcareous loams of the West, but will do well on any deep rich soil not too dry. So will orchard grass (*Dactylois glomerata*), doing better than blue grass on sandy soil liberally enriched from the barnyard. Red clover will grow on any good soil well prepared. This is fortunate, as each variety of soil may then be improved by it, and it affords a superior feed.

One of the principal advantages of mixed farming is the keeping of stock, in which the dairy takes the lead. Profitable returns are realized at once, and at the same time the productiveness of the land is increased by the manure that is made, while the keeping of sheep on the broken and less accessible land affords a further profitable income on the investment, difficult to be realized in any other way.

Where mixed farming is practised each part is conducted on a reduced scale, which affords a chance for doing the work well and in good time, and with less interruption from unfavourable weather. The spring grains, as well as clover and grass seed, may thus be got in earlier, a point of great importance. This gives a chance for planting corn and early potatoes, followed by the preparation of land for buckwheat and soiling crops, the lessened work of each allowing all to be done in sufficient time to begin the most important work of the farm—the harvesting of the hay crop. Where much hay is to be made, as where the dairy is extended, there is always more or less hay spoiled by wet weather, sometimes the greater part of the crop being all but ruined, while the last that is harvested is of little nutritive value from over-ripeness. Hence the importance of getting the crop soon gathered,

which the reduced quantity in mixed culture favours. Time is also afforded for attending to the corn crop and other hood crops. Then come the grains, each of which is taken care of in its turn, and all are harvested in good time for other late summer and early fall work. The number of cows in the dairy being reduced, a chance is offered for securing better animals and taking better care of them, whereby the yield of milk is increased, and the profit on it. So, too, with sheep. Where the flock is reduced there will be less crowding, and better attention can be given, which results in a better quality of wool, and more and larger lambs.

Another advantage is in the distribution of the work throughout the year. Less hired help is required. One good hand, with the owner, if he also is a good worker, will do about all that is required on an ordinary Eastern farm, with the aid, of course, of implements and machines, a full complement of, which can thus be profitably employed.

By his mixed system, the Eastern farmer seldom, if ever, fails to secure for at least some of his products a good price, and in the best market in the country. If a drought occur in the latter part of the season he has his early crops that escape it. If his winter grain is hurt, his spring grain may escape, and vice versa. He has the advantage of securing a high price for his barley when not enough is sown to supply the brewer, and if there is an overabundant yield he has it to feed instead of other grain that may command a proportionately higher price. If a cool season affects his corn, it benefits his potatoes. If his corn and late potatoes are hurt by drought late in the season, the early products, like barley and peas, and early potatoes, may be depended on.

The chance afforded to turn down sod is one of the chief advantages of mixed farming. By this process the ground is enriched, and a means afforded for improving the land that has been in grain, and is more or less exhausted. As our droughty seasons here allow only a few years to grass, and the same time for grain, there is not that exhaustion of the soil as where grain is made a speciality; hence the land is improved and continues to improve in texture and fertility. Weeds are also better kept down by variety in farming.

PROTECTING THE MANURE PILE.

Touching upon the point of keeping up the fertility of the land, the man who handles and breeds purely bred farm stock mainly has greatly the advantage over those who force the farm animals to rough it, eating other than first-class foods, and dropping impoverished manure here and there, the owner making no calculations for getting it together and putting it upon needy fields. These advantages are mainly two—first, that by feeding the more nutritious foods the manure is made rich, and second, through a systematic stabling process the manure is kept in a snug shape—in other words, in such form as to render its protection easy. The manure is needed, and there is no farm, no matter how new or fertile, can do well without it any more than a man merely because he is in full flesh can do without food daily and regularly to replace that which daily exercise and work take from him.

During the winter the accumulation, if on an impervious foundation, has doubtless been pretty well preserved, but if it be permitted longer to remain in the pile it should from this time on be carefully protected from rainfalls. If in compact shape this may be cheaply done with boards, and, of course, it matters not how indifferent the lumber is in quality, provided it turns water when set on end at a sharp angle. A thick covering

of straw or refuse hay will answer the same purpose. The main bulk of the manure is refuse woody fibre, a substance that is of little value when put upon the land, and not likely to be washed away while in the manure heap. But the real elements of fertility, the potash, soda, magnesia, phosphoric acid, soluble silica, etc., are carried by each rainfall, if no protection is given, to the most accessible sink hole, ditch or stream, and hence lost. These valuable constituents are thus readily washed out, leaving a residuum of too little value to pay for hauling it upon the field. Yet, a vast quantity of such so-called manure is carted out upon the farm under the mistaken notion that in proportion as there is bulk, in that ratio there is value.

Nor is it alone through the process of being washed away upon the surface that the manure pile is rendered less valuable. If it be upon a pervious foundation, there is constantly, even when all around the pile is frozen solid, a secret unobserved process of wasting going on, the surface for several inches immediately beneath the pile becoming richer to the cubic foot in valuable constituents than the manure pile itself. On a certain occasion, the earth upon which manure had been for several years stored and hauled off annually to the fields was removed, and its fertility tested alongside of the manure that had been stored above it, the result being that the earth promoted a more vigorous growth of the crop than occurred upon the surface where the manure had been applied. Nor did the experiment stop here, the sand, taken from a depth of two feet and more from the surface, placed by itself, produced a crop of grass such as no mere sand, manured in the ordinary mode, could be expected to do.

Therefore, the store of manure should be kept upon a concave foundation, made impervious through the use of whatever material is most available and economical. Moisture in the manure pile is of value, if it can be retained there without finding its way through the pile, sinking thence into the earth, or stealing out over the surface, carrying all there is of value with it. Ammonia, a valuable element in manure, is engendered within the pile, and escapes if the manure is permitted to dry up, as is often the case. Therefore, moisture without drainage or leaching, preserves the accumulation; and during the leisure time between now and the busy season any accumulation that is to be retained for future distribution should be forked over, put upon a suitable foundation, and carefully covered, provided there is any opportunity for a rainfall to rob it of valuable properties.—*National Live Stock Journal*

HOW TO KEEP THE BOYS ON THE FARM.

On this highly important subject a correspondent of the *Farmers' World* writes as follows.

I find no better way to keep the boys at home than to encourage them in their work. In the first place, never lie to them. If you want them to work faithfully encourage them by paying them a small sum occasionally. Give them a piece of land to work and raise what they see fit. Give them plenty of time to attend it and keep it clean, let them have a team to work when necessary. Have them raise something nice to take to the fair, go with them and see that they get it entered right. Unless you are sick, don't sit around and send the boy to the field, day in and day out, to work alone. Go ahead, there is nothing more encouraging than for a parent to start in the morning and say, boys, come, we must do so and so to-day. Be kind to them, and they will work with pleasure. If they fail to do as you wish, take hold of the plough or

cultivator, whichever it may be, and show them, they will soon see how they can do better work with more ease. Give each boy his share of chores to do. Divide them off according to their size and age and see that each one does what is allotted to him, so as not to have any dispute which shall do this to-night and the other in the morning. When a child disobeys and needs punishing take it to one side and talk candidly to it and tell why you have to punish it; above all things never strike a child when you are angry. If you promise a child anything fulfill your promise to the letter, they will soon have confidence in you; if they lose your confidence it is a hard task to gain it again. Take them as it were partners, use the little word we, it will cost you nothing and they will soon think the farm would go to ruin if they were to leave it. Give him a pig or calf to raise, when it is old enough to sell, let him sell it and receive the money. Go to the store with him and assist him in selecting a suit of clothes; if he hasn't enough money to buy such as he wants, give him some, he will double pay you when you are in a hurry to get a piece of work done, and then he feels proud to tell his companions what he has bought with his money. Encourage him to select the best of associates, tell him the disadvantage in selecting bad company, how they will lead him to ruin. Keep a supply of good moral papers to read, if he gets to reading good papers while young he is more liable to like them when older. Play games with the children when you have leisure, nothing will please them better than to win a game with their parents; it may not be amusing to you but it helps them make home the pleasantest place they can find. When home is pleasant they are loth to leave it. The most children think what father and mother do is right, so be careful what examples you set before them.

AVOID FARM MORTGAGES.

Money at seven per cent. will double in ten years if the interest is kept invested. If the farmer carries a mortgage of say \$5,000 for thirty years, it will cost him at seven per cent. about \$35,000 for the use of the \$5,000. This enormous figure obtained by the computing of interest at seven per cent. on the amounts paid, is no more than a fair estimation of the cost of such a mortgage, for the farmer can always doubtless invest his money in something which will yield him seven per cent.

Therefore:—1. Do not mortgage the farm unless it seems absolutely necessary. But, as a general rule, it is less valuable than a particular one, it may be well to specify by adding; 2. Do not mortgage to build a fine house. By so doing you will have to pay money for an investment which does not bring money. 3. Do not mortgage the farm to buy more land. Where there is absolute certainty that more can be made out of the land than the cost of the mortgage, this rule might not apply. But absolute certainty is very rare, mistaken calculation common. 4. Do not mortgage the farm unless you are sure of the continued fertility of the soil. Many persons borrow with the expectation of payment based on an experience of the land's virginity only, which on failing, may leave the land less productive, and the means of repayment thus removed. In this way trouble begins which may result in the loss of the farm. Keep very clear of mortgages.

BETTER have a rattle snake in the house than a bad hired man to contaminate the children.

THISTLES in grain fields should be cut below the surface. An old chisel fitted to a broom handle is good for this purpose.

"LITTLE BROWN HANDS."

They drive home the cows from the pasture,
Up through the long shady lane,
Where the quail whistles loud in the wheat field
All yellow with ripening grain.

They find, in the thick waving grasses,
Where the scarlet-lipped strawberry grows,
They gather the earliest snow-drops,
And the first crimson buds of the rose.

They toss the hay in the meadow,
They gather the older blooms white,
They find where the dusky grapes purple
In the soft-tinted October light.

They know where the apples hang ripest,
And are sweeter than Italy's wines,
They know where the fruit is the thickest
On the long, thorny blackberry vines.

They gather the delicate sea weeds,
And build tiny castles of sand;
They pick up the beautiful sea shells—
Fairy barks that have drifted to land.

They wave from the tall rocking tree-tops,
Where the oriole's hammock nest swings,
And at night-time are folded in slumber
By a song that a fond mother sings.

Those who toil bravely are strongest,
The humble and poor become great;
And from those brown-handed children
Shall grow mighty rulers of state.

The pen of the author and statesman,
The noble and wise of our land—
The sword and chisel and palette,
Shall be held in the little brown hand.

The New Haven News.

WHY THE COWS COME LATE.

Crimson sunset burning,
O'er the tree-fringed hills,
Golden are the meadows,
Ruby flashed the rills.
Quiet in the farm house,
Home the farmer hies,
But his wife is watching,
Shading anxious eyes,

While she lingers with her pail beside the barn-yard gate,
Wondering why her Jenny and the cows come home so late.

Jenny, brown-eyed maiden,
Wandering down the lane,
That was ere the daylight
Had begun to wane.
Deeper grew the shadows,
Circling swallows cheep,
Katydid's are calling,
Mists o'er meadows creep;

Still the mother shades her eyes beside the barn-yard gate,
And wonders why her Jenny and the cows can be so late,

Lowing sounds are falling,
Homeward now at last;
Speckle, Bess and Brindle
Through the gate have passed;
Jenny, sweetly blushing,
Jamie, grave and shy,
Take the pails from mother,
Who stands silent by,

Not one word is spoken as that mother shuts the gate,
But now she knows why Jenny and the cows came home so late.

—By John S. Peyton, from *Our Continent*.

SOME of the greatest advantages of underdrain- ing are found in putting tiles in fields that in most places are dry enough already. In a wet time plowing, cultivating or other work on the entire field is suspended until these places get into condition to work. The loss from this is most noticeable in hoed crops, as corn or potatoes, where weeds get the advantage and double or treble the labor of after cultivation. With a field dry in parts this evil may be avoided.

THERE are some kinds of weeds whose presence in clover fields is presumptive evidence of bad management. Sorrel is one of these. The fields that are red with this pest now have probably been heavily pastured the previous season, or were so sterile in places that the clover seed either did not grow or the plant had too little vigor to maintain its supremacy against weeds. On rich, well-cultivated soil clover will usually keep all weeds under, at least to such an extent that what scattering weeds remain may be destroyed by hand-pulling.

HOUSEHOLD HINTS.

THERE are people who dislike the taste of new milk, and yet are directed to take it. It will be made more palatable by sprinkling it well with salt.

HERE is an excellent dish for dessert. Line a mould with ice cream, fill the centre with berries, cover them with ice cream, and set in the freezer for about half an hour. It is not intended that the fruit shall be literally frozen, but chilled. Any fruit may of course be used.

HERE is a receipt for a cool and pleasant drink for summer, which will be found quite a good variation from lemonade. Take the juice of six oranges and six lemons, adding sugar to suit the taste. Put to this a quantity of pounded ice and some sliced pineapple, pouring over it two quarts of water.

ALPACA dresses, in gray or fawn color, are tucked right up to the waist. A tunic is worn over this tucked skirt, draped crossways in front and forming shawl-ends at the back. The plain bodices are crossed in front over the chest and confined to the waist by a velvet belt, there being also a velvet collar at the neck and velvet cuffs to the sleeves.

To make oil cloths look bright and fresh, take of milk in the proportion of three tablespoonfuls to one of molasses. After mixing thoroughly apply with a soft rag to the oil cloth, having it perfectly clean. If the carpet is sticky after drying use less molasses. The quality of molasses varies, and an experiment on an inch or two of surface will test the quality of the compound. If well-proportioned the dust will not stick to the floor more than on new oil cloth.

If the covers of the cushions in a baby's carriage have faded, they may be upholstered at home at small expense. One of the most satisfactory coverings is of sateen, the cotton sateen. Do not remove the old cover, but take the braid off, and after tacking the sateen to its place put a new braid over the edge, or the old one if not worn may be turned wrong side out. If you are careful to put the tacks in the same places that they were in before, it will look about as well as new. A pretty wrap to spread over the baby's lap is made of open-work curtain lace. Line it with blue or pink cambric, and put narrow lace on the edge.

THE *Prairie Farmer* finds in a French agricultural paper, a description of a new process for making bread, which has proved successful in one of the largest bakeries of Paris. It consists simply in dissolving a certain quantity of glucose in the warm water with which the dough is mixed. The dough rises rapidly and makes a very light and palatable bread. The theory of this proceeding is explained as follows. "In the ordinary process the starch of the flour is changed to dextrine, then the dextrine is converted to glucose, which is decomposed, evolving carbonic acid, which causes the dough to rise. Thus fermentation eliminates the starch of the flour and diminishes the quantity of bread. The new process avoids destruction of starch. The glucose combines with the yeast, and is converted into carbonic acid, which raises the dough. There is thus obtained, with economy of time and labor, a bread which is more abundant, more nutritious, and of better quality." Our contemporary adds. "This is an excellent recipe which we hope will be propagated in our rural and agricultural households." The proportion of glucose to be used is not stated, and can only be determined by experiment. Glucose in its solid and liquid forms is about one-half as sweet as cane sugar or molasses, consequently a larger quantity of the former could be used than of the latter without imparting excessive sweetness to the bread.

GARDEN AND ORCHARD.*USES OF PYRETHRUM.*

Pyrethrum, or the Persian insect powder, seems to be an effectual check to the ravages of the cabbage worm if properly and seasonably applied. A correspondent of the *Indiana Farmer* relates his experience in its use last season whereby he was able to secure 450 good solid heads from the 500 plants set out. He used a common table-spoonful of the powder to a 2½-gallon watering pot, first putting in the powder and pouring on boiling water, stirring it well meanwhile. After standing to steep while it is ready to apply to the plants by spraying. He says, "the effect was marvelous, for in an hour's time after the application not a live worm could be found, unless by chance he had been missed. Two applications were made per week as long as any worms could be found. Only about 35 cents worth of the powder was used upon the cabbages, and the labor did not exceed one and a half hours per week. The powder can be bought at any druggist's retailing at 50 to 60 cents per pound. It would doubtless prove effective in destroying many other insects which prey upon vegetation. It is one of the best destroyers of bed bugs and lice on stock of all kinds, including chicken lice, sheep-ticks, etc. For such purposes it is best applied dry. Druggists keep and sell a little blower with which to use it in its dry state. If applied to animals the hair, wool or feathers should be parted and the powder applied directly to the skin by the blower. When a chicken house has become infested with lice it is often difficult to eradicate them, on account of the many cracks in which they harbor. But with the blower the powder can be introduced everywhere, making a thorough renovation of the premises, as the writer can testify from an experience he had a few years ago.

HUNGARIAN FOR HAY OR GREEN FODDER.

A quick-growing plant is required for a second crop sown on land after oats, or early potatoes have been harvested. Hungarian grass is excellent for this purpose, and with a rich and mellow soil will be ready to cut in mid-summer, or soon after. If the conditions are most favorable, a heavy crop may be obtained in six weeks from sowing. Prepare the soil as for oats, wheat or other grains, and sow one bushel of seed per acre. It may be sown broadcast and harrowed in lightly. The Hungarian fodder has obtained a bad reputation in some localities, without deserving it, simply because the cutting was delayed too long. The crop should be harvested as soon as the head is well formed, and before the barbed awns become hard and dry. The fully ripened bristles irritate the stomachs and intestines of animals, especially those of horses, and have sometimes done injury.

If the crop is grown to help fill the hay-mow, it should be cut and cured in the same manner as timothy or red top, when it makes a good hay. Hungarian grass, is especially recommended as a late crop to be fed green, when the pastures are short and dry from close feeding and summer drouth. For this purpose it may be sown in strips weekly, from early June to the middle of July. By growing a few acres of this late crop after an early one, a farmer is able to carry an increased number of farm animals and keep them in good order. Bear in mind, that the conditions of success are a rich, deep and mellow earth, and on well worn soil this means a plenty of quick-acting manure, applied before the grass seed is sown.—*Dr. Halsted in American Agriculturist for July.*

FIRMING THE SOIL.

Peter Henderson, of New York, who has a national reputation as an authority in all gardening matters, says there is no operation of such vital importance to the garden or farm as "firming" the soil immediately after sowing. In the garden the operation is very simple. After the sower comes a man who with the ball of his foot presses down his full weight upon every inch of soil in the drill where the seed has been sown. Experiments made ten years ago show that in alternate rows the seeds trodden in came up in four days, while those unfirmed were twelve days in germinating, and all subsequent trials bear out the principle. Here, where we have so little rain at seeding time, it is absolutely necessary that we should economize the moisture that is in the soil, and there is no better way for a garden than "firming" the soil with the foot. We have tried it ourselves with excellent success. The same principle should be extended to the farm as well as the garden. For the farm the best implement of course is a heavy roller, and no amount of cultivation will enable the farmer to dispense with the roller. Growth will be more rapid, more certain, and result in a heavier crop with the roller than without it. The rule applies to plants as well as seeds, and was heartily endorsed a week or two ago by the agricultural editor of the *New York Times*.—*Carrington News.*

GRAPE VINE PRUNING.

Not only in early spring, but later in the season, strong, vigorous shoots will appear upon the main stem of the vine. These start at no particular place, and grow with great rapidity. Novices in grape culture are puzzled as to the proper treatment of these shoots. A shoot from a regular bud, if not needed, is broken away, and the same should be done with these chance shoots. Unless cane is needed just where such a shoot appears, break it off. The laterals puzzle many, but their treatment is very simple. As a shoot grows, there will be found two buds at the axil of each leaf—the part where the leaf joins the stem. Later, one of these buds will start into growth—this shoot is called a lateral. We wish to keep one bud perfectly dormant, for next year's fruiting. If the shoot from the bud that has started were pulled out, the other one would start into growth, and there would be no fruit from it next year. The proper treatment of the laterals is to pinch them back to one leaf, as often as they push.

MAKING APPLE-TREES BEAR EVERY YEAR.

In many parts of the country, apple-trees yield a crop of fruit only every alternate year, the year represented by an odd number, (1879) being barren, while that represented by an even number (1880) will be fruitful. In other places, orchards bear every year. Some trees will yield fruit only every other year, while others near them, on every side, will produce a bountiful crop.

Two seasons are required to produce a crop of apples, that is, during one season the fruit-buds are developed, and during the next, the fruit. All the vital energies of some trees are employed, during one season, to develop the fruit-buds; then the year following, their entire vitality seems to be spent in developing the fruit, without sufficient force being left to form fruit-buds for the crop of the next season.

Now, in order to induce an apple-tree to bear every season, climb into the top, or go up on ladders, just as one does when plucking the ripe fruit, and with a pair of sharp shears clip off all the young fruit from about half the tree. Then

fruit-buds will form on that side of the tree from which the young apples were cut off. One-half the top, then, will bear fruit one year, while the other half will yield fruit the next season.

S. E. T.

MOWING LAWNS.

To maintain a lawn in perfect condition, it must be mowed every week or ten days, but not so close as to lay bare the grass roots. Nothing is so destructive to a good lawn as too close mowing. If the mowing is done regularly at proper time, the clippings need never be removed, except perhaps after the first mowing in spring. In fact, the clippings constitute a valuable fertilizer and mulch, of which the lawn should not be deprived, and rakes do generally more harm than good on a lawn. The best implement for smoothing a lawn is a good roller.

Says an exchange:—A teaspoonful of saltpetre dissolved in a gallon of water has been recommended for killing rosebugs on grapevines.

Do not be afraid to pinch back your water-melons. It is better to have one good large one to a vine than to have three or four little stunts that can never ripen, and would not be worth anything if they did.

THERE are two broods of the cabbage worm that do damage to the crop, one in spring and one in midsummer. Destroy all the larvæ you can. Hot water, according to the experience of Mr. Ferric, of Fergus, and many others since he tried it, at a heat of 160 degrees Fahrenheit, applied quickly so as to be near that temperature, is effectual, and plants bear that heat.

A MAINE farmer who prefers surrounding the corn field with white twine to prevent crows from destroying the crop, claims that failure will follow the use of stiff stakes. He says: Go to the woods or alder swamp, cut alders or any young saplings about an inch through at the butt, from eight to ten feet long. Trim off all the leaves. Leave a short piece or two of limbs to hold the twine.

THE very best soil for the peach is a rich, deep, sandy loam; next to this a strong mellow loam; then a light, thin, sandy soil, and the poorest is a heavy compact clay soil. In selecting trees get those best adapted to the climate of your particular locality. The chief point is in hardness, the maturing of the new wood in fall; therefore in the coldest localities keep the tree cut back.

THE *Gardener's Monthly* states that it has been found that water heated to 130 degrees is fatal to all insects that infest plants, even though exposed to it for an instant, while the immersion of a plant for an instant in water of that temperature does not injure the plant in the least, unless the leaves are very tender from having been grown in the shade. But even then they do not suffer at 120 degrees, while the insects seem to be destroyed at 100 to 110 degrees; so in gardening practice the rule is to recommend the water to be heated to 120 degrees. The practice generally is to turn the plant upside down and dip the plant, but not the pot, for an instant only, in hot water. In use the water has to be carefully tested by a thermometer.

AS is the case with every biennial, the red clover dies once it has seeded. If the field is left until the third year it usually fills up with June grass, or with noxious weeds. A good growth of clover seed will keep down weeds of almost all kinds, including the Canada thistle, and with a good coating of lime and ashes it will do this all the more effectually.

THE DAIRY.

ADVICE FOR BUTTER MAKERS.

A correspondent of the *Country Gentleman* in a late issue condenses a great deal of valuable advice for dairymen in discussing the foaming of cream. "High temperature," he writes, "has the same effect as the ferment of impurity, and if the milk has been set or the cream has been kept in too warm a place, or in impure air, the same effect would be produced. And this is precisely the cause of foaming of cream out of or in the churn every time. I have produced this effect purposely several times, and never found it to fail. When milk has been set in a warm place until the cream has floated on a thin, sour liquid like whey; or the cream has been kept in the jar until the same thin whey has collected at the bottom; or when the churning has been done in a warm place and the cream has gone into the churn at 70°, there has always been this troublesome foaming, and at times the cream has been churned for seven hours at a time, and again for seven hours the next day, and no butter has come. So that in this particular case the difficulty, no doubt, has been due to the long keeping of the milk, aggravated by some unusual condition of the cows, or of the milk, or of the pails or pans used, or of the place in which the milk or cream was kept. To avoid this frequent trouble, some precautions are requisite now that the warm season has come. There are so many of these that I will only enumerate them, leaving your readers to apply the reasons for them as their own intelligence and experience will suggest:

1. Never permit the cows to be overheated or over-driven.

2. Avoid sour fermented food, and water having green scum on it, whether in ponds or troughs.

3. Wash all the pails or pans first in cold water; then scald with hot water; finally rinse with cold water; wipe dry with a perfectly clean, ironed and well aired towel, and then air them well.

4. Never ventilate the cellar or the milk-room in the daytime, and only from dark to daybreak. If the apartment is damp, dry it by putting a bushel of fresh stone lime in it, in a box, until it becomes sticky by absorbed moisture. A bushel of fresh lime will absorb 28 pounds of water and yet appear perfectly dry, but reduced to fine powder.

5. Keep the milk-room as near 62° as possible.

6. Skim the cream never later than 36 hours, and keep it no longer than 36 or 48 hours at the most before churning.

7. Cool the cream if necessary, by the use of ice, or setting in cold water, or a cold closet, to 60° before it is put in the churn and also cool the churn to the same temperature.

8. Scald the churn before it is used, and then cool it down with cold water or ice to 60° before the cream is poured in. The churn should always be rinsed with cold water after churning, then scalded, and then finished with cold water, wiped dry with a dry clean towel, and put away in a dry cool place, with the mouth down, to avoid dust.

9. Churn in a cool place, or if this is not possible, cool the cream and churn to 55° before churning, if the temperature of the room is over 70°. The motion of the churn greatly tends to warm the cream, just as a warm wind would do, or a cool wind would reduce temperature. If these precautions are taken, there will be no foaming at any time.

BUTTER THAT WILL KEEP.

There are not a few butter makers who imagine that if they have a cool and well-ventilated place in which to store their butter nothing further is required. But this idea is an erroneous one, for poor butter or butter containing butter-milk or any foreign matter will not remain sweet and sound for any considerable length of time, even under the most favourable conditions. To make butter that will keep, the utmost cleanliness must be observed with all vessels connected therewith, and the milk must be set in rooms free from all foul odors, not in cool and fragrant cellars where vegetables have been stored over winter, and the odors therefrom have penetrated every part of the woodwork, brick, and stone, only to be emitted again during the warmer weather of summer. In such places the cream is certain to absorb taints not readily dispelled even by the most careful manipulation.

To make superior butter the milk should be cooled rapidly, and as soon as possible after it is drawn from the cow, for the sooner the animal heat and odors are eliminated the less likely are the latter to be re-absorbed by the rapidly rising cream. The ventilation of the room where the milk is set should also be perfect, in order that the said odors may escape, as well as all others which may be introduced by those handling the milk and cream. But the butter maker who has all the necessary conveniences and knows just how to make a superior article may fail, through some fault of the food supplied to the cows. Milk from cows that run in weedy pastures, or that are fed upon rank-flavored roots or other kinds of food in winter, will not yield superior butter, no matter how carefully or scientifically it is made. Butter to keep well must be perfect and free from all taints and odors.

CAPITAL ADVICE.

An "Iowa Farmer" talks in this sensible way in the *Dairy* to the man whose cows "holds up" her milk: "You get mad and pound her ribs with the three-legged stool, and again her eye—always looking sidewise at you—changes and an expression of determination and obstinacy, but yet perfect placidity too, fills that eloquent organ. It is no use. You give it up and let in the calf, and the cow then turns and looks you full in the face, with an air of triumph which is equal to a grin, if an eye can grin, and a cow's eye can. No, it is no use putting things on her back, or twisting her tail, or pounding, or coaxing her. When a cow 'is sot, she's sot,' and there's an end of it. If you have trained her so badly that she has learned this trick, the best way is to humor her, and let in the calf. But I never failed yet to get the better of the cow in such a case by muzzling the calf, and letting it bunt and bunt while I milked. But the calf must be tied, or it will happily make a dive under the cow and over-set the milker and the pail too. The right way is to train the cow; first, by never letting her know it is to suck when a calf, by removing her from the dam before she has sucked, and then when she is a cow by never letting a calf suck her. A cow so trained never, in my experience, held up her milk."

COW FEED FROM GARDEN.

In farms where the dairy is an important part of the husbandry, provision is made by sowing soiling crops, to supplement the diminished pasturage in midsummer, those who keep only the "family cow," or at least two or three cows, find the flow of milk to decrease, and often without any green crop provided for keeping it up.

The territory of those who keep but a single cow is often restricted to a small pasture and a vegetable garden. The garden should be made to supplement the pasture, and this may be done to some extent by securing for the cow much from the garden that usually goes to waste. Every one who has a garden tries to have an abundance of green peas. After the vines have yielded their last profitable picking, instead of allowing them to remain upon the ground until that is wanted for another crop, feed the vines to the cow while they are still green and succulent. So with sweet corn. When the last ear is plucked from the stalk or a hill do not wait until the whole patch or row can be cleared, but pull up the stalks that have been deprived of ears, a few at a time, and feed them while in their best condition. The outer leaves of early cabbages and the leaves of beets, carrots and turnips carefully saved will make an important item in the succulent food for the cow.

Much is said about cows for general purposes, meaning usually their adaptability for making into beef after they are too old for the dairy. But a cow that is good for butter, cheese or milk, should never be killed until so old that her value for beef will be very small, however well-built she may be. Practically, the only use for which we consider a cow's value is for the dairy.

Cows usually become addicted to kicking when heifers, from being milked by abusive milkers. I have never seen an old cow become a kicker unless abused. Instead of cows being averse to being milked when giving large quantities, I have ever found it the reverse. When pasturage is good, and cows come home at night with their udders distended with milk, they seem grateful to have it removed.—N. E. Farmer.

One reason why creameries make better butter than farmers' dairies is because of daily churning of the cream. There is some change going on in milk or cream from the first, and in winter where few cows are kept it is almost impossible to make good butter. With only one cow the cream should be churned at least once a week and if necessary to make more bulk, some slightly soured milk should be mixed with it.

THERE can be no dispute that the cow to win in the end is the one that makes the most butter and cheese from the least food consumed; and surely the Ayrshire is at least a good candidate for this honour. Then why do we not hear from her breeders? Weigh her food and weigh her product, and then publish the result, and our word for it, the market will see a turn. If you sit down and supinely drift, you are lost.—*American Dairyman*.

A DAIRYMAN once told us that he introduced a new cow into his herd, and of course the "leader" took a look at her, which she very unwisely resented, and a tussle ensued in which the other cows soon joined, and in a few minutes all of them were in a furious rage, that he and his men with clubs and all their strength and shouting could not put down until the new cow was dead. We have always found it a good plan to keep an eye on the herd when a new cow is turned in with it.—*American Dairyman*.

A FRENCH correspondent of the *New England Farmer* writes:—"The Danish system of making butter promises to become general; this consists in creaming the milk by centrifugal force, and churning about fifty gallons at a time, by special machinery worked by the ordinary engine. Not a drop of water is employed in the whole operation, and the hand never touches the butter. The latter brings at Paris twenty per cent. higher than the other prepared butter, it has no porosity, no milk. Ice is not employed. The cream is heated to fifty-seven degrees, and the butter is made in forty-five minutes. Cleanliness is perfect."

HORSES AND CATTLE.

GLANDERS.

PRECAUTIONS TO BE TAKEN BY HUMAN BEINGS.

Persons in charge of horses will do well to consider the following remarks by Mr. Geo. Fleming, President of the Royal College of Veterinary Surgeons, of England.

"The importance of framing some precautionary measures for people who, by accident or profession, may chance to be exposed to contact with glandered or farcied horses, cannot be over rated, when we remember the facility with which mankind can be inoculated, the loathsome character of the disease so induced, and its almost invariably fatal termination.

"In the first place, those who have the care of diseased creatures, or are likely to be brought into contact with them—veterinary surgeons, surgeons, medical and veterinary students, coachmen, grooms, knackers, etc., should be fully alive to the risks they incur with a view to be on their guard against inoculation, which is likely to occur if the glander virus reach any part of the body where there are wounds or abrasions, or even where the epidermis is thin and soft. The eyes, nose and lips, are dangerous parts in this respect.

"Persons who have wounds, ulcers, cracks or excoriations on their skin, and especially on the arms, hands and face, should have nothing to do with glander or farcy patients; and if by accident they receive an injury of this description, they ought to abstain from attending on them.

"The discharge from the nose or from the Farcy ulcers, should not be removed with the naked hand or any article likely to convey it accidentally to the person (such as a handkerchief or towel), but with a sponge and plenty of water; the first being carefully rinsed afterwards and laid aside for this purpose only, and the water thrown into a drain where no animal can reach it.

"Care must also be taken that the animal does not snort or sneeze the nasal discharge over the face or hands, or, indeed, on any part of the body. Should such an accident occur, the matter must be removed with the greatest solicitude, and at once. The same precautions must be used with regard to the other secretions, or in fact anything proceeding from a deceased or suspected horse, as all may serve as vehicle for the virus. Neither must the expired air of such an animal be directly inhaled.

"The mediate transmission of the virus in other ways should also be avoided. Articles impregnated with the contagion, such as blankets, head collars, halters, etc., should not be handled until cleansed and disinfected. Neither should the attendants or any other persons sleep in the stables containing diseased or suspected horses, nor yet remain in them longer than is absolutely necessary; after contact with them and infected articles, the hands should be washed thoroughly with soap and water, or a very weak solution of hydrochloric, carbolic, or acetic acid.

"People who have to attend such animals should be attentive to these sanitary precautions and well-behaved, they ought to be cleanly in their persons and steady in their habits, of a good constitution, and in vigorous health. They should resort to the open air, as frequently as their duties will permit, and live well.

"The stables in which the sick or suspected horses are kept ought to have as pure an atmosphere as possible—be well ventilated and kept clean—and should contain as few animals as circumstances will allow.

"Reynal recommends that in authorized infirmaries, as well as in those attached to cavalry

barracks, veterinary schools and large horse establishments, those in charge of the sick or suspected should have a room that does not communicate with the stable, the necessary surveillance taking place through a glazed window; no articles which have served to dress the horses should be deposited in this chamber.

"All wounds, punctures or abrasions made while manipulating or dissecting the deceased should be immediately cleansed and cauterized. The dissection of such animals should not be proceeded with until the carcasses are perfectly cold. The dressing of Glander or Farcy ulcers must be circumspcctly conducted, and forceps should be used.

"The clothes worn by persons attending sick or suspected horses should be kept scrupulously clean; those of people who have died of Glanders, as well as their beds and bed clothes, should be destroyed or thoroughly disinfected.

"If any person who has been in contact with a glandered horse perceives any part of his skin—and especially that on the hands or face—to inflame or ulcerate, or should he feel unwell, he ought to apply at once to a physician.

"Those who administer medicines, dissect, or cut up diseased animals, must be particularly cautious in avoiding inoculation."

A CALL AT BOW PARK.

A recent brief visit to Bow Park gave the *Chicago Reader Gazette* an opportunity of seeing that attractive and valuable farm at its best. The crops were in fine condition. A large acreage of wheat promised a yield of nearly forty bushels per acre; the meadows were very heavy and the pastures luxuriant. The noted Shorthorn herd grazing these pastures or comfortably resting in the probably unsurpassed stables were the chief objects of interest. No lover of good cattle could fail to enjoy an examination of such a herd. Fourth Duke of Clarence, although nearly ten years old, is still in good form and vigorous health, and is a bull of marvelous merit. With great size, weighing nearly 2,800 pounds, he is free from coarseness; the body long, unusually deep and thick, with top and bottom lines nearly perfect, is well carried on strong, clean legs. There is every evidence of a mild, placid disposition and of great feeding capacity. Chief of all his merits, however, is the ability to reproduce his good qualities. Among many excellent calves of his get, Duke of Brant 2nd, out of 10th Duchess of Hillhurst, is among his best; his dam is one of the best cows of the herd. The 9th and 11th Duchesses of Hillhurst are not nearly her equals; the latter has not yet bred. Duke of Brant, out of 9th Duchess, is a bull of considerable promise, but will require time to show at his best. The Duke of Oxford 38th is a large bull of good merit and sire of some excellent young things. Among other bulls there are two or three capital Kirklevingtons and a Waterloo, full brother to the fine bull lately sold at Harristown. No public sale is contemplated for this year. There has been a good demand for bulls, mainly from the Province. There seems no desire to sell females. One naturally looks with interest at the "fat cattle" which were so successful at Chicago last fall. The "white steer" has gone on famously, making a good gain in weight, keeping all his smoothness, handling a trifle firmer and walking much freer than he did. The young cow is a marvel; weighing nearly 2,500 pounds—the heaviest cow of which we know—yet smooth, firm and active, with a bright, clear look, as if she were not nearly done with her work as yet. Both are better show animals to-day than when at Chicago last November.

There is a creditable white two-year-old, not yet ripe, and a very good white yearling. Two car loads of fat steers were being sent to the station, sold for export at six and three-fourths cents per pound, after having been fed since last fall, when they were bought in at not over four cents. Fed partly for the sake of the farm, in the way of manure, they must have given a good direct profit.

SUNLIGHT IN STABLES.

We tried an experiment, some years since, to test the effect of absence of light upon a calf. We had two deep-red calves of the same age (sixty days), one weighing 180 pounds and the other 182 pounds. The latter we placed in a dark room, with a trough that could be filled by a spout through a partition. The other was confined in the same amount of space, but in full light, and both were fed exactly alike for the next three months. The object was to test the effect of light upon such a growing animal. At the end of the time, the one in the light weighed 430 pounds and the other in the dark 360 pounds; and its color had faded to a very pale, dirty red. Its eyes were so much affected when admitted to the light, that it kept them closed most of the time for the first week or two. The two calves were kept on together, but the one from the dark room never fully recovered from this three months of darkness. It never recovered its bright red color, although the color improved. Any one who noted these two calves, during this experiment, would never after doubt the impolicy of a dark stable. Sunlight is indispensable to healthy vegetable and animal life. Every farmer sees his cat and dog select a belt of sunshine on the floor to lie and bask in; and if he will watch his cattle when turned out, he will find them at once seeking the sunny side of the barn yard. And with all these indications before his eyes, still the farmer keeps his animals in a dark stable much to their discomfort and his pecuniary loss.

We do not, of course, include all farmers in this statement, for a small minority fully understand the importance of sunlight in stables, and make ample provision for its introduction.—*National Live-Stock Journal*.

MR. A. B. ALLAN says:—I have tried all kinds of floors for horse stalls I have heard of, and except concrete, plank is the only one that I can keep dry; and I prefer the latter to the former, for, if it is not absurd to use the expression, it is the most elastic. I have used plank for many years, and I never could discover that it injured my horses in the least.

HAVE you noticed that those calves you have running loose are not doing as well as they ought to? That weak little thing yonder is crowded back and will be food for crows if not attended to. It pays to tie up your calves and feed each by itself as you do your cows. How about the water? Do they have to go forty rods to water and when they do get there, if they get any, have to stand on their heads to drink?

AN illustration of how a small beginning in the raising of good stock grows, if judiciously managed, is afforded in a communication from a correspondent to the *Breeder's Gazette*. In 1876 he bought an eight year old Shorthorn cow with a heifer calf six months old; he has bought two breeding bulls since and sold five, and now has seventeen thorough-breds. Ten of them are females old enough to breed, and the original cow, now fourteen years old, is still a breeder.

CARE OF COWS IN CALF.

Where facilities for separation are at hand, it is doubtless safest to keep the in-calf cows apart from the rest; but, of course, this is not always possible. Separation, however, should not be supposed to insure absolutely the safety of a herd, so as to make inspection unnecessary. In all circumstances, the more carefully a herd is "watched and tended," the smaller are chances of loss from neglected accident or undetected illness.

Even if the non-breeders—that is to say, the cows and heifers intended for breeding, not at the time pregnant—are kept apart from the present breeders, they should be watched, and if not running out with the bull, removed from among their female companions during periods of excitement. Many a sprain, many a strain, and much loss of flesh, from disturbance and from time taken off grazing, might be avoided by watchfulness.

Among the heavy breeding cows, and those not far gone in calf, constant supervision is an important necessity. To catch the first sign of calving, and immediately separate from their fellows those about to cast, is often the only way of preventing the evil from extending to the whole of the breeding female portion of the herd; while the notice and removal of anything likely to cause casting, the immediate application of remedies in the case of minor accidents, attention to slight lameness, and numberless other little details of daily care, go to make the difference, very often, between successful and unsuccessful stock breeding.—*National Live Stock Journal, Chicago.*

METHOD OF FEEDING TO PREVENT COLIC IN HORSES.

The article on this subject in your last number page 162, is in general, an excellent one; but I have known horses which, if fed "with fine meal mixed with twice its bulk of short-cut hay," as there suggested, would still be affected with the colic. "The fibrous hay" does not, in some instances, "completely separate the particles of meal, so as to form a spongy, porous mass," as there stated, as I have experienced, and caution must be used in regard to this. I kept two family horses for a number of years, and when I first obtained them their mess, morning and evening, was Indian meal, mixed half and half with wheat bran, and a pint of oil meal, with at least four times their bulk of short-cut hay, wet up with soft, pure cistern water; in addition to this, whatever long hay, during the night and day, was requisite for them. One of these horses did well with this ration, but the other was soon attacked with colic. I alleviated this with a dose of dissolved Epsom salts poured down the throat from a junk bottle. Still every few days the colic would come on again. I then suspected it must be caused by the wet-up mixture of short-cut hay, meal, etc., and discontinued this, and fed the meal and bran dry by themselves, and long hay only; and although I kept the horse half a dozen years or more after this, it was never again attacked with colic, nor had it any other ailment.

A neighbour of mine had a horse often dangerously attacked with colic. On learning this, I inquired as to its feed, and found it was given a ration night and morning of a mixture as described above. I informed him of my case, and he then changed the feed of his horse as I had done, since which it has escaped colic entirely.

It is dangerous to feed some horses corn in any way, whether on the cob, cracked in a mill, or ground into meal. I have known of occasional deaths from all these, especially among Eastern horses, which are seldom reared on corn alone for their grain, as is so generally practised at the

West and South. There I have seen horses turned out day and night to large fields of corn, to eat all they desired of both stalks and grain, supplementing this, perhaps, with no other feed, not even grass or hay.—*A. B. Allen, in National Live Stock Journal.*

BONE SPAVIN.

Ordinary treatment of spavin consists in rest, cold applications, continued during two or three days, and succeeded by blistering, or the insertion of a seton, or by firing. If firing be resorted to, a blister may be applied immediately thereafter. Subsequently, liberty on pasturage, when in season, or work on soft ground, such as ploughing. In cases where spavin is not of the occult kind, the bony enlargement is not removed by the treatment, and more or less stiffness of the hock-joint will be apt to remain.—*Breeder's Gazette, Chicago.*

A BREEDER of Jersey cattle objects to a demand for the record of the combined yield of a herd, as being a delusion and a snare, and thinks the record of a single animal should be sufficient guarantee of the excellence of its offspring. This latter idea is the delusion and a snare, and is precisely what is casting doubt and uncertainty upon the breeding of Jerseys. A breeder has a certain bull at the head of his herd. This bull gets twenty-five calves from as many cows. Of these calves one becomes a cow having a high record for milk and butter. Is this one animal to be held as a test of the value of the sire, or are the twenty-four animals whose record dare not be published and is kept secret not the better test? One would naturally suppose that if one cow calf only is a good animal out of twenty-five that the chance of the bull getting another good animal would be in the same ratio, and that the credit is probably due to the cow more than the bull. And yet upon these selected records the fabric of Jersey speculation is built up and sustained.

It is a prevalent and well-founded belief that clover hay is not a desirable food for the horses, and that it provokes the common disease known as "heaves." It has been supposed that it is the dust in the hay which produces the disease by irritating the sensitive lining membrane of the bronchial tubes. This supposition is doubtless a mistake. Clover hay is not necessarily dusty, not nearly so much so as timothy cut before it is ripe, in which the immature blossom exists in the form of fine dust, which being partly pollen, has a very irritating effect upon the membranes. And yet we are recommended to feed only timothy hay to horses and keep the clover hay for cows. Now, heaves is a nervous disorder, and does not arise from irritation of the bronchial membranes. This condition of the membranes, with the resulting thickening of them and consequent obstruction of the air passages, produces the disorder known as roaring, or wheezy, noisy respiration, but not the heaving of the flanks, which is the effect of the spasmodic action of the diaphragm, produced by disordered nervous action, and which is known as heaves. It is more probable that the nitrogenous quality of the clover hay is the real cause of the disorder, as food rich in nitrogen stimulates the nervous system, while food rich in starch, as potatoes, for instance, has a very favourable effect upon a horse that is troubled with heaves. Cotton-seed-meal and peas are also highly nitrogenous foods, and these, if their use is persisted in, will cause heaves in a horse in a short time. It is a valuable thing to know wherein and how foods differ in respect to their nitrogenous and carbonaceous character, for much of their value in feeding depends upon this difference.

CATTLE.

The following copied from the preface of the fifth volume of the Canadian Shorthorn Herd Book, will be of interest to many of our readers:

"With the recently demonstrated feasibility of sending highly fed cattle across the Atlantic in steamers that carry them over in a short time and land them in good condition at British seaports, where they can be sold at good prices, to supply the consumers of beef in Great Britain; the demand for animals of large size, early maturity and high feeding qualities, has greatly stimulated the breeders of Shorthorn cattle. The general run of farmers are now becoming more and more impressed with the value of Shorthorn blood to cross upon, and grade up their native stock to a higher standard of excellence. So steady has been the demand for young Shorthorn bulls of late years, that few, if any, breeders have failed to dispose of all they could raise at remunerative prices. So great an improvement does the infusion of Shorthorn blood make on our native stock, by the prepotency of the sire, that it may fairly be claimed that each cross upon a native foundation, adds not less than \$5 each cross to the value of the animal as produced, up to four crosses, and as the cost of transportation across the ocean is the same for a large as a small animal, those who make it a business of shipping cattle to the British market, can, and will, pay a price in proportion to the size, weight, and quality, of the animal they purchase. As a general rule steers with from two to four crosses of Shorthorn blood, are ready to be fed for the butcher at two and a half years' old, and at three, or three and a half years' old will average 1,400 or 1,600 pounds, live weight each, when fed, where a common beast at the same age would scarcely reach more than from 500 to 900 pounds, and will have cost every bit as much to keep and feed. Then the quality of the meat in good Shorthorn grades is so much superior to that of native cattle, that shippers are willing to pay from one to two cents per lb., live weight, extra for them. The demand for such cattle also seems unlimited, so that the future of Shorthorn breeding seems to be very bright, as there is hardly any other breed of cattle that will take their place; they are also an excellent class of cattle for milking purposes as well."

THE EARL OF SOUTHESK'S HERD OF WEST HIGHLANDERS.

For many years the Earl of Southesk has kept a herd of from one hundred to one hundred and fifty West Highland cattle, principally bullocks, in his beautiful and extensive deer park. Few noblemen have done more than Lord Southesk for the breeding of pure cattle in the district. His Lordship for years kept a herd of superior pure bred Herefords, but has now gone back to his favourite "doddies" and by judicious and liberal purchasing he is rapidly coming to the front in the polled class. His Lordship is also taking keen interest in getting up a West Highland herd-book, and is establishing a herd of that breed at Kinnaird. His Lordship has recently purchased several pure-bred cows at a high figure, and a capital pedigreed bull. Two of the cows have this season dropped promising white calves.

SHEEP AND SWINE.

COTSWOLDS.

Tradition says this breed was brought into England from Spain, by the Queen of Henry II., about the year 1154, and there is some support for this, inasmuch as that Spain has long possessed a breed somewhat like the old Cotswolds. But the earliest English history refers to a breed on the Cotswold Hills, celebrated for the length and fineness of their fleece. This range is named from the numerous sheep "cotes" or folds found there from early times; the word "wold" meaning a hill. They run right through Gloucestershire, from north north-east to south and south-west, separating the valleys of the Severn and Thames rivers, and reach heights of 1,000 to 1,100 feet.

These "cotes" were long ranges of buildings of three or four low stories, with gently sloping platforms by which the sheep could easily reach the highest. They saved room, gave good shelter, when needed, and testify to the care and attention paid the breed, in old times. In 1600 their wool was of sufficient national value to have its trade regulated by law, and in the fifteenth century they could only be exported by Royal permission, some being allowed to go to Spain by the favour of Edward IV.

The old Cotswolds were large, hardy, big boned, light fore-quarters but heavy in the hind, flat-sided, and slow fatteners, but with a heavy fleece of long and valuable combing wool. By deep infusion of Leicester blood they have been refined and smoothed, the meat and fleece improved, and quicker fattening power imparted, while the hardiness is not lessened. The improved Cotswold will endure hardships and exposure and suit itself to any soil, it has a large carcass of good meat, matures early, and gives a heavy and valuable fleece of combing wool, in extensive demand for a varied class of goods. Year-olds will often weigh 120 "pounds and over" and full grown 300 to 340. The fleece will average, in a good flock, eight pounds, and often reaches eleven to fifteen and sometimes, single fleeces reach eighteen pounds. It is sometimes nine inches long, and often waved, and is mellow and soft, though coarse.

A pure-bred Cotswold should have white face and legs, though dashes of gray are allowable on both (a trace of the old stock) a hornless head, with thick forelock of wool on forehead. The hind-quarters are square, full and broad, and the thighs heavy and solid, but the fore-quarters and neck are not so square and heavy, nor the bris-ket so full forward as in the best Leicesters. The head is strong, with sometimes a Roman nose, the back straight and broad, ribs well sprung, body round, flanks deep, legs clean, of medium length, and fairly fined boned. They are active, and of attractive appearance; thriving on rather indifferent pasture, the ewes are good mothers, and the lambs hardy and quick. It is a valuable breed for crossing; and has aided the foundation of the Oxford and Shropshire Downs in England, Cotswold, merino in Germany and America; and the Beacon-Downs of New York State. It is also much used in England and America for producing cross-bred market sheep and lambs.

ESSEX PIGS.

This is classed among the "small" breeds and must be perfectly black.

In its early form the head was long and sharp, the ears erect—back, sharp; body long and flat and bare of hair; legs long, though the bone was not large. They were unquiet and great eaters, quick fatteners, and were white, or black and white colour.

Early in this century, Lord Western imported into England, a pair of pure Neapolitan pigs, and crossed them with Essex sows, and also used Berks, and Black Sussex, in his improvement of the breed. He bred out the white colour, made the form good, and established early maturity, little offal and great fattening powers. But by breeding too much from his own stock, they slowly lost size, muscle, constitution and fecundity.

But a tenant of his, the late Fisher Hobbs, of Botted Lodge (then a tenant at Marks Hall on the western estate), had taken the opportunity of using these Neapolitan Essex boars (then highly refined), and used them on large, strong, hardy, black, rough and coarse Essex sows. In due time he founded the "Improved Essex" of to-day, competing against Lord Western by whom the same name for the breed was adopted. At Lord Western's death Mr. Hobbs bought the best of his stock. Their reputation dates from 1840, when a boar and sow of Mr. Hobbs's breeding, each took first prizes at the second show of the Royal Agricultural Society at Cambridge.

They mature early, have excellent flesh, and when aged often reach 500 pounds weight, but are rather delicate. They have an excessive tendency to fatten, which (unless counteracted) often injures the fertility, and renders rearing the young, or keeping the breed pure difficult work. As top crosses they give quality, early maturity, and are especially valuable, crossed thus on a "black" breed.

The Berks, Devons, Dorsets and Oxfords, have all been benefited by Essex blood, the crosses having the great eating powers and good constitutions of the dams with the best points of the sires.

The more an improved pig eats the better, and this point increases in value as the pig is improved for then less is required to supply wastes of the body and more goes to flesh forming.

IMPROVED OXFORDS

combine the best qualities of the Berks and Essex. The old Oxfords were like the old Berks, and the first improvement was made in 1837, by the Duke of Marlborough, by means of two Neapolitan boars imported by him, and presented to Mr. Druce, sr., of Eynsham, and the late Mr. Small bones. These were used on Berk sows (having Chinese blood in some of them), and two families of pure black pigs were formed.

At Mr. Smallbone's death, Mr. Samuel Druce, junior, bought the best of his stock and getting improved Essex boars from his father and from Fisher Hobbs, used them on the sows of the Neapolitan Berkshire cross with capital effect.

The improved Oxfords are fair size, all black; fair quantity of hair, very prolific, good mothers and sucklers, and have been very successful at shows in England. At four months they weigh sixty to ninety pounds, and at nine or ten months easily ran to 400 pounds.

SUMMER MANAGEMENT OF SHEEP.

During the hurry and rush of the general farm work the sheep must not be neglected. And while one can not give general directions to apply to a particular case, yet a few general observations will be of practical benefit.

Sheep should not be too closely confined, nor kept all summer on the same range, unless it is large. A few head of cattle with each bunch of sheep will help in two ways. The cattle will eat the large, coarse grass, and they will very materially help to keep off all dogs. Do not fail to put on at least one good-sized sheep-bell to every ten sheep, and then kill every dog, large and small, that comes around your farm. Don't bury the dogs, but bury the carcass of any sheep or lamb.

Look after the lame sheep. This wet summer, with high grass, or what is worse—sheds, is very

apt to give you more or less trouble with lameness. Pare the hoof carefully, half is in paring, and apply pulverized blue vitriol, one pound; red lead, one pound; nitric acid, eight ounces; adding cider-vinegar until a paste is formed, and apply. Turn your sheep in your stubble fields, as they do splendid there if not left on after the feed is gone.

Grub in the head is caused by the striped gad-fly (*Oestrus vis*) depositing its egg in the nostrils of the sheep during July and August, which hatches in a few days and crawls up into the head of the sheep, and there generally does no harm, though sometimes when it comes in contact with the brain death ensues.

Study the situation. This can be done with great profit to the shepherd. As a preventive put tar on the nose of each sheep and lamb, and you will obviate much anxiety and some real trouble.

The poet says, "Man wants but little here below, nor wants that little long," and if you do not adopt this motto in your notions for caring for your sheep, do not blame any one but yourself if you fail, or if the sheep die with grub, dogs, cholera, or the dozen other enemies of the sheep. Once upon a time a gentleman said to me, "Look well to the last," and now we say to the general reader, "Look well to your flocks."—*Practical Shepherd, in Pittsburgh Stockman.*

SELECTING BREEDING SWINE.

There is not usually sufficient care exercised in selecting the brood sows, and very little attention is given the choice of a boar. The simple fact that the latter known as a Berkshire, or an Essex, is often a good recommendation to the average farmer, but every farmer or breeder of stock should be able to judge for himself as to whether the boar is worthy or not of patronage. For the farm the pure breeds are not so well adapted as crosses of them with good coarse sows. The sow should be strong, long, and with every indication of being able to nurse and supply her pigs. If she is healthy, a good feeder, and has previously been a good mother, good pigs may be secured if the boar possesses the qualities necessary for improvement. A thoroughbred boar, of any pure breed, should be fine in the bone, as this indicates smaller proportion of offal. He should be dished face, with no appearance of length in the head. The jowls should be prominent, the face broad, and the eyes expressive of a quiet temper. The body should be long and the hams well developed, while the legs should be short and wide apart. Above all things beware of a boar that possesses a back full of bristles. This characteristic has been bred away from all our best animals, and the hair should be soft and fine for a hog. Such a boar will sire good pigs from all classes of sows, and they will be hardier and better for the farmer than either of the parents, but as we have stated, the boar must be a good one, even if he be a thoroughbred.

EFFECT OF MUSIC ON SHEEP.

The following pleasing anecdote of the power of music is related by the celebrated Haydn:—

"In my early youth," says he, "I went, with some other young people, equally devoid of care, one morning during the extreme heat of summer, to seek for coolness and fresh air on one of the lofty mountains which surround the Lago Maggiore in Lombardy. Having reached the middle of the ascent by daybreak, we stopped to contemplate the Borromean Isles, which were displayed under our feet in the middle of the lake, when we were surrounded by a large flock of sheep, which were leaving their fold to go to pasture.

"One of our party, who was no bad performer on the flute, and who always carried the instrument with him, took it out of his pocket. 'I am going,' said he, 'to turn Corydon; let us see whether Vigil's sheep will recognize their pastor.' He began to play. The sheep and goats, which were following one another towards the mountain with their heads hanging down, raised them at the first sound of the flute, and all, with a general and hasty movement, turned to the side from whence the agreeable noise proceeded. They gradually flocked round the musician, and listened with motionless attention. He ceased playing, and the sheep did not stir.

"The shepherd with his staff now obliged them to move on; but no sooner did the fluter begin again than his innocent auditors again returned to him. The shepherd, out of patience, pelted them with clods of earth; but not one of them would move. The fluter played with additional skill; the shepherd fell into a passion, whistled, scolded, and pelted the poor creatures with stones. Such as were hit by them began to march, but the others still refused to stir. At last the shepherd was forced to entreat our Orpheus to stop his magic sounds; the sheep then moved off, but continued to stop at a distance as often as our friend resumed the agreeable instrument.

"The tune he played was nothing more than a favourite air at that time in Milan. We were delighted with our adventure; we reasoned upon it the whole day, and concluded that physical pleasure is the basis of all interest in music."—*From "Anecdotes of Natural History." By the Rev. F. O. Morris, B.A.*

CLOVER FOR HOGS.

Several stockmen gave their experience at the Breeders' Convention to the effect that actual trial with the scales showed that one acre of clover would make two pounds of pork to one of beef. Some of them fed corn at the same time and deducted ten pounds of pork for every bushel of corn fed and credited the balance to the pasture, with the same result. It was urged that hogs should run one month, at least, with no grain, even if they made no increase of weight during that time, as it puts the system in the best possible condition to commence fattening with corn.—*E. C. Bennett.*

SHEEP.

It seems to us if farmers would turn their attention more to sheep growing they would enrich their land with greater ease and keep it up with less expense, so that they could raise better crops and keep their land free from weeds, than they can by raising any other kind of stock. The first cost is so little, to get started in the business, and it is so pleasant and profitable that we often wonder that more farmers do not go into raising a flock of sheep. In conversation with a well-to-do farmer, some time ago upon the subject, he said there was lots of money in feeding and fattening sheep for the Chicago market, and that he had followed it some years and with good results. He said he fed a lot last winter and for every bushel of corn fed his sheep he realized a dollar. He is feeding a large lot again this winter. We believe if there were fewer dogs raised and more sheep it would be better for the country. But there is no hope for the sheep industry, in this country, so long as people would rather raise worthless curs and be taxed for them and not grumble, than to raise sheep that will bring in a good return (we have often wondered why it was so, but you might just as well kick a man as to kick his dog). But

we hope the time will come, and that speedily, when we will see a nice flock of sheep on every farm, when they will be protected from the dogs, and that too by public sentiment.

Don't let the butcher coax away the best ewe lamb.

If the buck lambs are castrated now they will do better and save trouble in the fall.

EARLY pork sells the best. A bushel of corn will make as much pork now as three in cold weather.

LAMBS can be safely weaned and separated from their mothers at four months, and should not be allowed to subsist upon the ewes longer than five months, as they cannot thrive best while raising lambs.

BEGIN while the pigs are small to feed them raw food and they will soon eat anything raw as well as cooked. Keep them growing through the hot weather with grass and weeds till the sweet corn gets large enough to cut for them. With plenty of green food a little meal will count for all it is worth.

ONE cause of the deterioration of swine is that sows are allowed to breed too early. If a sow has her first pigs at fifteen months it is early enough. Then if a good mother and good milker she should be kept as a breeder till four, five, or even six years old. Her pigs will steadily increase in value, and the litters will also be larger than the first one.

So soon as the sheep are shorn, the ticks which have found a hiding place in the thick wool betake themselves to the earliest and best lambs, whose wool affords the best protection. Dipping the lambs in water where tobacco stems have been steeped, will greatly relieve the lambs and prevent the flock going downhill road on the approach of winter.

THE whole county of Laprairie, in the Province of Quebec, has been quarantined because of a disease in the sheep; and an order passed by the Governor-in-Council has directed the slaughtering of all the animals infected. This has caused great consternation among the farmers, as the Government pays only one-third of the value of the animals so slaughtered.

No matter how sloppy the food given to pigs, they should have daily a good supply of clean, fresh water. This is especially needed in Summer for pigs kept in pens and with little green food. But there is scarcely a place where pigs can be kept where more or less green food cannot be had as part of their daily ration. Weeds from the garden are excellent, especially the pigweed and purslane, both of which are very nutritious.

Will there ever be less wool or mutton wanted per capita than now? No. Is the wool and mutton product keeping pace with the increase of population? It is not. Will sheep and wool, therefore, be less remunerative in the years to come than now? Certainly not. As the inhabitants of a country increase, meat prices increase, the masses seek the cheaper kinds. Mutton is one of the cheapest. Hence, as population increases, it must be in other countries adapted to sheep as in England, that the popular taste will incline that way. It is so in all the thickly settled districts of Europe; it is becoming more so from decade to decade in the United States. The use of wool will certainly not decline. It is becoming more and more sought year by year. Hence, those who earliest pay attention to those breeds of sheep adapted to their localities, in connection with their stock, will earliest reap the full reward of their endeavours.—*Colorado Live Stock Record.*

CREAM

To render yourself agreeable is nothing. Pick-pockets are the best talkers in the world.

When lovers quarrel, what presents made on either side are not returned? The kisses.

Joy is our duty, glory, health,
The sunshine of the soul. —Young.

What is it that makes girls so attractive? It is the money their fathers are supposed to have.

EMOTIONAL sanity has never yet caused a victim to put his hand in his pocket and pay an outlawed debt.

The average girl with a big hat loaded with flowers and feathers seems to be all head until you talk to her.

"BETTER behave yourself," said a turnip to the potato, "or some one will come along and take the starch out of you."

It is said that when a monkey looks into a mirror he immediately goes and peeps behind it. He evidently wants to kick himself for being so ugly.

You will observe this, the devil never offers to go into partnership with a bizzzy man, but you will often see him offer to jine the lazy, and furnish all the capital besides.

As dauntless as a lion,
Submissive as a lamb,
As cheerful as the sunshine,
Composed as evening's calm,
As joyous as the skylark
When up to heaven it flies—
'Tis thus the good man crosses
The river to the skies.

—W. De Witt Wallace

The loafer lies about, the world "owing him a living." The world owes him nothing but a very rough coffin, and a retired and otherwise useless place to put it in.—*J. G. Holland.*

OFFICER to timid soldier—"Why, Pat, you are surely not going to turn coward?" Pat—"Why, sure, I'd rather be a coward for five minutes than a corpse for the rest of my loife."

The young woman who bites her fingernails and kisses her pug dog on the nose, would fall in a stony faint at seeing her father nip a piece off the butter lump with his own knife.

Lead thy mother tenderly,
Down life's steep decline;
Once her arm was thy support,
Now she leans on thine.
See upon her loving face
Those deep lines of care;
Think—it was her toil for thee
Left that record there.

When Sir Walter Scott was at school, a boy in the same class was asked by the "dominie" what part of speech "with" was. "A noun, sir," said the boy. "You young blockhead," said the padagogue, "what example can you give of such a thing?" "I can tell you, sir," interrupted Scott. "You know there is a verse in the Bible which says. 'They bound Samson with withs.'"

Two village worthies met on the street one day. "Jamie," says the richer of the two, "are ye never gaun to pay me that account? I'm ill off for siller the noo." "Oh," says Jamie, "I have na seen ye this long time. Could ye cheenge a twenty-pound note?" "Ay could I," says the laird, drawing out his pocket-book. "Ah weel," says Jamie, "you're no needin' siller then," and walked on. Payment indefinitely postponed.

MINISTER, softly—"I hope I see you keeping well, John. I hope—" John, heartily—"Thank ye fur speerin', minister! I hae little tao compleen o' but the rheumatism in ma left leg." Minister earnestly—"Just that, John! Now look at the matter seriously. You are growing old. See what old age brings. I hope—" John shortly—"Auld age? Hoots awa! Ma weel leg's as auld's ma game yin, an' it disna compleen!"

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TORONTO, AUGUST, 1884.

ABOUT THE CROPS.

Good accounts of the crops come from nearly all parts of the Province. In the northern and north-eastern districts the June drouth had a bad effect on hay and some of the grain crops, but even in these districts great improvement took place throughout the whole of July. Elsewhere the hay is about as heavy as last year, and it has been secured in excellent condition. The rain showers came at intervals of a few days, just sufficient to promote healthy vegetation but not so as to do injury worthy of mention to the mown hay. The fact is that with the improved implements of husbandry now in the hands of farmers it is only the work of a few hours to cut and gather a crop, and being spread evenly over the ground it is so quickly cured that what is mown to-day may with perfect safety be housed to-morrow. The fall wheat crop is also a remarkably good one, considering its somewhat unpromising appearance in the early part of the season. With the cool and bright weather of July there was only a moderate growth of straw, and standing well, the grain was given the best possible chance for filling out and maturing. As a consequence we have this year a plump bright berry that offers a most cheering contrast to last year's sample. In some of the western countries the plant was injured to a considerable extent by winter exposure, but even where the greatest harm was done, accounts say that a surprising improvement took place during the three or four weeks which preceded the harvest. The same weather was equally favourable to spring wheat, oats, barley and peas, and altogether the prospect is excellent for a golden harvest. With prices fairly good this year the farmers of Ontario will be several millions of dollars better off than they were last year, and everybody is hopeful that the depression which was threatening to overtake trade will be in a great measure averted. The farmers are in good heart, and the success of every other department of industry is largely dependent upon theirs.

THE ENGLISH SPARROW.

We do not seem to be exactly sure in this country whether the English sparrow is a useful bird or a nuisance, but opinion seems to be gradually forming in support of the latter idea. One would suppose that the nature and habits of the sparrow should be well-known in England, but even there it is yet a subject of investigation. Miss Omerod, the entomologist of the Royal Agricultural Society, has recently requested her correspondents to report on insect-eating birds, and here is what a Lincolnshire man has to say of the sparrows:—"As seen following the plough, they were found to be feeding upon turnip seed that had not vegetated; seen upon the young barley, they were found to be eating red clover and frefoil seed; examined to find what they were doing in a Swede turnip field, just bursting into bloom for seed, it was discovered they were feeding on the young unopened buds." So far in this country the sparrows have taken up their abode in the towns, but as they become more numerous they will doubtless spread into the rural sections. If they are a nuisance the sooner the fact is auth-

oritatively determined the better, so that means may be taken for their extermination. This may be accomplished while the birds remain in town, especially if bird-nesting is liberally encouraged; but let them get thoroughly established in the country and we might as well undertake to exterminate mosquitoes.

THE SALE OF PARIS GREEN.

Complaints have often been made during the last two or three years, and they are sometimes heard yet, that farmers are unable to get supplies of Paris green excepting from the druggists, and there are many localities in which the nearest drug-store is miles away. Formerly every store-keeper or grocer in the country might sell this as valuable insecticide, and owing to its general use in destroying the potato bug it was a great convenience to farmers that they could procure it at the nearest store. But it happened that a number of persons, either intentionally or ignorantly, made use of the poison to their own destruction, and the Pharmacy Council of the Province took advantage of the statute to limit the sale to licensed druggists only. Their motive was doubtless a good one, for, being an arsenical compound, it is just as important that precaution should be taken in the case of Paris green as in that of any other poison. But it is so generally used, and its poisonous properties are now so generally understood, that the strict provisions of the Pharmacy Act may be safely relaxed. Accordingly, in the amended Act passed by the Local Legislature last session, a proviso is contained which enables any merchant to sell Paris green or London purple subject to the general regulations for the sale of poisons by druggists. The drug must be put up in well-secured packages distinctively labelled with the name and address of the seller and marked "poison," and a record of every sale must be kept for reference in case of need, according to a form set forth in a schedule to the Act. This proviso will doubtless answer the purpose for which it was intended, and the farming community will be enabled to procure their supply in the way most convenient for them. It is likely, too, that they will be enabled to procure it at a cheaper rate, the druggists no longer having a monopoly of it.

BRANNY FOOD.

The advocates of brown bread are not greatly encouraged by scientific demonstrations, and the manufacturers of specially prepared food from wheat must revise their theories. It has hitherto been affirmed on good scientific authority that the gluten was found only in the cortical cells of the grain, and that the body of it was composed almost wholly of starch. But a Philadelphia microscopist, Dr. N. A. Randolph, has recently demonstrated that the gluten pervades the whole body of the grain,—that, in fact, it forms a sort of net or cell-work in which the starch grains are inclosed, and is thus to be found in considerable quantities in the ordinary flour. By dissolving out the starch grains of the wheat Dr. Randolph found a network of gluten remaining which occupied the whole interior from centre to circumference, and composed of the same nitrogenous element as the external covering. Although but a very recent discovery, this is after all only what the scientists might have regarded as the natural construction of the grain. But Dr. Randolph has pushed his experiments farther, and he has discovered that the dense cellulose walls which enclose the gluten in the outer covering, and which make up the chief parts of the branny foods, are incapable of serving as food for man. The substance of these cells, after the most care-

ful cooking, did not yield in any degree to the influence of the digestive juices; and even immersion in strong nitric acid for several days had no effect upon it. It may therefore be concluded that the man who tries to live on branny bread, pure and simple, is not much better off than the unfortunate prodigal son of the parable who fed on the husks that the swine did eat. For the hard-working farmer especially, bran-bread is a sorry substitute for a meal.

THE COST OF DOGS.

There are about 360,000 householders in Ontario, and it is safe to assume that there is an average of one dog to each householder. What does it cost to keep them, and are they really worth their cost? A dollar per month is a low estimate, but even at this figure the grand aggregate is \$4,320,000 a year. It is a very large sum, and the bulk of it is wasted. The only use of the great majority of dogs is—as farmers very often express it—to "keep bread from moulding," and a pig or a few chickens are equally useful for this purpose. But it is not merely that the great majority of dogs are useless; they do a vast amount of mischief for which no reparation is possible. Dogs are the one great enemy of the sheep industry, and many farmers in this country have been so discouraged by losses to their flocks that they have abandoned sheep-breeding altogether. Our laws are fairly good as far as compensation for loss is concerned, for if it is not possible to trace the sheep-killing dog to his owner, the municipality is responsible for a two-thirds valuation. But under any circumstance it is a dead loss, whether damages are recovered from the owner of the dog or from the municipality; while the owner of the sheep loses in a variety of ways, the least not being from the effects of the "scare" which the surviving members of his flock have received. In the interest of sheep-farming we think it is exceedingly desirable that the dog nuisance should be abated, and if it can't be done in any better way the annual tax should be doubled, or trebled if need be.

THE MILLING BUSINESS.

The statistician of the New York Produce Exchange says that, previous to the new process in milling, a barrel of flour, 196 pounds, was reckoned as equal to five bushels of wheat. The new process takes an average of four and a half bushels of wheat to a barrel, and the Produce Exchange made that the standard in 1879. A large majority of mills, however, still make flour by the old process, and the best flour made by it takes five and a half to six bushels of wheat; but the quantity of grain required depends on its quality, as well as on the grade of flour to be made. The advantage of the new process offers one explanation of the serious loss which has overtaken the business of merchants milling in this Province within the past three or four years; but the fact is undisputed that there is very little profit in milling at the present time under either process. It is unfortunately the case that the great majority of our millers are carrying on business at a loss, and in consequence they are discouraged in the effort to maintain local markets.

It is a noted fact, established by experience that fowls produce eggs in an inverse ratio to the number kept, which militates against keeping fowl on a large scale. Where there are so many together, various causes lower the vitality and cause a falling off of egg products.

WALKS AND TALKS AMONG THE FARMERS.—III.

"I am afraid the Canada thistle is gaining upon us," I remarked to an intelligent old farmer the other day. "It is master of the situation," was his reply. Another, with whom I lately talked on the subject said, the thistles never beat him until last season. He could always bind his own grain without mits before then. He had fought them very perseveringly, and thought if his neighbours had only been as determined as himself, they might have been exterminated from the neighbourhood. But they went to seed on adjacent farms, and his was constantly being re-sown. I have watched this man the present summer with much admiration, as I have seen him waging the unequal war, at the head of a brigade of children, his own, for, happy man, he has a quiver full of them. He and his little army spread themselves across the grain-fields, each soldier armed with a spud wherewith to transfix the hateful weed. Of course, the thistles would start again, but the grain would be so far ahead that they would only make a feeble growth before harvest.

This task of thistle-killing, is a serious item in the labour of running a farm. "I should consider farming mere play, but for the thistles," was the exclamation of a neighbour not long since. This pesky weed is "master of the situation," in the sense that it dictates the whole system of management in many cases. One field must be summer-fallowed to get rid of them. Another must be prepared for turnips for the same reason. A third would grow a good grain crop, but it will be half thistles. That pasture must be broken up, it is so infested with thistles. Thus Mr. Thistle installs himself manager of the farm, and asks, like Boss Tweed, "Well, what are you going to do about it?"

It's a very knotty question. The railroads and highways are extensive nurseries of the pest. Mr. Stirton's Anti-thistle law, though a wisely conceived piece of legislation, is a dead letter. To carry it out, would ruin one-half the farmers in the country. Very few pathmasters attend to the duty in this case "made and provided." I drove a few miles yesterday, and came to a locality where, for a couple of miles, the pathmaster had set a man to mow the thistles down. The larger ones had fallen victims to the devouring scythe, but there were enough dwarfs left to propagate the species indefinitely. It needs both scythe and spud to do the work effectually, and what an undertaking this is, along all the miles of highway where this nuisance has got a foothold! The fence corners are full of them, and mowing fence corners would try the patience of Job, especially when they are full of stones as they too often are.

Must we give up the struggle? If we do, our agriculture will be ruined. The only course is to fight it out on this line if it takes all summer. And it will require several summers, for the enemy has gained many a march upon us, and entrenched itself all over the country. Every field has become a camping-ground and a field of battle. It has taken possession of our best lands. In fact, the goodness of a soil may now be judged by the size of the thistle growths. That old farmer was not far astray who, in search of a farm to buy, hunted for one where the thistles were strong enough to hitch his horse to! This, like some others, is an improving crop. Its long spreading roots run everywhere in search of plant food, and bring it to the surface. The leaves attract and absorb ammonia from the air. The crop gets heavier every year, and if you can only convert it into manure, it is a good one.

Thoroughly to exterminate the thistles, will

cause a revolution in our style of farming. We must quit making little collections of stones in the fence corners. The fences themselves must be straightened out, or, better still, abolished. Instead of hummocky pastures, we must get them level enough to run a mowing machine over them, with a close cut. We must cultivate less land, and do it better. Soiling must be resorted to. Last, but not least, we must grow more clover. Thereon hangs a tale.

Few are aware to what an extent clover may be made a useful ally in exterminating thistles. Indeed, there is a strange ignorance among farmers as to the habits of clover, and its value, rightly treated, as a soil-renovator, and as a weed-killer. First of all, it is, properly speaking, a biennial plant, that is, it requires two seasons in which to mature. Then it dies, having re-seeded the ground with the ripe heads of the second growth. This fact largely explains the winter-killing of clover. The two-year-old plants are dead and gone anyhow. They are heaved out because their roots have no longer any hold in the ground. The young plants of the previous fall seeding have not much hold of the soil either. So they heave out, and often look in the spring as if they had been pulled out with a rake. The clover sown with a grain crop the previous season often heaves out too, because it has made only a spindling growth, having been half smothered by the grain under the shadow of which it has been vainly trying to flourish.

To get the best results from clover, it should be sown alone, very early in the spring, on ground fully prepared even to harrowing, the previous fall. Sown on the last light April snow fall, as in the case of fall wheat, it starts with the first germinating weather, and makes a good growth the first season. Now comes the high virtue of clover as a thistle and general weed-killer. Run the mower over the field at the proper time for making the greatest havoc among the thistles. That is, of course, just before or just as they come into bloom. You will mow down much of the young clover too, but that will not hurt it. It will recover quicker than the thistles and outrun them in the race of the summer. Later on you will get a light crop of clover hay. Repeat these operations next year, and goodbye to Mr. Thistle! You will get a cutting of clover hay, a second cutting of clover for seed in the fall, and the land will be as well fertilized with the old clover roots and dead leaves, as though the dressing of ten or a dozen loads of barnyard manure had been spread over it.

Romance? Yes, but not fiction. "Romantic," says the dictionary, "characterized by novelty, strangeness, or variety." It is all that, but it is more, it is *true*. If you doubt, all I have to say is, *try it*. Is not this a far cheaper and easier method of killing thistles than summer-fallowing? But is it equally effectual? If you doubt, again I say, *try it*.

"Clover doesn't make good hay," says one. "It does," I reply, "if you make it right." How comes it that so much clover hay is grown in the old country where the climate is more moist and the summer more showery than here? Because the farmers there know better how to heat it. What spoils our clover is that we dry instead of curing it. We grow it with timothy, crumble up and make dusty, fusty hay. Timothy and clover, though a common mix, are a bad mix. They are "married not mated." Their time of ripening is different. If you cut to suit the clover, the timothy suffers. If you mow when the timothy is fit, the clover is worthless. Orchard grass and clover go well together because their season is the same, but timothy and clover should be grown apart. It would give more breathing time in haying, if clover were grown by itself, and timothy by itself. The clover could be cut and got in before the timothy is ready for the scythe.

Clover should be *cured*. So soon as the external moisture has evaporated after mowing; it should be put into cocks. There it undergoes a sort of sweating process which permeates the heap with delicious aroma and makes it the most attractive of all hay to stock. Thus treated, it will never give a horse the heaves, while its nutritive qualities are equal to those of any hay that can be put into the manger. But this "walk and talk" have gone far enough. More anon. W. F. C.

CANADA SHORTHORN HERD-BOOK.

Below we give a list of transfers of thoroughbreds reported up to June 23rd, 1884. In the following list the person first named is the seller and the second the buyer.

H. Jessie (Vol. 9), by Young Harry [12108]—Jas. F. Hammond, Wellesley; Henry Hostatler, Wellesley.

B. Cecil's Victor [12113], by Scarlet Velvet [7838]—Jos. S. Thompson, Whitby; Davin Curtis, Peterboro.

H. Princess Alexandra 2nd (Vol. 9), by Lord [10430],—Wm. Elrick, Hillsdale, Geo. Elrick, Fergusonville.

C. Princess Louise (Vol. 9), by Frontenac Lad [5261],—T. C. Stark, Gananoque; Jos. C. Haig, Gananoque.

Nelson [10170]—The late Henry Collins, Peterboro'; Wm. Clough, Burnbrae.

B. 7th Duke of Kent [12119] by (imp.) Baron Berkeley [9669], 22010, (86153),—F. W. Stone, Guelph; Wm. Grant, Dumblane.

B. Floss Hero [12122], by Royal Butterfly B. Meadow Vale [12137] by Rosy Prince 4th [9280],—John Ormiston, Owen Sound; Wm. Dowkes, Owen Sound.

B. Sambo [12148], by Earl of Airdrie [5153],—James Cameron, Cataract; John Cameron, Norval.

B. Humphrey [12142], by Young Bismarck [10629],—James Cameron, Cataract; John Cameron, Orangeville.

B. Paddy [12141], by Young Bismarck [10629],—James Cameron, Cataract; J. Lamont, Caledon.

B. Dufferin [12175], by (imp.) Roderick [11789],—Wm. Jestin & Sons, Streetsville; Arch. Cairns, Flesherton.

C. Lily White (Vol. 9), by Contender [4839],—Wm. H. Davis, Crown Hill; Wm. Elrick, Hillsdale.

B. Lord Selkirk [12159], by Edward Hanlan [7046],—Mrs. G. S. Davis, Stonewall, Man.; Alex. Matheson, Stonewall, Man.

B. Silk Velvet [12139], by High Sherriff [7180],—Thomas Boak, Oakville; Jaques Fox, Gloucester.

B. Duke of Malden [12138], by Silk Velvet [12139],—Wm. Squires, Amherstburg; Wm. Squires, Malden.

C. Niagara Strawberry (Vol. 9), by Roderigo [8208],—George W. Miller, Homer Hugh Mitchell, Southend.

C. Maid of the Mist (Vol. 9), by Commodore [8255],—Hugh Mitchell, Southend; Joseph Pearce, Tryconnell.

B. 8th Duke of Winfield [12151], by 4th Duke of Winfield [9922],—John K. Martin, Cayuga; And. Armour, Dunnville.

C. Telluria 16th (Vol. 9), by Barrington J. 2nd, [10781],—F. W. Stone, Guelph; John Meyer, Kossuth.

B. Derby Duke [12152], by Osborne [11491],—John Douglas, Tara; W. & G. G. Mitchell, Tara.

C. Maggie (Vol. 9), by Ottawa Chief [5803],—R. P. Mitchell, Mount Sherwood; John Clark, sr., Ottawa.

B. Young What's Wanted [12163], by Abe [6560],—John B. Carpenter, Simcoe; Samuel Porter, Mount Vernon.

B. Alpha [12162], by Abe [6560],—John B. Carpenter, Simcoe; L. J. Colver and G. F. Travis, Bloomsburg.

H. Lass of Green Burn (Vol. 9), by Lord Caradale [10145],—Smith & Mitchell, Birtle, N. W. T.; Alex. Preston, Birtle, N. W. T.

B. Hercules [12165], by Don Alfonso [4921],—W. T. Benson, Cardinal; C. M. Simpson, Almonte.

BEES AND POULTRY.

FIRST STEPS.

Very few make the industry their only one. The majority keep them in addition to some other business. The former require special preparation by reading and practise, to reach best success, but the majority do not need such grounding. When ready the first thing will be choice of site, which should be within good honey supplies, and not near large bodies of water, ponds, etc.—returning heavy-laden, bees often drop into the water and are chilled to death. Shelter the hives from high and cold winds, if not by trees, then by a board fence, and when thus sheltered face the hives south or east.

The hives should be near the house where they may be always and readily in sight, and quickly reached in swarming, etc. They should not be too near the roads, and should be in as retired a place as possible, and safe from intrusion of animals, etc. The hives should not stand closer together than ten feet, then queens will not be so easily lost, and the bee-keeper has more room to work. Let the hives stand level, about three inches from the ground, and clear the space about them and cover with white sand, gravel, sawdust, etc. When high stands are used many bees are lost by missing the entrance and perish on the ground.

Buy your bees in spring, and get them in movable comb hive if possible, they costing about \$8 to \$10 for bees and hives. The "movable comb" hive was invented by Rev. L. L. Langstrath in 1850, and another form of it by the great German bee-keeper, Dzierzon.

This hive created a revolution in bee-culture, the chief points being these:

Each comb is put into a frame (itself movable), instead of being fastened to the sides and top of the hive, and the hives are in such form that you can examine the combs or bees at any time without trouble.

You can take out the frames at any time, and remove them to other hives, or extract the honey, and replace them for refilling. You can see how much honey is in store, the strength of the colony, and can increase or lessen it and can even regulate what number shall be raised.

You can prevent swarming, or rather can make swarms at your leisure and pleasure simply by dividing the colonies. And you can also detect the presence of any enemies, such as math-worm, fowl-brood, etc.

But you must not think that all that is necessary is to get one of these improved hives, full of good bees and, without further intelligent care, that honey will flow into a ripe shower of dollars.

LOST QUEENS.

This often happens when the queen flies to meet the drone, and the day after the bees will be seen greatly excited, flying and running about outside the hives, and from one to another. Some will go to other hives, but towards mid-day the rush cools down, only to reappear next morning in a fainter form, and it stops after the third day, the bees returning to their usual work of bringing in stores.

Sometimes a hive will contain two queens, at the same time, for weeks and months, although the rule is that only one reigns at a time.

COCHINS.

This breed has attracted more attention and brought higher prices for a longer time than any other, but its chief glory has passed.

It was the chief cause of the famous "poultry mania" that swept England and America nearly forty years ago—one of the most remarkable "crazes" of modern days.

For a single bird \$500 was often paid, or for a

pen of them, and an interest in poultry-keeping was excited that has steadily increased.

They were the first of the kind ever seen there (in 1847), and some peculiar merits were claimed for them among their true ones.

When the reaction took place people went to the opposite extreme and abused the breed unjustly, for they have many good points, which the present generation is cultivating with profit.

The varieties of Cochins are "White," "Buff," and "Partridge." The less common are "Black," "Grouse," "American" and "Cuckoo," all being named from colour.

The "Black" is difficult to keep colour unstained. The "Cuckoo" results from a cross with the "Gueldres," and the "Grouse" is simply a dark partridge. Their general form and appearance are the same—full, deep, and wide. The breast should be broad and full—neck very short, back short and very broad, and legs short and wide apart.

The cock should weigh ten or eleven pounds, and a good one thirteen pounds, hens eight to ten pounds.

The legs are heavily feathered to the toes and thighs well covered with downy feathers or "fluff" and when this and the other feathering is fine the birds are well bred.

The legs are yellow with sometimes a tinge of red, but white or green legs are not advisable.

The breast is smallish and neat—comb medium size, neat, straight and evenly cut, must not be notched or twisted if for show pen.

The ear-lobes pure red, without any white. The tail of the cock is small, but larger than the hens which is very small, and neither should stand very erect or stiff. The hens being nearly covered by the plentiful "saddle feathers."

The wings, in both, are very small and closely folded neatly to the body, and the saddle feathers form a cushion on the hind part of the back. The whole appearance is noble and striking.

The "White," must be pure in colour without a feather of any other colour.

The "Buff" varies in shade of colour, but the birds in a pen should agree, and a little black may occur in the tails of cock and hen without harm. The hackles, back, saddle hackles, and wing coverts of the "Buff" cock are of a rich gold colour. If the neck hackle is pencilled with black it is a bad fault, but a necklace not clouded is not a serious blemish.

The chickens of this variety usually come lighter in colour than the old birds, and the latter get a little lighter colour also after each moult, and this requires the breeding birds to be kept a couple of shades darker.

The "Partridge" hen's neck hackles are striped with black or bright gold, the body is light brown colour with very dark brown markings.

The cock's hackles and saddle, bright red, black stripe—back dark red, wings same colour, with a clear crossbar of green black—breast and under body black, but not mottled.

The Cochins are very hardy—thrive under very unfavourable circumstances, and grow fast, though they feather slowly. They bear confinement well; are quiet, and domestic, peaceable and easily made pets. They cannot fly over a two feet fence; the hens make the best of sitters and mothers, and are good layers, especially in winter.

The flesh is not as good as some other breeds, though pretty fair when young; the hens are also apt to get too fat for good layers, and every couple of dozen eggs they lay want to "set," which is awkward when eggs are wanted, but a blessing if chickens are in demand.

Cochins are subject to a disease called "White Comb," a powdery eruption on comb and wattles, if not prevented, spreading all over the body, the feathers falling off. This arises from dirt and

want of green food, and the remedy is plenty of the latter, and a few purges of six grains of jalap at intervals of two or three days; the comb, etc., being dressed with an ointment of four parts coconut oil, two oz. powdered turmeric, and one of sulphur.

The Cochin cannot be called a good market fowl (unless crossed with say Dorking or Creve-cœur), nor where eggs are the sole want is this breed advisable.

SUNFLOWER SEED.

A subscriber writes us to learn if sunflower seed is good for poultry: We have used it with good success this year, and find it gives the plumage of our birds a glossy and smooth appearance. At first, our fowls would not eat them, not seeming to distinguish them from sticks or stones, but in a short time they learned to open the shells, and devour the kernels as though they had not been fed, while corn and other grains were scattered on the ground. Their change was soon noticeable; and we would advise all breeders to feed sunflower seed; it is not necessary to use a large quantity; we feed a small quantity once a day, and find it sufficient. We think the amusement of breaking the shells will turn out just the thing when our birds are cooped up this winter, as it will divert their attention from egg-eating, feather-plucking and similar mischief.—*Fanciers' Exchange Bulletin.*

HANDLING BEES.

After we have procured our stock of bees, it is essential to know how to handle them, be they Italian, black or hybrid. To the practical hand it is no task to open a hive and "go through" it, as the bee-men say. But to the novice it looks like a great undertaking to open a hive with its thousands of stingers that seem each and every one of them ready to pass out and plant themselves where they will do the most good. Now, the secret is this: Bees when filled with honey are not inclined to sting unless they are squeezed. To cause them to fill themselves with honey it is only necessary to frighten them and they will rush to save their most valuable property. Closing the entrance and rapping upon the side of the hive a few times, or blowing smoke into the entrance or down among them from the top will make them load up and be docile. But the actions of the person have much to do with it also; it almost seems as though bees know a person who is afraid of them. In going to a hive and opening it make slow, deliberate motions, and keep your hands away from your face, unless put there slowly. I have known many persons to be stung by quickly throwing their hands up to their face when an angry bee came around, the bee taking it as a challenge to fight. First, get a good bellows-smoker to begin with, fire it up with dry, rotten wood; approach the hive from the side to be out of the way of the flying bees, and give one or two strong puffs at the entrance. Wait a minute or two for this to have effect, then move the cap with as little jar as possible, remove the quilt or honey board as carefully, blowing a little smoke as you do so, and give the bees a little time to fill themselves with honey. The little fellows will be seen with their heads stuck in the cells, lapping away for dear life.

Now, make slow motions, pry the frames over with as little jar as can be, and while looking at the combs keep the breath from striking the bees too much, or you will think you have been struck with a hot poker. Patience and practice will soon give the novice confidence. But do not abuse your power and smoke the poor bees out

of the hives, as I have seen some do; usually three or four puffs from the smoker are enough.—*Germantown Telegraph.*

EXPERIMENTS WITH BEES.

During the past six years I have been experimenting with five different strains of bees. They were the light-colored Italians, the imported Italians, the German or black bees, and a cross between the German brown bee and the imported Italians, I tried them both separately and side by side; and for both extracted and comb honey, I prefer the cross. I have five reasons for my preference, viz.:

1. When I put on the sections, I know I shall find the bees at work there the next time I look at them.

2. They are not half so apt to swarm until after storing a fair crop of surplus honey.

3. When I take off the sections, they are always capped over, if there has been any reasonable flow of honey.

4. They make whiter combs than the pure Italians.

5. They are better honey gatherers; at least, to me, they have proven so. In every respect they are just as easy to manage as any race of bees.

My best colony of bees, this season, was from a Heddon queen; she was from the cross to which I have already referred. I introduced her into a fair-sized colony of blacks, and set them by the side of my best dark Italians, and worked them for comb honey.

When I took off the sections at the close of the season, I had 40 pounds more of comb honey from her colony than from the dark ones. I also reared two nice queens besides; and then had 2 strong colonies in good condition for wintering, besides the old one which had the body of the hive full of capped honey on which to winter. The hive, in size, is the same as the 8-frame Langstroth.

Bees have done very well, considering the shortness of the season. I averaged about 100 pounds of comb honey to the colony; and one more than doubled from spring count. All went into winter quarters with the hives full of comb honey, well capped.—*G. L. Pray in American Bee Journal.*

LET TURKEYS RUN OUT.

Turkeys do not require as warm quarters in winter as do other fowls. However cold the weather, they should be allowed to run out of doors every day, except, perhaps, in very stormy weather. If confined in warm quarters and not allowed to run out of doors, they usually show signs of indisposition, lose their appetite, become dumpish and inactive, and not unfrequently die. They are very hardy birds and easily wintered. About all they require is a place to roost at night where they will be out of the wind, plenty to eat and drink and their liberty during the day.

Introduce new blood into your stock every year or two, by either buying a good cock or a setting of eggs of the same variety from some reliable breeder.

Bee culture is woman's work, and thousands of the gentler sex who now waste their time in the fabrication of "crazy quilts" or some other useless article of "fancy work" might easily make enough money to clothe themselves with, and contribute delicious honey to the family table, by looking after a few hives of bees. The quick observation and gentle handling, so requisite in the business, belong peculiarly to women, and there is no part which is so laborious that it may not be appropriately performed by them.

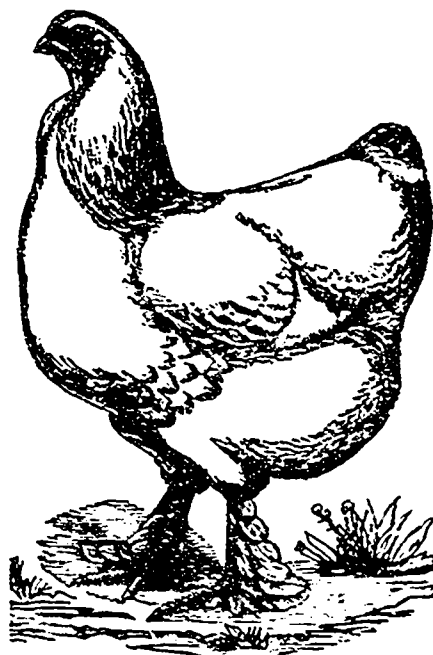
POULTRY—BREEDS FOR LAYING.

The best breeds of fowls for laying are those that suit the climate in which they are kept. It is an off-repeated inquiry as to which breed is most suitable by those who contemplate poultry keeping. Such inquiry can only be answered by those who have experimented with different varieties in different localities. There is no doubt that the Leghorns are equal to any other breed for egg production; but it does not follow that they are the most profitable fowl under all



LIGHT BRAHMAS.

circumstances. They are divided into two classes—the single, and rosecombs—and there is a further subdivision, according to color. The single-combed varieties of fowls are subject to frozen combs in very cold weather; but when properly managed they escape harm. The difficulty may be overcome by "dubbing" them, as is done with Games; but as the principal points of the Leghorns are given to the comb, they



WHITE COCHIN HEN.

would thereby be disqualified from competition at the fairs and poultry shows. A frosted comb would not be objectionable to those who only breed fowls for profit and not for exhibition; but when the comb becomes frosted, the hen ceases to lay until the injured member is completely healed. As the comb may be frozen several times during the cold season, the loss of time from egg production, owing to the effect of the temperature, would be quite an important item. The double-comb varieties, though exposing quite a large surface to the action of cold, have their combs closer to the head.

In thus noticing so small a matter as the comb, the object is to present one of the difficulties in the way of keeping a breed that never sets, but lays well. While the breed may not find favor in cold climates, there is no reason why it should not be popular in other sections. As the Leg-

horns have their virtues and faults, so do other breeds of fowls. In raising fowls for market, many object to the Brahmas and Cochins on account of their slow growth; and this objection may be a strong one, if the fowls are to be sent to market as chicks, as they do not feather until well advanced. If matured fowls are intended for shipment, the largest carcasses, with fine appearance, may be obtained from such breeds. The Plymouth Rocks, which grow fast and are uniform in appearance when young, also make good market fowls, when grown; but while they are excellent layers, they are liable to become excessively fat when highly fed, especially when they are confined, which is a hindrance to egg-production. This may also be an objection to the Brahmas and Cochins. The best results are derived from Plymouth Rocks when they have full range. All breeds do best with freedom; but the larger ones are more contented under restriction. It is best, therefore, in selecting a breed for laying, to take into consideration its hardiness, fitness for market, time of maturity, adaptability to climate, and disposition. By selecting these breeds which possess qualities adapting them to the conditions of the particular section of country, the best breeds for laying as well as for other purposes will be secured.—*P. H. Jacobs, in American Agriculturist.*

A GREAT many poultry raisers recommend the ashes theory about chicken yards. Nothing will be lost by allowing your fowls free access to the ash dump.

GIVE the hens the run of your orchard, especially if it is kept under cultivation, and you will be rewarded with an increased quantity and improved quality of fruit.

It is not all mixed swarms, nor yet a quarter part of them, that I would imprison in a pit for three days, covering them up hive and all. This is a method to be resorted to when hostile feelings break out among the tangled mess. When such a state of things ensues, they will be pretty sure to leave, unless deprived of the power to do so.

Two things make honey sell rapidly. First, putting up and keeping it in attractive shape and place; and second, reducing the price. Between the two I believe that the first is the best card for the producer, and is far less expensive. Let all honey producers do this as far as possible. Let him also be in no great haste to market the crop. Honey sells best in cool weather, and is by no means a perishable article, and even grows of better quality if properly kept.—*American Bee Journal.*

My poultry-yards, says a correspondent, are double, so that one can be used for two or three weeks or longer, while the other is ploughed up and seeded with oats, wheat, rye, turnips, or some other green crop. By this method fifty fowls can be kept on two quarter-acre lots all the summer or until they can be let out for a range. The droppings are ploughed in and covered up, fresh soil is turned up, and there is some useful green food provided for them. By thus alternating the yards, the ground is economized four-fold, at least. A poultry-yard should have some shade by all means. One of my yards has a double row of Norway spruces on the north side, and the other has some plum trees in it. The spruces make a pleasant shade and a dry place in which the fowls lie and dust themselves in the warm weather, and the fowls pay for the comfort of it and I get a good crop of plums.

STEAM PLOUGHS.

Nearly thirty years ago Mr. Smith, of Woolston, Eng., brought out his system, called the "Roundabout," and it was used with more or less success until a few years ago, when it was re-placed by the now well-known Double Engine system. In 1869 Mr. Fiske exhibited for the first time, at the Royal Society's Show at Manchester, his system of steam cultivation and cartage, but like Smith's it also died a natural death.

Both systems were, however, capable of doing good work, but the enormous amount of rope, the number of men required, the time and labour necessary to set it to work, and move it from place to place, prevented either being adopted to any very great extent.

Many fortunes have been spent in England in trying to perfect a system that would meet all the objections of the "Roundabout," or Smith's system, and it has ended in the Double Engines being almost universally adopted, and up till now it is perhaps the only system worth notice for the requirements of the English agriculturist.

What was required, however, was a steam plough that would break the thousands of acres of prairie in the North-West. For this purpose one or two sets of Double Engine apparatus were imported from the well-known firm of John Fowler & Co., but it was found that, although it answered all the requirements of the British agriculturist, there were certain objections which were fatal to its use in this country—the chief among them being, first, the enormous first cost; second, the number of skilled men required to work it, and at high wages; third, the enormous weight of the engines.

The only system that appears to have been attempted on this continent is the one of drawing the ploughs behind the traction engine, and a more stupid, unmechanical idea it would be impossible to conceive. The reasons must be patent to every engineer who knows his business, but as it is farmers, and not engineers, that our remarks are addressed to, it will be as well to explain the fallacy of this system:—

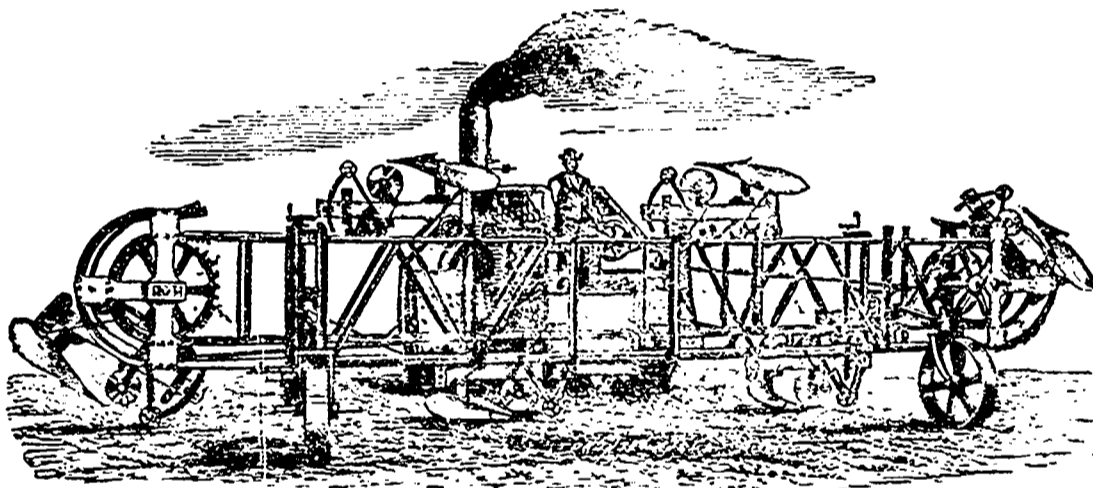
First, it is useless to attempt ploughing by steam unless a large amount of work is done, and for that reason at least six ploughs should be used, and to draw that number of ploughs—the resistance of which is often as much as one and a-half tons—requires an engine weighing not less than eight tons, otherwise there would always be a slip between the driving wheels and the surface of the land. Second, the power required to drive or propel such an engine over the land at the same rate that the ploughs are travelling—say three miles per hour—is greater than that required to draw the ploughs. It will thus be seen that there is not only a serious loss of power, but of a corresponding amount of fuel and water, and wear and tear of engine. Thirdly, it is impossible to work the ploughs after a rain of a few hours, as the engine is depending entirely upon the dry surface of the land for the necessary friction to haul the ploughs.

Our illustration represents a new system that has been invented and patented by Mr. E. Ingleton, late of the county of Kent, Eng., who has had very extensive experience for this past seventeen years with all kinds of steam-ploughing and other agricultural machinery in Germany, Russia

and England, was for several years the mechanical judge for the two agricultural societies of Entin and Lubeck, and a practical agriculturist as well as engineer. The illustration represents the plough as attached to the traction engine of Capt. Colquhoun, of Stony Mountain, the latter having been adapted to that purpose by the builders of the plough—the Vulcan Iron Works, Winnipeg. The advantages of this system over all others are, first, its extreme simplicity; second, its easy control, only one man being required to manage the whole apparatus; third, the moderate cost; fourth, the small amount of fuel required to do a given amount of work.

It will be noticed that the ploughs work at right angles to the travel of the engine, and cut furrows twenty-five feet long, the engine travelling at the rate of half a mile per hour in a direction of right angle to the ploughs. This speed of engine gives a surface ploughed of one and a-half acres per hour, or say from fifteen to eighteen acres per working day, and although the engine travels across the land, it has nothing to haul behind it, and the speed is so low that it requires a mere fraction of its power to drive it, so that almost the whole power of the engine is devoted to doing actual ploughing; this accounts for the very small consumption of fuel required to do the work.

Owing to the angle of the mould-boards of the



STEAM-PLOUGHING.

ploughs, the pressure of the furrow has a tendency to force the ploughing apparatus forward, thus relieving the engine of all draught, and consequently loss of power and liability of the driving wheels to slip, as is always the case when drawing a heavy load. This enables the engine, when fitted with broad wheels, to work on the land when in its very softest condition. It is only fair to state that the engine was built by Messrs. Taggart Bros., of Ontario, and is a poor specimen of engineering, and has caused endless trouble and delay to both Mr. Ingleton and Mr. McKechnie, of the Vulcan Works, but it has at last been put into practical shape at a cost of nearly a new one. It is, however, the intention to build a new style of engine, and adapt it to every requirement of the farm, including ploughing, threshing, reaping, rolling, and hauling grain to the railway.

Assured as we are of the success of this machine, we anticipate a direct profit from its use, as farmers will be able to dispense to a great extent with horses for farm work. Mr. Ingleton sees no difficulty in adapting his new engine to practically every department of labour where horses are required. In such a case the farmer owning a set of his machinery can use a few oxen for odd work, these can be kept at trifling expense, and the more costly horse simply kept for driving purposes. Farmers here and there have urged that one of the drawbacks to profitable farming in this country lay in the first cost, care and feeding of horses, added to their liability to

disease and death. The equipment we have described will be moderate in first cost, economical in working, and with fair play the chances of life are largely in favour of the engine as against the number of horses required to do the same amount of work.

BRIGHT SIDE OF FARMING.

It is undeniably true that the energetic driving farmer, who follows the business in view of making money, leads a busy life; for it necessarily involves an outlay of much hard labour and energy of mind. With this fact in view, and the numerous trials and perplexities which always occur to the farmer during very busy seasons, and the fact that the hardest and most important work of the year comes during hot weather, when labour and exertion are most unpleasant, and when those who follow other callings have comparative leisure—it is not surprising that many farmers become discontented, and sometimes discouraged. A certain amount of discontent seems to be a law of human nature. People of all callings look with envy upon those who follow other kinds of business, and however well a person may be situated, he is likely to imagine that others have a better lot in life. It is not surprising then to find farmers looking enviously upon lawyers, merchants, or those who follow other callings which demand less exertion of body and mind. (?)

But there is a bright side of farming which every farmer ought to recognize and which more than balances its unpleasant features. While it is true that much farm work is laborious and unpleasant, it is also true that farmers enjoy ample time for rest, and without financial loss. The work of the farm requires more muscular exertion than that of the shop or desk,

but it is less confining and monotonous. The clerk, book-keeper and mechanic work more hours a day, and are more closely confined than the average farm hand, whose work is in the open air and who has his evening for himself.

The winter months, with their long evenings, afford to the farmer comparative leisure and ample time for recreation, amusement and intellectual culture. They afford opportunity for reading and study, and for laying plans for future work and improvement.

The fresh vegetables, pure, rich milk and golden butter, which are looked upon by the wealthy residents of cities as luxuries, come to the farmer directly from nature and at little expense. The same articles are bought by the city people at extravagant prices, after they have lost their freshness and most desirable qualities. The farmer deals directly with nature, and the blessings which he should appreciate and enjoy, more than counteract the difficulties and disappointments which fall in his path.

There is no reason why farmers may not lead happy lives. Ambition if carried too far, becomes a misfortune and excludes contentment and enjoyment. But with an aim to live and to enjoy, rather than accumulate fortune, there is no calling better adapted to comfort, contentment and real happiness than agriculture.—*Manitoba Free Press.*

Miscellaneous.

Advertising Cheats!!!

"It has become so common to begin an article in an elegant, interesting style, then run it into some advertisement that we avoid all such,
 "And simply call attention to the merits of Hop Bitters in as plain, honest terms as possible,
 "To induce people
 "To give them one trial, which so proves their value that they will never use anything else."

"THE REMEDY so favorably noticed in all the papers,
 "Religious and secular, is
 "Having a large sale, and is supplanting all other medicines.
 "There is no denying the virtues of the Hop plant, and the proprietors of Hop Bitters have shown great shrewdness and ability
 "In compounding a medicine whose virtues are so palpable to every one's observation."

Did She Die?

"No!
 "She lingered and suffered along, pining away all the time for years."
 "The doctors doing her no good,"
 "And at last was cured by this Hop Bitters the papers say so much about."
 "Indeed! Indeed!"
 "How thankful we should be for that medicine."

A Daughter's Misery.

"Eleven years our daughter suffered on a bed of misery,
 "From a complication of kidney, liver, rheumatic trouble and Nervous debility,
 "Under the care of the best physicians,
 "Who gave her disease various names,
 "But no relief,
 "And now she is restored to us in good health by as simple a remedy as Hop Bitters, that we had shunned for years before using it."—THE PARENTS.

Father is Getting Well.

"My daughters says:
 "How much better father is since he used Hop Bitters."
 "He is getting well after his long suffering from a disease declared incurable.
 "And we are so glad, that he used your Bitters." A LADY, of Utica, N. Y.
 "None genuine without a bunch of green Hops on the white label. Shun all the vile, poisonous stuff with "Hop" or "Hops" in their name.

THE SURGICAL DRAWER.—There are a hundred little accidents liable to occur at any time in a household which call for immediate attention. A drawer, shelf, or box with old linen, adhesive plaster, scissors, tweezers, and any other appliances the house affords, accessible and known to all the family, is not only a convenience but may save suffering and avert danger by saving time and confusion. Of course, it should be out of reach of small and heedless hands.

Mr. T. C. Berchard, public school teacher, Norland, writes: "During the fall of 1881, I was much troubled with Billiousness and Dyspepsia, and part of the time was unable to attend to the duties of my profession. Northrop & Lyman's Vegetable Discovery and Dyspeptic Cure was recommended to me, and I have much pleasure in stating that I was entirely cured by using one bottle. I have not had an attack of my old complaint since, and have gained fifteen pounds in weight."

THE SICK IN THE BEST ROOM.—It is hard enough to be sick, or to take care of the sick in hot weather, where everything is as comfortable as possible. So it seems almost cruel to keep the sick member of the household and the nurse, in a small, poorly ventilated room, while the cool, airy parlor remains closed until it becomes damp. A cot or lounge, which could be moved to suit the time of day, might be put in the best room with little effort, will not only aid in the recovery of the invalid, but may preserve the health of the over-taxed nurse.

A. M. Hamilton, Warkworth, writes: "For weeks I was troubled with a swelled ankle, which caused me much pain and annoyance. Mr. Maybee, of this place, recommended Dr. Thomas' Electric Oil for it. I tried it, and before one bottle was used I was cured. It is an article of great value." Beware of Electric or Electron Oils, as they are imitations of Dr. Thomas' Electric Oil.

"No, indeed!" exclaimed Mrs. Podsnap energetically, "I don't believe in the extension of woman's suffrage at all. She suffers enough now."

Scientific and Useful.

WARM LOAF CAKE FOR TEA.—One full cup of sugar, half cup butter, mix well, two eggs, flour to make very stiff batter in which have been sifted two spoons baking powder; flavour.

LEAD PIPES.—To clean the waste pipes leading from the sink, pour down them a strong solution of potash dissolved in hot water. Be very careful that none of this mixture gets on your hands or clothing, as it will destroy all animal matter that it comes in contact with.

THE QUEEN OF PUDDINGS.—To make the queen of puddings, take one pint of fine bread-crumbs, one quart of sweet milk, three ounces of loaf sugar, small piece of butter, yolks of four eggs, grated rind of one lemon; bake till done, then spread over a layer of preserves or jelly; whip the whites of the eggs stiff, add three ounces of pulverized sugar, in which has been stirred the juice of the lemon. Pour the whites over the pudding and replace in the oven. Let it brown slightly. To be eaten cold.

Thomas Robinson, Farnham Centre, P. Q., writes: "I have been afflicted with Rheumatism for the last ten years, and have tried many remedies without any relief. I got a bottle of Dr. Thomas' Electric Oil, and found it gave instant relief, and since then have had no attack. I would recommend it to all.

STRAWBERRY SYRUP.—Take four pounds of the best double-refined sugar and one quart of filtered strawberry juice; put them together in the brain-marie; stir until thoroughly dissolved, take off the scum and bottle. The flavour of this syrup may be heightened by the addition of a gill of orange juice to the above quantity.

POTATO CHIPS.—Peel and slice, round, some fine potatoes. Lay in cold water for one hour. Dry by laying them upon a dry towel and pressing with another. Fry in salted lard, quickly, to a delicate brown. Take out as soon as done; shake briskly in a hot colander to free them from fat, and send to table in a deep dish—uncovered—lined with a napkin.

FIRST RELIEF ULTIMATELY A CURE.—These are the successive effects of one of the most deservedly popular remedies in the Dominion, Northrop & Lyman's Vegetable Discovery and Dyspeptic Cure, which reforms an irregular condition of the bowels and liver, invigorates the stomach, renews digestion, and changes the current of the blood from a sluggish and turbid into a pure, rapid, and fertilizing stream.

RICH CAKE IN SUMMER.—Much money and more precious strength is spent by kind hearted hostesses in baking rich cake that but few want, and in hot weather at least, nobody ought to eat or bake. Plain cookies or ginger snaps are convenient for the children's lunch. But nice bread and butter is good enough for grown folks to eat any time with the choicest fruit.

RESCUED AT LAST.—W. H. Crooker, druggist of Waterdown, says, when all other remedies fail for Bowel Complaints, then Dr. Fowler's Extract of Wild Strawberry comes to the rescue.

OUT-DOOR PARLORS.—Those with very large houses can shut up the Winter parlor and open one for the hot season, invitingly furnished with matting and willow. But the matron with average means must have her Summer parlor out doors. A very cosy one can be improvised on the veranda with rugs, a table for work and books, easy chairs, and curtains or screens, if needed.

IT is a needless waste of substance to throw away the pods of green peas. They contain a large amount of valuable juice which might as well be saved and used. Wash a part of them and boil with the peas, either loose or in a sieve. After boiling throw away the remnant of the pods, for the value then has been extracted and will be found in the soup, which will be very much stronger and thicker than when the peas are boiled alone.

A SEARCH WARRANT.—If there is any lurking taint of scrofula in the system, Burdock Blood Bitters are warranted to search it out.

There is a girl in Philadelphia so crossed-eyed that she has to wear spectacles on her ears when she wants to read. The tears from her right eye flow down her left cheek.

The superiority of Mother Graves' Worm Exterminator is shown by its good effects on the children.

"I wish my wife wasn't a politician," said Sniffkins, sadly. "Why?" asked his friend. "Is she a Democrat?" "No, she's a bolter. She won't let me in after half-past ten o'clock at night."

HOPEFUL WORDS.—Mrs. McArthur, of Hoppeville, Ont., says she could not keep house without Hagyard's Pectoral Balsam to cure prevailing throat and lung troubles.

"Do you know what the board over that cow's face is for?" asked the Colonel. "No," responded the Major, "unless it is to keep her blushes from being seen when the milk-man works the pump-handle.

"I should think you would need a military guard to keep the young men away," said a citizen to the father of six marriageable daughters. "Oh! I'm a pretty good foot soldier myself!" was the cheerful reply.

Corns cause intolerable pain. Holloway's Corn Cure removes the trouble.

Scene: City restaurant—First Client (in a hurry): "Waiter, fried sole!" Second ditto (ditto): "Waiter, fried sole! Fresh, mind." Waiter, (equal to the occasion, shouting down tube). "Two fried soles, one of 'em fresh!"

Alexis Cyr, of Grant Isle, Aroostook Co., Maine, writes: "Having used Northrop & Lyman's valuable Emulsion of Cod Liver Oil with Hypophosphites of Lime and Soda, and derived great benefit from it, I take the liberty of asking you for quotations, and also whether you would be willing to give me the agency for this place, as I am confident there would be a large sale for it in this vicinity when its merits were made known.

"What do you want to set such a tough chicken before me for!" indignantly exclaimed a fair damsel in a restaurant the other day. "Age before beauty, always, you know, ma'am," replied the polite attendant, who well knew how to serve his employer and a tough chicken at the same time.

THE BUSIEST PLACE IN CHICAGO.

Any person who visits the Advertising Agency of Lord & Thomas, McCormick Block, will not doubt that they are transacting an immense business with the newspapers of the country. A thorough knowledge of their business, coupled with energy and a liberal use of their own medicine, has placed them in the front rank of advertising agencies in the United States.

We will not state the exact amount, but we will say that during the past few weeks they have closed contracts which will aggregate hundreds of thousands of dollars, and this business has been secured in competition with the Eastern agencies, thus demonstrating their claim of possessing unequalled "facilities."

Their business offices are veritable hives of industry, every member of their efficient corps of employes being furnished with work enough to develop their working energies. We think this firm might well adopt as their motto "Courtesy and Energy." The Herald congratulates them on their merited success.—Chicago Herald, May 10.

IMPORTANT TO TOURISTS.

Commencing May 15th and continuing until October 1st, round trip tourist tickets, good going fifteen days from date of sale and good returning until October 31st. Can be purchased at very low rates, to Denver, Pueblo, Colorado Springs, and other Colorado Tourist Points, via the BURLINGTON ROUTE (C. & Q. R. R.) This famous line is the only one extending from Chicago, Peoria or St. Louis, direct to Denver, and the only one running through trains without change every day in the year between Chicago and Denver. In addition to above trains which run via Pacific Junction, it also runs over its own lines, through daily trains between Chicago, Peoria, Kansas City and Atchison; and through daily trains between Kansas City, Atchison and Denver, thereby enabling it to offer the tourist the option of purchasing tickets by a greater variety of routes than any other line. Remember these facts, and when ready to start call upon any railroad ticket agent in the United States or Canada for tickets, rates and detailed information, or address PERCEVAL LOWELL, General Passenger Agent, Chicago.

Humphreys' Homeopathic Specific No. 28
 In use 30 years. The only successful remedy for Nervous Debility, Vital Weakness, and Prostration, from over-work or other causes. \$1 per vial or 3 vials and large vial powder for \$5. SOLD BY DRUGGISTS, or sent postpaid on receipt of price. Address, Humphreys' Homeopathic Medicine Co., 109 Fulton St., New York.

THE SIGNS OF WORMS are well known, but the remedy is not always so well determined. Worm Powders will destroy them.

TO HORSE OWNERS!



GOMBAULT'S CAUSTIC BALSAM

THE GREAT FRENCH VETERINARY REMEDY!

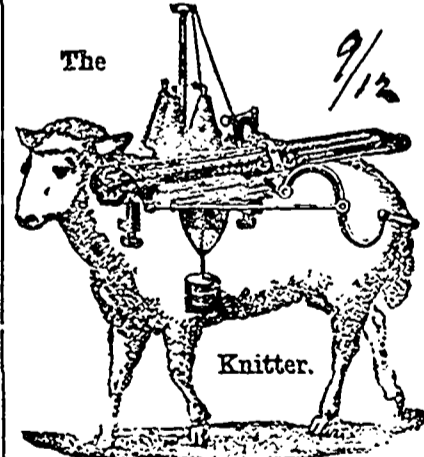
Prepared by E. GOMBAULT, ex-Veterinary Surgeon of the French Government and. Has been in prominent use in the best Veterinary Practice of Europe for the past twenty years.
 A SPEEDY, POSITIVE & SAFE CURE For Croup, Spill, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, all Skin Diseases or Parasites, Thrush, all Inflammations, all Throat Difficulties, Lameness from Sprain, Hubs and other bony tumors. Removes all Blisters or Blemishes, and many other diseases and ailments of Horses and Cattle. Far superior to a blister or cauterization in its beneficial effects, never leaving scar or bluish.

WE GUARANTEE that one tablespoonful of GOMBAULT'S CAUSTIC BALSAM will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made. Every bottle of CAUSTIC BALSAM sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.
 LAWRENCE, WILLIAMS & CO. HAMILTON, ONT., Sole Importers & Proprietors for the U. S. and Canada.

HUMPHREYS' HOMEOPATHIC VETERINARY SPECIFICS

FOR THE CURE OF ALL DISEASES OF Horses, Cattle, Sheep, Dogs, Hogs, Poultry For 20 years HUMPHREYS' Veterinary Specifics have been used by Farmers, Stock-breeders, Horse R. R., Hippodromes, Menageries, and others with perfect success.

- LIST OF SPECIFICS.
- A. A. Cures Fevers & Inflammation, Milk Fever, Spinal Meningitis, Hog Cholera, 75c.
 - B. B. Strains, Lameness, Rheumatism, 75c.
 - C. C. Cures Distemper, Nasal Discharges, 75c.
 - D. D. Cures Cuts or Gashes, Worms, 75c.
 - E. E. Cures Cough, Hoarseness, Pneumonia, 75c.
 - F. F. Cures Colic or Gripes, Bellyache, 75c.
 - G. G. Prevents Miscarriage, 75c.
 - H. H. Cures all Urinary Diseases, 75c.
 - I. I. Cures Eruptive Diseases, Mange, 75c.
 - J. J. Cures all Diseases of Digestion, 75c.
- Veterinary Case, black walnut with Veterinary Manual (30 pages), 10 bottles Medicine, and Mediator, - - - \$4.00
 Medicator, - - - 35
 These Veterinary Cases are sent free of express on receipt of the price, or any order for Veterinary Medicine to the amount of \$5.00 or more.
 Humphreys' Veterinary Manual (30 pages) sent free by mail on receipt of price, 25c.
 Pamphlets sent free on application.
 HUMPHREYS' Homeopathic Med. Co., 109 Fulton Street, New York.



Lamb Knitting Machine, The family favourite and standard manufacturing machine.

The LAMB KNITTING MACHINE makes all sizes of socks and stockings, cardigan jackets, shirts, drawers, combination suits, scarfs, caps, mitts, and in fact anything a family would want. It is not a common circular machine making only one size. You can make any size, narrow and wide the same as in hand knitting. It is as far ahead of the common circular machine as the binder is ahead of the old cradle. It is always ready to do any kind of work. Is complete, simple, and everlasting, knits over twenty garments in ten different stitches. On receipt of \$1 we will send you one pair full fashioned ladies' stockings, narrowed on the back, and one pair ladies' mitts. You can then see the actual work of the most wonderful and perfect knitting machine ever invented. Send for catalogue and price list.

J. M. STATEN, Sole Agent for the Dominion, 44 CHURCH STREET, TORONTO

GOOD THE YEAR ROUND—National Pills are a good blood purifier, liver regulator, and mild purgative for all seasons.

HOME CIRCLE.

ENGLAND ONE HUNDRED YEARS AGO

From an address delivered not long since by Mr. Thomas Ashbury, C.E., before the Manchester Association, we extract the following as to what was the state of affairs in England a hundred years since:

"We need not further consider the engineering works of the past age, but come at once to the period of say about a century ago, or at all events the period when George III began to reign (1760), and glance at the state of our own country at that time, the better to understand and appreciate the advantages and blessings of the present time.

"One hundred years ago England could hardly be called a manufacturing country, as we imported almost everything except corn, wool, and flax, iron from Spain, Germany, Sweden; pottery from Holland; hats from Flanders; silk from France, cloth and carpets from Belgium. One hundred years ago we had, as a country fallen very low. Our cotton, woollen, flax, machine, etc., manufactures were struggling into birth: we could not keep the water out of our coal pits: we could not build steam engines; we could not build a church fit to be seen; we had no harbours or docks; we had no ships fit to go to sea; we had no literature worthy of our nation; we had our roads swarming with highwaymen. We had our army and navy composed of prisoners or pressed men captured openly; we had gibbets at nearly every cross road in the country; we had bribery and corruption of the grossest kind at Parliament elections; we had drunkenness, profligacy, and brutality, not only among the ignorant, totally neglected, common people, but also among the so-called upper classes; we had public abominations and obscenities that were not surpassed in the days of Nero; we had bull baiting, cock fighting, men fighting, dog fighting, badger drawing, and other coarse, ferocious, savage sports (pigeon shooting, unfortunately, still exists); we had the pillory, and men and women placed there for disgusting crimes, and crowds as foul as the criminals would pelt them with stones and rotten eggs, and horrid scenes were of common occurrence; we had women publicly whipped as well as men, and all feelings of refinement and delicacy were smothered in the licentious tendencies of the people; we had women and girls working down coal pits; we had blasphemy, brutality, irreligion, atheism, prevailing among all classes and causing the ships, the barracks, the works, the clubs, and even very many of the English homes to be turned into places of revelling and vice, disgracing the English name, and only worthy of the demon of darkness; we had, however, a few, manly, plucky, brave men, who amid the darkness, drunkenness, and vice, endeavoured to educate, lift up, and arouse the people to a purer and more noble life; but these men fought against tremendous odds, for some of them were carried off by press gangs as sailors or soldiers, some of them were publicly whipped out of the town, and even in Salford the very first use made of the new town fire engine was to drench that noble, godly man, John Wesley, when he boldly and courageously 'bearded the lion in his den,' and publically reprovved and exposed the prevailing vices and iniquities of our sister borough.

"James Watt, while learning his trade in London, had to keep his house, and durst not walk abroad for fear of being seized and sent to labour as a sailor on our then 'floating hells, or on our plantations in India or America. One hundred years ago there was in Scotland a veritable slavery class of colliers and salters, and it was only in 1799 that this was finally abolished. One hun-

dred years ago the main roads in this country had ruts four feet deep in many places; in fact, one writer says the ruts were navigable; another says they were like the roofs of houses put together, and they had only just superseded the pack horse and bridle paths. One hundred years ago hanging was common for nearly all offences; human life was little thought of. One hundred years ago or thereabouts, the first eight bags of cotton arrived in Liverpool, and the Custom House officer seized them as not being a product of the United Kingdom, now we import £20,000,000 worth per annum. One hundred years ago our shipping did not reach two millions sterling: now the sailing of our own and foreign ships runs up an average of forty five millions sterling. In the year 1777 the borough of Liverpool bought up the revenue of its manorial rights for £2,850: one hundred years after, the annual revenue from the same source was £250,000! One hundred years ago there were no public docks in London or anywhere else. One hundred years ago the mail coaches had just begun to run; now our railways carry 700 millions of people in the United Kingdom every year. One hundred years ago ballooning was in vogue, and seemed destined to achieve great things; a voyage was made from England to France; no real progress in this direction can be recorded.

"One hundred years ago, or thereabouts (1776), independence in America had been declared. One hundred years ago Arkwright had just invented his spinning machines, looms, etc. One hundred years ago or a little more, the country was astonished at the recent erection of the first stone lighthouse. (Smeaton, 1759.) One hundred years ago Watt had just invented the condensing steam engine. One hundred years ago Brindley had just finished his first great canal and Worsley tunnel. One hundred years ago England imported nearly all its iron, for Henry Cort only invented 'puddling' in 1788. One hundred years ago there was no gas or electric light, no high pressure steam engines, no steamboats, no telegraphs, no railways, etc. The working men of Lancashire one hundred years ago had precious little book learning, but an enormous amount of brain power. Many of the principal inventions were made by them and large fortunes was the result to some. They had great physical strength, could walk long journeys with heavy loads, and their fare was simple, generally milk, bacon, and some kind of oatmeal, one kind of which was thick and hard, and was called 'jannock,' since become in Lancashire synonymous with anything genuine and thorough. The goods were principally carried by packhorses. John Kay, of Walmsley, near Bury, the inventor of the 'fly shuttle,' made his escape from a riotous mob by being made up into a pack and carried away on the back of a horse. He died in Paris of a broken heart, guilty, like many other men, of having invented something for the good of Lancashire people, who turned against him for it.

"Tennyson has hymned the praises of our wondrous 'mother age,' and bids us remember how much better 'fifty years of Europe than a cycle of Cathay.'

"Every one can see the great contrast between the material condition of to-day and that which existed centuries ago. Take the last century or thereabouts; the merely material, physical, mechanical change in human life is greater than occurred in the 1,000 years, nay, even 2,000 years or more, that preceded it. In England this material change has been more rapid than in any other country, and is beyond parallel in the world's history. Yet the question has been asked in our times, 'With a thousand times the resources of any that preceded it, does it use them to a thousand times better purpose?'

MEDICINE AS PRACTISED BY ANIMALS.

M. G. Delaunay, in a recent communication to the Biological Society, observed that medicine, as practised by animals, is thoroughly empirical, but the same may be said of that practised by inferior human races, or, in other words, by the majority of the human species. Animals instinctively choose such food as is best suited to them. M. Delaunay maintains that the human race also shows this instinct, and blames medical men for not paying sufficient respect to the likes and dislikes of their patients, which he believes to be a guide that may be depended upon. A large number of animals wash themselves and bathe, as elephants, stags, birds, and ants. In fact, man may take a lesson in hygiene from the lower animals. Animals get rid of parasites by using dust, mud, clay, etc. Those suffering from fever restrict their diet, keep quiet, seek darkness and airy places, drink water, and sometimes plunge into it. When a dog has lost his appetite, it eats that species of grass known as dog's grass (*chindent*), which acts as emetic and purgative. Cats also eat grass. Sheep and cows when ill, seek out certain herbs. An animal suffering from chronic rheumatism always keeps as far as possible in the sun. The warrior ants have regularly organized ambulances. Latreille cut the antennæ of an ant, and other ants came and covered the wounded part with a transparent fluid secreted from their mouths. If a chimpanzee be wounded, it stops the bleeding by placing its hand on the wound, or dressing it with leaves and grass. When an animal has a wounded leg or arm hanging on, it completes the amputation by means of its teeth. A dog, on being stung in the muscle by a viper was observed to plunge its head repeatedly for several days into running water. This animal eventually recovered. A sporting dog was run over by a carriage. During three weeks in winter it remained lying in a brook, where its food was taken to it. The animal recovered. A terrier hurt its right eye; it remained lying under a counter, avoiding light and heat, although it habitually kept close to the fire. It adopted a general treatment, rest, and abstinence from food. The local treatment consisted in licking the upper surface of the paw, which it applied to the wounded eye, again licking the paw when it became dry. Animals suffering from traumatic fever treat themselves by the continual application of cold, which M. Delaunay considers to be more certain than any of the other methods. In view of these interesting facts we are, he thinks, forced to admit that hygiene and therapeutics, as practised by animals, may, in the interest of psychology, be studied with advantage. He could go even further, and say that veterinary medicine, and perhaps human medicine, could gather from them useful indications, precisely because they are prompted by instinct, which are efficacious in the preservation or restoration of health.—*British Medical Journal*.

CHEWING THE CUD.

Every child living in the country has stood and watched this curious operation, and wondered what the lump was which he saw come up in the cow's throat, and then go down again after she had chewed it for a certain length of time. And perhaps he may have seen the anxiety and turmoil produced on a farm by the report that some one of the cows had "lost her cud," and as the result of this excitement he may have seen the absurd attempt to "make a new cud," in the hope that the cow would by such means be restored to good condition. There is in the minds of a large proportion of our readers (which simply means the community) so little

correct understanding of the true nature of "chewing the cud," that a few words concerning it may not be amiss.

A very large tribe of animals, of which sheep and cows are only familiar examples, are called in works of natural history *Ruminantia* because they all *ruminant*, they chew the cud. They do so because their peculiar organs of digestion require it; they can get their nourishment in no other way. They have, it is said in the books, four stomachs, but the statement is not strictly correct, for the entire digestion is done in a single one, that which is called the fourth, the other three being only places for preparatory work. Their food is swallowed without being chewed, the chewing is to come later. When this unchewed food is swallowed it passes directly into the first stomach, to use the common term, but the drink which the animal takes goes straight past the entrance of the first into the second. These two serve only to *soak* and soften the coarse food. When the first has done what it can, the food passes out of it into the second, and then the cow is ready to "chew the cud."

The second stomach, while busily at work in soaking the food, keeps it in motion, and gradually rolls it up into masses, so that in the small upper part there is formed an oblong solid lump of the size that we recognize as the "cud." This the animal throws up into the mouth, and chews with evidently as much satisfaction as the same act of mastication gives us when we put the most delicate morsels between our teeth. When it is sufficiently chewed, the mass is swallowed and its place taken by another which had been rolled up in the meantime.

But the "cud" thus masticated does not return to the second stomach, from which it had come. It passes smoothly into the third, a place for additional lubrication, and then into the fourth, where the true digestion begins and ends.

This is, in brief, the whole story, and we see how naturally the chewing comes in: it is the same as is our own case, only that it is at a different stage of the food's progress. And we see also what "losing the cud" really is. The cow or sheep is suffering from indigestion; the "second stomach" has failed to roll up the little masses suitable for chewing, and there is nothing which the poor beast can bring up. Of course, therefore, the one thing required is to *restore the tone and power of the stomach*; not to burden it with an "artificial cud," which would only increase the difficulty, instead of relieving it.

POISONOUS PLANTS AND FLOWERS.

There are many plants whose leaves, flowers, and seeds contain virulent poisons, which every one should know, so as to avoid them and keep children from them.

Buttercups possess a poisonous property, which disappears when the flowers are dried in hay; no cow will feed upon them while in blossom. So caustic are the petals that they will sometimes inflame the skin of tender fingers. Every child should be cautioned against eating them; indeed, it is desirable to caution children about tasting the petals of any flowers, or putting leaves into their mouths, except those known to be harmless.

The oleander contains a deadly poison in its leaves and flowers, and is said to be a dangerous plant for the parlor or dining room. The flower and berries of the wild briony possess a powerful purgative, and the red berries, which attract children, have proved fatal. The seeds of laburnum and catalpa tree should be kept from children; and there is a poisonous property in their bark. The seeds of the yellow and of the rough podded vetches will produce nausea and

Fool's parsley has tuberous roots, which have been mistaken for turnips, and produced a fatal effect an hour after they were eaten.

Meadow hemlock is said to be the hemlock which Socrates drank; it kills by its intense action on the nerves, producing complete insensibility and palsy of the arms and legs, and is a most dangerous drug, except in skilful hands. In August it is found in every field, by the seashore, and near mountain tops, in full bloom, and ladies and children gather its large clusters of tiny white flowers in quantities, without the least idea of their poisonous qualities. The water hemlock, or cowbane, resembles parsnips, and has been eaten for them with deadly effect. The water dropwort resembles celery when not in flower, and its roots are also similar to those of the parsnip, but they contain a virulent poison producing convulsions, which end in death in a short time. The fine-leaved water dropwort and the common dropwort are also dangerous weeds. The bulbs of the daffodils were once mistaken for leeks and boiled in soup, with very disastrous effects, making the whole household intensely nauseated, and the children did not recover from their effects for several days.—*The Druggist*.

WHY GIRLS WILL WED.

She rose at the early daybreak,
With a sick and aching head,
And she said—this cross little woman—
"I wonder why girls will wed!
They wouldn't, I am sure, if they reckoned
The things that a wife must bear;
The never-done work of a household,
The never-done mother care.

"Six dozen pieces to wash to-day,
And the children must go to school,
And every one knows on washing days
Baby is cross, as a rule;
And Bridget is new to the work yet,
(Oh, dear, how my head does ache!)
Yet, I shall have the dinner to cook
And all of the beds to make."

But as soon as breakfast was ready,
Father came in from the yard;
He kissed the sick little mother,
"Was sure that her work was hard."
He said to the noisy boys: "Be still!
Your mother's not well to day;"
And when he bid her "good-bye,"
He "could kiss the pain away."

And the coffee or kiss—which was it?—
Healed like a magical charm;
The spirit of diligent gladness
Was everywhere on the farm.
The father worked hard at the ploughing,
The mother forgot her pain,
Bridget did well with her washing,
There wasn't a drop of rain.

The baking and cleaning were over.
When the boys came home from school;
Baby forgot it was washing day,
And pleasantly broke his rule;
And at night the house was clear and bright—
There was not a thing amiss;
" 'Tis only a wife," the father thought,
"Would do as much for a kiss."

And the wife, sitting down in the fire-light,
The baby asleep at her side,
Her husband chatting and watching her
With a husband's loving pride,
Thought much of her full and pleasant home,
Of her children asleep in bed;
And said with a sweet contented laugh,
"No wonder that girls will wed!"

Lillie Barr.

THE DESTRUCTION OF WEEDS.

There are few if any operations on the farm where so much time is misspent as in the destruction of weeds. Many farmers spend twice as much time trying to keep the weeds down as is necessary, and yet do not more than half accomplish the work. This is because they let the weeds get too large before the work is commenced; once master of the weeds, the work of keeping them down is very easy; but if by a few days delay, the weeds are permitted to get well rooted, the work of exterminating them is not only very difficult, but

very laborious, and even when accomplished leaves the crop in a crippled condition. There should be but one rule to adopt with the weeds: that should be to kill them as soon as they appear above ground. It is easier to cultivate the ground three times when the weeds first appear, than once after they get several inches high, and the crop will grow twice as fast by so doing.

The idea which some have that the cultivation of crops is for the sole purpose of keeping the weeds down, leads some to make very great mistakes; cultivation is often delayed to permit all of the weed seeds to germinate that once hoeing may keep them down, then it is believed that the crop will take care of itself, this is a mistake that is fatal to the production of a very large crop; and yet once hoeing will usually require as much time as it would to go over the ground three or four times, when cultivation is commenced as soon as the weeds appear.

As frequent cultivation is very necessary to secure a vigorous growth of almost any crop, if the labor of cultivation was more, the benefit to the crop would more than cover it; but with proper implements, the labor of frequent cultivation is less, because as long as the ground is comparatively clear of weeds, except those that have just appeared above the surface, there is but little need of using the hand hoe; but a wheel hoe, or a cultivator may be used and run over the land so rapidly that the cost of labor will be but very little; while if the cultivation be delayed until the weeds get large, the work cannot be done with a wheel hoe, and a hand hoe must be resorted to.—*Massachusetts Ploughman*.

MISTAKES OF FARMERS.

1. To think that anyone can farm; that a man who has starved as a canvasser for a patent toothpick or has been unsuccessful as a carpenter, can jump into a business requiring high intelligence and persevering efforts, and, being utterly unfamiliar with details, be able to make money.

2. The idea that a large farm, half stocked, and poorly cultivated, pays better than a few acres well and carefully tilled.

3. What is it but the worst kind of a mistake to pay hundreds of dollars for good farm machinery, and allow it for want of proper shelter to rot and become useless a year or so sooner than it should?

It is a mistake to let year after year pass by with no attempt to improve the quality of the farm stock. Blooded cattle pay. They make beef quicker, the cows give more and richer milk. Better blood in horses pays. A Norman or part Norman colt is a valuable piece of property.

5. To let foolish pride or narrow-minded prejudice prevent the adoption of new methods when they have been proved by practical men.

6. To get up after the sun, lean on fork handle, speculate for an hour or two upon what the whether is going to be, let the weeds get a good start, and then wonder why farming don't pay.

7. To leave a lot of unchopped, wet or half-split wood at the wood pile, a lot of old harness hanging in the kitchen, and muddy tracks in the dining-room, and expect to see the woman folk good natured.

8. To have a lot of half-fed, emaciated, lonesome-looking fowls, roosting dejectedly in some old cottonwood tree, when a few good, healthy Plymouth Rock or Brahma chickens, properly housed, would make the poultry yard an honour, instead of a disgrace.—*Ex.*

For active sports, for pleasing rest,
This is the time to be possessed;

WAIT TILL THE CLOUDS ROLL BY.

Words by J. T. WOODS.

Music by H. J. FULMER.

Moderato con espress.

The piano introduction consists of two staves of music. The right hand features a melodic line with eighth and sixteenth notes, while the left hand provides a rhythmic accompaniment with chords and single notes.

rall e dim..... 1. Jen-ny, my own true loved one, I'm

The first line of the song features a vocal line starting with a rest, followed by the lyrics "1. Jen-ny, my own true loved one, I'm". The piano accompaniment continues with a steady rhythm.

go - ing far from thee,..... Out on the bounding bil - lows, — Out on the dark blue

The second line of the song features a vocal line with the lyrics "go - ing far from thee,..... Out on the bounding bil - lows, — Out on the dark blue". The piano accompaniment continues with a steady rhythm.

sea!..... How I will miss you, my dar - ling, There when the storm is rag - ing high,.....

The third line of the song features a vocal line with the lyrics "sea!..... How I will miss you, my dar - ling, There when the storm is rag - ing high,.....". The piano accompaniment continues with a steady rhythm.

rall.
Jen-ny, my own true loved one, Wait till the clouds roll by.....
colla voce

Sopr'o. f
Wait till the clouds roll by, Jen-ny, Wait till the clouds roll by;
Alto.
Tenor. f
Bass. f
Wait till the clouds roll by, Jen-ny, Wait till the clouds roll by;
p

f
Jen-ny, my own true loved one, Wait till the clouds roll by.
rall.
f
Jen-ny, my own true loved one, Wait till the clouds roll by.
rall.
f
colla voce.

2

Jenny, when far from thee, love,
I'm on the ocean deep,
Will you then dream of me, love,
Will you your promise keep?
And will I come to you, darling?
Take courage dear, and never sigh,
Gladness will follow sorrow,
Wait till the clouds roll by.

3

Jenny, I'll keep your image
Within my heart so true,
Each thought of mine for ever
Still, love, shall be of you;
Dry then your tear-drops, my darling,
Soon will the night of sorrow fly,
Cheer up, and don't be lonely,
Wait till the clouds roll by.

YOUNG CANADA.

LEARN TO SWIM.

Every healthy boy and girl can learn to swim. Let me tel' you how I learned. In learning to swim, there are just two things to acquire. First, confidence in the water; second, proper motion in the water. First, learn to think of the water, not as a monster, ready to devour all that may approach it, but rather look upon it as a willing servant or a playful companion, ready to serve or save, and ready to afford you all manner of delight. Then learn to move the hands and feet in the right way.

Some persons reverse this order, and try to secure the proper motion first. This they do by using corks or life-preservers, or anything that will hold them up while they get the stroke, or catch the exact movement. Thousands have learned in this way. It is not the best; for such have to learn over again when they try to swim without these helps.

A better way, especially for the girls, is to have some friend who will place the hand under the chin of the learner, and gradually remove the help as the person learns to do without it.

If you choose this method—of learning the proper motion first—you need only to remember this single rule: Always thrust out the hands and feet at the same time! In the recovery, when you draw in the feet and hands, do it slowly; then, with a sudden push, stretch yourself out as far as your feet and hands can reach, keeping them close together. Any good swimmer will show you how this is done; but you may not do it perfectly the first time.

I began the other way, gaining confidence first, the proper motion afterward. Most persons are afraid of the water, especially when they sink beneath its surface. Those learning to swim are apt to carry the head and body too far out of the water.

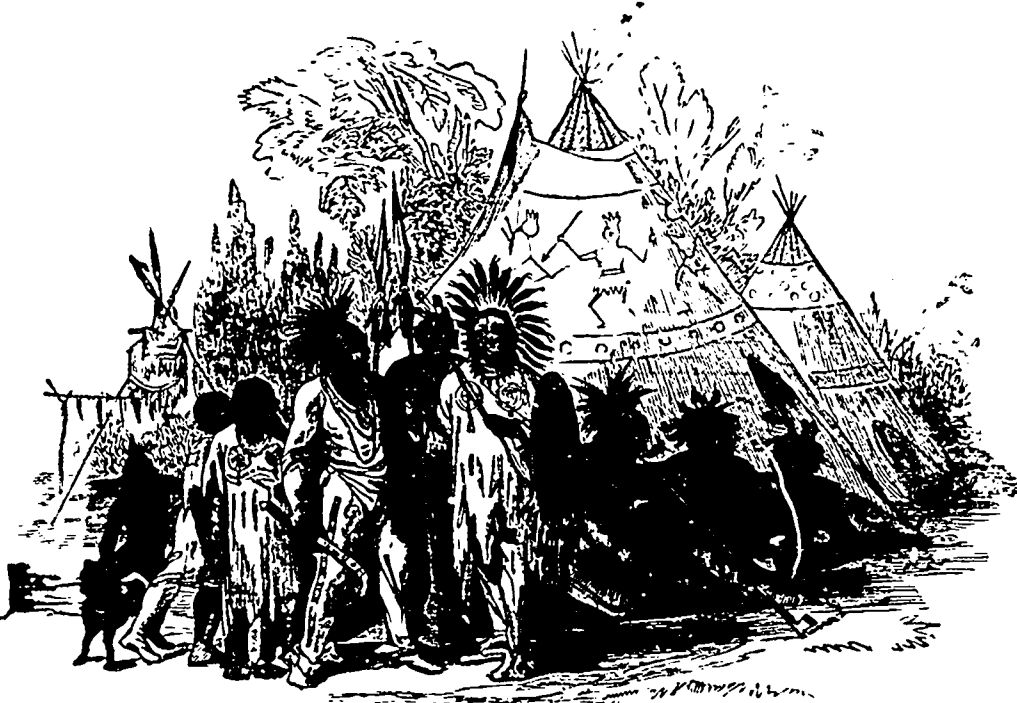
To gain this confidence, then, I first of all accustomed myself to remain under water as long as I could hold my breath. In this way I lost all fear. Afterwards when I was learning the proper motion if I sank up to my mouth, and almost to my eyes, it didn't frighten me.

Having gained this confidence, then I took a very easy and natural method of learning the swimmer's stroke. I began with what we boys call scooping, *i.e.*, standing on a rock, or anything a foot or two below the surface, I stooped down until the water came to the chin, then gave a sudden push, with the hands stretched out before me, and the feet straight behind me, the hands and feet together, of course, thus skimming along the surface.

First I went a little way, until I reached

the hand of my friend, who stood ready to catch me. Then he stepped back a little farther. Then a little farther still. Thus I discovered the buoyancy of the water. Then I took my first stroke while scooping, then another, and gradually another, until I proudly told my companions the next day that I could swim six strokes. Adding a few strokes every day, in a short time I was swimming fearlessly with the veterans. You can all do the same, if you will try.

"Isn't 'Collar Button' rather an odd nickname to give your boy?" asked a gentleman of a friend who had just addressed his son by that title. "Well, I don't know," replied the father, laughingly. "It may sound a little curious; but it suits the boy first-rate." "Why do you think the nick-name 'Collar Button' suits the boy?" "Because," was the reply, "when he slips out in the evening I am never able to find him."



INDIANS AT HOME.

AN INDIAN'S HONESTY.

An old Indian once asked a white man to give him some tobacco for his pipe. The man gave him a loose handful from his pocket. The next day he came back and asked for the white man. "For," said he, "I found a quarter of a dollar among the tobacco."

"Why don't you keep it?" asked a bystander.

"I've got a good and a bad man here," said the Indian, pointing to his breast, "and the good man say: 'It is not mine; give it back to the owner.' The bad man say: 'Never mind, you got it, and it is your own, now.' The good man say: 'No, no' you must not keep it.' So I don't know what to do, and I think to go to sleep; but the good and bad men keep talking all night, and trouble me; and now I bring the money back I feel good."

Like the old Indian we have all a good and bad man within. The bad man is Temptation, the good man is Conscience, and they keep talking for and against many things that we do every day. Who wins?

Gas in London is 65 cents per 1,000 feet.

THE LITTLE GENTLEMAN.

My friend and I after a weary ramble entered a street car. There was an old lady with white hair, and that peaceful expression of one who has come near to the end of the struggle, and can see the restful plains beyond the gates. Opposite sat a pale young woman with a heavy bundle in her lap, from which peeped the corners of men's underclothing, which doubtless she had finished with a sigh of relief and of thoughts of the bit of hard-earned money which was now rightfully hers. Two young mothers with bright-eyed children came next, and in the corner was "only a boy," a lad of ten or twelve. He was busily engaged in plucking the green leaves from a quantity of blossoms of a sweet-scented shrub, but on our entering the car, he gave his attention to us until I had the fares ready; then with quick courtesy he placed them in the box for me, and acknowledged my thanks with a smile.

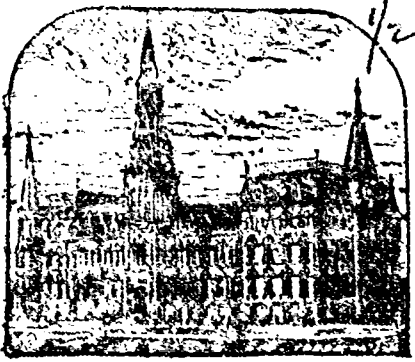
Returning to the pleasant task of assorting the fragrant blossoms, he was not oblivious of anything that happened in the car. One of the restless babies dropped the toy which it had been holding, but our young gentleman instantly restored it. Presently he saw the pale girl watching his busy hands, and stepping across the car he laid a handful of flowers in her lap. Tears came into her eyes, and she hastily murmured her thanks, and some broken words about "mother" and "the country," and I doubt not those blossoms brightened many weary hours.

Who can tell the power such a small action may exert? It is the small things of the earth which shall confound the great, and the casting of a sunbeam across the path of another may save some sore heart from despair.

Our young friend then gave each of us a portion of his treasure, stopped the car for the old lady, and he gave her his hand to steady her feeble steps.

We left the car soon after, but I doubt not he finished the trip in the same way. My friend, who was a disbeliever in boys, was warm in this one's praise, but feared he was only one among a thousand of a different kind. But why need this be so? Try such a way for yourselves, boys, and see how good it is.

"I WILL not," said a little boy, stoutly, as I passed along. His tone struck me. "What won't you do?" I stopped and asked him. "That boy wants me to 'make believe' something to my mother, and I won't!" he said, in the same stout tone. The little boy is on the right road. That is just one of the places to say "won't." I hope he will stick to it. "Won't" is not a pretty word for children, but it is the right one when asked to deceive.



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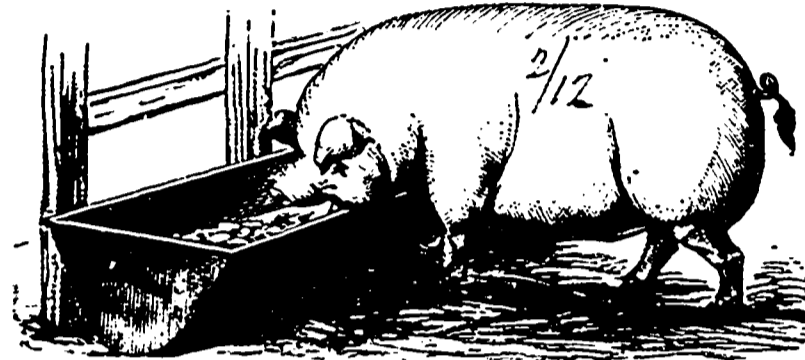
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