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RURAL NOTES.

"WILDEST enthusiasts," *The National Live Stock Journal* remarks, make "extravagant claims" for the silo system.

GENERALLY speaking, early culture is the most successful, and early maturing crops are the reliable ones. The early market, too, usually gives the top prices.

THE best time to dig a well is during a severe drought, and if a good vein is then reached, little fear need be entertained that the supply will fail.—*N. E. Farmer.*

ALL honey not in the comb is looked upon with suspicion. Comb honey, too, has not escaped, although the efforts to adulterate it have so far not been very successful.—*American Cultivator.*

LARGER loads can be hauled with broad wheels, and if the meadows are soft these wheels do not sink into the sod and cut it up as the present narrow tires will do.

THE best renovator for meadows and pasture land is barnyard manure, evenly scattered with fork and harrow. It is a complete fertilizer, containing in goodly proportion the three substances needed by growing crops—nitrogen, phosphoric acid and potash.

To test seeds, a certain number should be counted out and planted in a box or flower-pot, keeping them in a warm room. By counting the number that grow, the germinating qualities can be very nearly ascertained, and thus sometimes a complete failure prevented.—*Massachusetts Ploughman.*

ONE of the best rules for planting out an orchard is to select chiefly the kinds that are known to do well in one's own neighbourhood. A great many trees have been lost in the northern counties of the Province through the practice of choosing such varieties as do well only in the southern counties.

FARMERS have much to learn concerning the value of small fruits. They are profitable and certain, the labour of cultivating them is comparatively light, and there is a market for them everywhere. No labour on the farm is so well repaid as that spent in raising grapes, strawberries, raspberries and currants.

THE imports of live cattle into Great Britain the first two months of this year show a considerable increase over the number in corresponding time the last two years. More fresh beef was

imported than last year, but not nearly as much as in 1881. The imports of bacon and lard were smaller, as were those of cheese, butter showing some increase.

It costs money to build and maintain good country roads; but, if carefully laid out, it is money well invested. The most valuable and saleable farms are those lying along the best roads. To improve the roads, therefore, is a sure way to increase the value of farms. The best of land is worth little for farming purposes if shut out from the world.

THE Niagara grape is said to be the best variety grown in western New York. It is a strong grower, withstands drouth, insects and disease, is remarkably productive, ripens early, and hangs fresh and plump for a long time after ripening, ships and keeps well, and has an excellent flavour. All these qualities should make the Niagara a favourite with grape growers.

WHEN we feed cattle, we place the food where the animals in a natural position can reach it with the greatest ease. The same common sense practice holds good in providing food for plants. Some send their roots deep into the soil, and others send them near the surface. The manure should be so applied as to be most available and accessible to the feeders of the plant.

THE island of Jersey, which has given to the world the Jersey breed of cattle, has an area of only fifty square miles. Yet, it supports 12,000 cows, the animals being kept in stables all the year, and every particle of manure is saved. Their principal food in winter is parsnips, and this food has probably developed the butter quality which gives the Jersey cow its distinct reputation.

THE Vermont farmers are noted for the attention they pay to dairy interests, and in the last fourteen years they have increased the average butter yield of cows by fifty pounds. This has been accomplished mainly by better feeding, and especially by adopting the soiling and ensilage systems. The cost is no more than under the old plan, and consequently the increase is all clear profit.

THEY are trying in New South Wales for Government aid to eradicate the naturalized cactus, a mischievously prolific plant popularly known as "prickly pear." The rapidity with which it spreads is illustrated by the statement (perhaps not wholly disinterested) of one advocate of the "appropriation," that whereas \$250 would have sufficed thirty years ago to rid the colony of it, "a million sterling" will soon be little enough for such a purpose.

THE *Gardener's Monthly* says: "It has only recently been clearly demonstrated that a dead branch on a tree makes almost as great a strain on the main plant for moisture, as does a living one. This is one of the most important discoveries of modern botanical science to the practical horticulturist, as by this knowledge he can save many a valuable tree. A dead branch, or a weak one, should be at once cut away."

WE believe there is, or ought to be, a farmer's side to the tariff question. The increased duties on reapers, mowers, waggons, ploughs, etc., are certainly no gain to the farmer. They don't assure him better or cheaper implements, and no better market for his produce. Farmers will begin to think that it is time they had a voice in the framing of tariffs, as well as some other people—especially the farmers of our great North-West empire.

LIGHTNING followed a single strand of barbed wire with which a pasture fence was supplemented; "passed down nearly every post on the north side of the field, a distance of about thirty-five rods," and finally down a tree to which the wire was stapled, killing a cow on the way, "the indications being unmistakable," a correspondent of *The Michigan Farmer* says, "that she stood under the tree with her head near or just under the wire."

THE *American Cultivator* says that above all things else it is necessary that there be a general understanding that large crops are always proportionately more profitable than small crops, that within certain limits a given amount of products can be grown more cheaply on five acres than on ten. When this fact is properly appreciated the popular craze to secure more land will be abated, and better culture of fewer acres will take the place of the present system of half tillage over large acres.

GEORGE WHITFIELD, of Rougemont, Que., and Geary Bros., of London, had an important sale of thoroughbred cattle at Chicago recently, including Polled Angus and Aberdeens, Galloways, Shorthorns and Herefords. The Angus and Aberdeens were the favourites by long odds—twenty-two bulls selling at an average of \$474, while the average of twelve Herefords was \$190, and that of eleven Shorthorns only \$97. The latter were not in condition to command the best prices, but it is evident that the present rage among prairie farmers is for the Angus and Aberdeens. It is saying much for Canadian breeders that they are supplying the American demand for thoroughbreds on so large a scale, for it is the fact that farmers in the western States are mainly dependent on Canadians for improved stock.

FARM AND FIELD.**HINTS CONCERNING CLOVER.**

Clover is sown, as a rule, early in the spring, whether with some grain crop, the cultivated grasses or as a crop by itself. A practice common in the northern States is to sow clover on late snows in March or April.

The analysis of red clover indicates what manures will increase its growth. It contains 92 to 84 per cent. of lime and about the same per cent. of potash, with 9 to 10 per cent. of phosphoric acid, magnesia, etc. As lime enters so largely into its composition, lands deficient in this respect require generous applications of lime. Deficient soils are benefited by gypsum (sulphate of lime), the phosphates and wood-ashes. Common stable manure, containing as it does all the elements of a good fertilizer, is also suitable as a top-dressing for any pasture or meadow.

While gypsum is not always a success on ordinary soils, sown broadcast at the rate of one to three hundred bushels after the leaves are developed, it seldom fails to promote a remarkable growth of stem and leaves. Experiments made by Dr. Pincus, of Germany, regarding the action of gypsum on clover, made it appear that the sulphates check the development of the flowers and also of the seed, from which he inferred that, while the application of gypsum is favourable to a large increase in the yield of hay, it is not favourable to the development of the seed crop. Commissioner Killibrew, of Tennessee, says he has rarely found benefit from the top-dressing of gypsum on clayey loams; its effects have always been apparent on a strong limestone soil. In a dry season gypsum is undoubtedly beneficial on all soils, and it always serves a good end in its highly stimulating effects on well-restored lands where there is a good coat of clover.

Bones are also an invaluable aid to clovers, their leading elements being lime and phosphoric acid; nitrogen is also abundant. A dressing of bone-dust will often quite restore old pastures which have been long cropped, and the phosphate of lime exhausted. Grasses are greatly benefited by wood-ashes. A top-dressing of ashes may be applied to grass on all kinds of soil with the assurance that they will pay the expense attending the application. For permanent mowing lands ashes are advised when they can be obtained in sufficient quantity.

Coarse manures ought not to be thrown on clover, as they are liable to injure the plants. An excellent top-dressing for meadows, to be applied after the last cutting or in the spring, when the soil is poor, is barnyard manure composted with muck, peat, leaves, sod, potato tops and other perishable vegetable matter.

Professor Levi Stockbridge, of Massachusetts, after a series of experiments with mineral manures at the Agricultural College at Amherst, prepared the following formula for a fertilizer to be sown on clover—broadcast—in the early spring to induce an increased yield: Nitrogen, 43 pounds; potash, 40 pounds, and phosphoric acid 11 pounds. These materials he advised to be supplied in the form of sulphate of ammonia, 24 per cent. dry salt, 215 pounds; muriate potash, 80 per cent. dry salt, 80 pounds; super-phosphates, 80 pounds. This amount was designed for one acre.

ENGLISH VIEWS ON POTATO CULTURE.

The London *Gardener's Magazine*, in a recent issue considers at length a number of disputed points in potato culture. The sum and substance of opinions expressed is briefly as follows:

It is a matter of secondary importance whether whole sets or cut sets are planted, so that the

seed is sound and contains strong eyes. The refuse and sweepings of the winter store abound in weak eyes, hence should be avoided for seed.

It matters little whether the seed be dormant or sprouted at the time of planting. Short, plump shoots are obtained by sprouting seed in full daylight which are almost certain to result successfully, but the man who plants large tracts of land cannot do this, and generally speaking he does well without it.

When very large potatoes are planted the crop usually proves less satisfactory than when seed of as mallish or medium size is employed. The sets cannot be too ripe; if hard as flints all the better; if shrunk and shrivelled through being immature, all the worse. The reason why large sets do not usually produce good crops is that they produce too many shoots from one centre. The consequence is that the haulms become crowded, and form a cold mat on the ground, to the injury of the tubers that are beneath. The fancier reduces the number of eyes, because one or two strong shoots will pay him better than a crowd of weakly ones. The farmer adopts the shorter method of planting small sets whole or large sets cut, for he knows that large sets uncut will fill his field above ground and keep it empty below.

To plant unreasonably close is to ensure failure rather than to court it. The distance apart depends on the variety and the character of the land. The nature of the season also has an influence. For instance, warm, wet weather promotes an undue spread of haulm.

The potato will grow in any soil; and in a particularly good season the worst soils will produce good crops. But in a run of years the best returns are obtained from a deep fertile loam, or liberally-managed sand, or well-drained peat. Limestone soils produce good potatoes, but the crop is usually small, both in bulk and sample. Well-managed clay land will produce bulk without quality; or, at all events, never such a quality as a deep, fertile, sandy loam.

To grow the crop well is a somewhat costly proceeding, to speak comparatively, but the risk is slight when the work is well done, and a fair return in bulk will range from eight to fifteen tons to the acre. There are two ways of evading the disease, and the adoption of either must be determined by consideration of the circumstances. On a light, lively soil, in a favourable climate, the early sorts will make a fair return and will be removed before the disease appears and in time for planting the land with a crop to follow. On a late soil, or where the late system must be followed, the great matter is to plant a variety that the disease, if it comes, is likely to spare. Happily there are some first-class sorts that are practically disease proof; for although in a bad season they may suffer more or less, they do not, even in the worst case, suffer obliteration.

VALUE OF DIFFERENT FOODS.

Experiments and investigations by scientific men have done much to throw light on the different problems in feeding. We are much better able to decide on the comparative value of different articles of food than we were a quarter of a century ago. But science is often expected to do impossible things, and, in this matter of feeding, some scientists have possibly done harm by too hasty generalizations. We confess to a good deal of distrust, in the present state of scientific attainment, of attempts to exactly state the comparative value of different articles of food.

The chemist can tell us exactly the composition of a food, he can tell us pretty accurately what percentage of food has been digested in a given case, and he can help us much to determine whether we are feeding economically. In like

manner the practical feeder will come to reasonably correct opinions as to the greater profit from different kinds of food or modes of feeding. The results of long experience with a large number of animals has great value; but each must be careful in attempts to make general rules.

There are considerable differences in the chemical composition of different samples of the same grain or grass. In modern milling "wheat bran" may vary wonderfully. The maturity of the crop when harvested; the mode of keeping, and its consequent condition, all have important effects. Most feeders underestimate the importance of attractive appearance, odour and flavour in feeding stuffs. The quantity eaten and the good done by a given quantity are much greater when the food is attractive than when only hunger will compel reluctant feeding.

The great differences in animals adds to the difficulty of making absolutely correct statements of the value of foods. Of two horses, one may grow fat on a ration which will barely keep his mate in fair condition. One may do well on Indian corn; the other need oats. Of two pigs from the same litter, one may add fifteen pounds of weight for each bushel of corn consumed; the other not half as much. There is a fair average result; but this is to be determined only by many trials. Differences in temperature, in the shelter, in the kindness of treatment, in the regularity or frequency of feeding, may cause greater variation in result than differences of kind of food.

We must also bear in mind that the value of a food may be much greater or less as it is fed in connection with others. None of us would do well to attempt to live on either bread or meat alone; yet both are valuable foods. At first sight it would seem a simple question to determine the comparative value of milk and corn as fed to pigs. Feed one lot with corn and another with milk, keeping record of quantity eaten and gain made, and one might say you have the answer; but, undoubtedly, feeding both corn and milk to the same animal would give better results than feeding either alone.

A food poor in itself may be quite valuable when fed in connection with highly-nutritious foods. Thus, one could afford to pay a good price for wheat straw, if he had no other food than corn and oil-cake; just as one will do well to feed some such food as oil-meal, even if the cost be high, when he finds it necessary to make a poor food, like wheat straw, the major part of the ration.

We write this not at all to cast discredit on the careful and very valuable experiments which have been made in this direction; but to give a needed caution against implicit reliance on tables of food values; and as a word of explanation why we refuse to give precise answers to many questions of this nature which come to us.—*Breeder's Gazette*.

GET AN EARLY BREAKFAST.

As the days get longer and work presses, very many farmers with their hired help will rise early and work an hour or more, often two hours before breakfast is ready, attending to "chores," hoeing, cutting wood, etc. Now, we protest that, however convenient, this is a very injurious habit, not only on the farmer himself, but far more so on his sons or any boy who may be working with him, as they are young and growing, and their stomachs need food sooner than the older ones. How often we have heard young men complain of the length of time that it seemed to them elapsed from the time that they began at the wood-pile in the morning until breakfast was ready, even when there were plenty of women to do the work. But we have another and stronger reason to urge our

cause with. The prevalent opinion is that the morning air is the purest, most healthy and bracing, but the fact is that the contrary is the case with respect to the hours before and about sunrise. At no hour of the day is the air more filled with dampness, fogs and miasms than at about sunrise. The heat of the sun gradually scatters these miasmatic influences as the day advances. An early meal braces up the system against these external influences. Every one knows the languor and faintness often experienced during the first hours in the morning, and that this is increased by exercise and the want of food. We once lived for a number of years close to a pond of water and a swamp where in the morning the fog covered everything around it, and we found after a long fight with every form of malarial fever, ague, etc., that we should either have to "pull up stakes" and move away, or invent a remedy, and since we have tried the early hour breakfast plan have had no trouble. Let those who have the least fear of malarial fever avoid the boarding-house plan of a long walk before breakfast. In all malarial districts if breakfast for any reason cannot be had immediately, a cup of coffee, well milked, should be drunk by those who labour out of doors as soon as possible after rising. Then let them attend to the chores, or mowing, hosing, etc., for an hour or two while the team is feeding and breakfast is preparing; you will feel better and do more work. By following this plan and avoiding the habit of going bare-foot, which so many do before sunrise and after sunset, many dollars worth of doctors' bills will be saved.

IMPROVE THE HOMESTEAD.

Every owner of a farm, be it small or large—whether only "ten acres enough" or a tract of hundreds—should make such improvements annually as will enhance the attractiveness and value of his premises. About the dwelling there is usually abundant room for changes for the better, and such as would prove decided improvements. The planting of trees of various kinds, both fruit and ornamental, is one of the investments the farmer can make at this season, and we urge its importance upon all whose premises are not well supplied with these useful and attractive appendages. The outlook from the house should be rendered pleasant by its surroundings, including flowers, shrubs, vines, trees, lawns, neat fences, etc. These things cost but little in time and money, and return many fold in the enjoyment of a family and its visitors, while the outlay is more than repaid in the enhanced value of the homestead. Not only farmers, but village and suburban residents who have sufficient ground—and a few rods afford space for a fine display—should give this matter of beautifying home special attention every spring, and not neglect it during summer and autumn.

But there are other ways in which to improve the appearance and value of farmsteads. Good buildings, fences and the like are among the most prominent factors in enhancing the money value of a farm, and generally will first attract the attention of those desirous of purchasing. A good orchard of choice fruit is another permanent improvement which augments the valuation of one's premises. Farms that are well drained are of course far more productive than those whose surface is interspersed with swamps, swales, or wet and cold spots. Underdraining is an investment that would pay large and continuous dividends on many farms where it is considered unnecessary. These and other matters which we need not even enumerate are worthy of special note with a view to future action, and we trust they will not be overlooked or neglected when the proper season arrives.

HOW TO WHITEWASH.

The *American Agriculturist* gives the following directions for whitewashing: "Procure fresh-burnt lime, not that partly air-slacked. The large lumps are best. The fine portions and small lumps will not make a wash that will stick well. For this reason, lime that has been burned for several months is not as good as that just from the kiln. Put a pound or two into a vessel, and pour on boiling water slowly until it is all slacked and is about as thick as cream; then add cold rain water until it will flow well from the brush. Stir often when using it. A few drops of bluing added will give it a more lively colour. One or two tablespoonfuls of clean salt, and one fourth pound of clean sugar to a gallon of the wash, will make it more adhesive. If the walls have been whitewashed, let them be swept thoroughly, and if coloured with smoke, wash them clean with soap-suds. A brush with long, thick hair will hold fluid best when applying it overhead. If a person has the wash of the right consistence, and a good brush, he can whitewash a large parlour without allowing a drop to fall. When it appears streaked after drying, it is too thick, and needs diluting with cold water. Apply the wash back and forth in one direction, and then go cross-wise, using a paint-brush at the corners, and a thin piece of board to keep the brush from the wood-work or the border of the paper. Colouring matter may be mingled with the wash to give it any desired tint. To make a light peach-blow colour, mingle a small quantity of Venetian-red. For a sky-blue, add any kind of dry blue paint, stirring it well while mixing. To make a wash of a light straw colour, mingle a few ounces of yellow ochre or chrome yellow. The colouring matter should be quite fine to prevent its settling to the bottom of the vessel."

CARE OF FARM MACHINERY.

The advantage of keeping farm machinery from unnecessary exposure to the weather is cogently insisted upon by the *Ohio Farmer*, which says:

We have noticed that ploughs last, on an average, about three years; waggons, eight to ten years; reapers, five to eight; drills, eight to ten. We think these figures are fully as large as the truth warrants. We know of many implements that have not lasted so long, and of many which have lasted much longer. We to-day can point to waggons that have been in constant and hard use for twenty years, reapers that have stood the wear and tear of liberal use for more than fifteen years, drills that have been in use as long, and other agricultural implements that have stood the wear of fully twice the average age of such implements. These implements were not made of unusually good materials nor were they suffered to lie idle. They were put to constant use. What, then, is the secret of their greater endurance? It is simply this—they were taken care of. When not in use they were put away properly.

These implements not only lasted longer, but while they were in use they very rarely failed. They were always ready for work. The reapers did not break down in the middle of harvest and compel all hands to lie idle while some one went to the railway station to get repairs; drills did not fail just when the wheat ought to be sown; the waggons were not always breaking down and occasioning delays and vexation. Another thing may be said in their favour, and that is that they always did good work. The reapers cut a smooth stubble, and put the grain down in good condition; the ploughs did not refuse to scour; the drills put the wheat in just as a first-class drill would; and these implements did good work not only while they were new, but till the last year they were in use.

HINTS FOR THE HOUSEHOLD.

POLISH oilcloth with kerosene.

CLEAN grained wood with cold tea.

WASH matting with salted water.

TURN-OVER collars, with fancy neck-ribbons, are now fashionable.

To make a good liniment that should be kept on hand ready for use in cases of bruises or sprains: Add one-half ounce oil of wormwood to four ounces of alcohol.

"ALWAYS use good manners at home, and then when you go among strangers, you need never be alarmed, for it will be perfectly natural to you to be polite and respectful." This is true; and we have always thought that the best and easiest way to do anything right, was to get into the habit of doing it right.

THE housewife who is on the lookout for little ways to economize will find it to her advantage, if she has seamless sheets which have been used for several years, to tear or cut them in two in the centre, and sew the outside edges together; lap them and sew with a machine. Or they may be sewed over and over. Hem the raw edges. Sheets turned in this way will last for a long time.

A VERY pretty way to cover an old-fashioned square stand (and almost every home has at least one) is to put over the top smoothly a fine piece of scarlet or blue silesia, or cambric; over this put a cover of any pretty openwork lace or muslin. Then put a piece of the silesia about thirteen inches deep around it; cover this also with the lace; the effect is excellent, and in this way a useful article of furniture is redeemed from positive ugliness and deformity. If the legs are scratched or marred, a coat or two of varnish will make them look all right.

EVERY breadmaker has observed that the temperature at which her dough is kept while rising has a decided influence upon its quality. If it is kept warm, so that the process of fermentation goes on rapidly, the bread will be whiter and tenderer than if it is allowed to rise in a low temperature. The little yeast plant with the long name flourishes best at a temperature of about 72°, and when it has abundance of sugar to feed upon. If no sugar is put into the dough the plant converts the starch of the grain into sugar and feeds upon it.

THE mothers of little girls from one and a half years old onward can save themselves a great deal of work, and at the same time can have neat looking children, by making dresses for them out of the plain blue or pink gingham now seen in almost every store. The young mother of a first baby invariably feels that she owes it to this child to dress it for the first two years of its life in white. It is impossible to do this without expending more thought upon it than should be given. The coloured ginghams are so delicate in shade, and can be so tastefully made, that there can be no objection to them.

A CANE-SEATED chair is at best not very comfortable in cold weather, and may be improved by fastening a moveable cushion to the back, at least, if not to the bottom also. This may be accomplished in various ways. One easy way is to purchase a scarlet Turkish towel, fasten a layer of cotton to it, line it with Turkey red calico, and catch it to the top of the chair with bows of ribbon, and at the bottom with some stout cord. The seat may be cushioned in the same way, and if the chair is small the towel will answer for both cushions. Patchwork or cretonne may be used in place of the Turkish towelling, but that is both serviceable and pretty.

GARDEN AND ORCHARD.

TRIMMING APPLE TREES.

BY M. J. HARVEY.

Experience is the mother of wisdom. There are different opinions among farmers about the proper time for trimming apple trees. The main object ought to be to trim in that season of the year when the wound will entirely heal over or the tree is ruined, sooner or later. If that object is not accomplished, the water enters and a hole is rotted into the trunk. It becomes hollow and is destroyed.

Some trim in early spring. The sap forces itself out of the wound in abundance, runs down on the body or larger limbs; the bark turns black and often dies; and the tree is permanently injured. Another follows the opposite extreme, and prunes in August, or even in early winter, when the sap has turned into the wood. The wound does not turn black, as in the other case; but heals slowly, if at all, and a tree with holes in it is the final result. If the bark is entirely peeled off a tree, from the roots to the limbs, in the longest days of mid-summer, which is somewhere from the 15th to the 26th of June; a new bark is formed and the tree is not injured, and an old tree is said to be benefited by the operation. If apple trees are pruned at this time, if any bark is accidentally taken off, new bark will form, to cover the wound where the limb has been removed. It will entirely heal over, if the limb removed is not too large and the growth is sufficient for that purpose. The sap of the tree is not too thin to run out and blacken the tree, as in early spring, nor too thick and already formed into the wood and the wound comparatively dry; both wood and bark, as in later pruning, are not stopped in further growth over the wound. Many farmers, as a general thing, prune an orchard without discretion, sawing off large limbs that can never heal over, oftentimes cutting them off some inches from the trunk of the tree, or the larger limbs from which they are removed. The stub of the limb will die to the body, and the further decay of the tree is sure.

In pruning off too much, the natural equilibrium between the roots and the top is destroyed, and the body of the tree will come out in suckers or sprouts. Such ignorant pruners had better cut their trees down and trim them afterward, which is easier done and with more profit to themselves, as the ground could be employed for some better purpose. If a limb is dead, there is no option; it must be cut off close to the tree. The only living limbs that should be cut off are the small ones, that will heal over, coming from the larger branches in the inside of the top (and those that cross and gall each other), thereby letting in more sun to the apples, to give them a better colour and give the pickers a better chance in the tree. Everything beyond this is superfluous and pruning had better be dispensed with altogether. Many fine orchards receive their death-warrants from such ill pruning every year.

FUCHSIAS.

BY MRS. MARY E. WILLIAMS.

Fuchsias, so called in honour of the distinguished botanist, Fuchs, are thought by many to be difficult of cultivation and of shy blooming habit. I learned by a seeming accident that these plants love the sun, if sufficient moisture is supplied to prevent a too rapid evaporation from the foliage. A few years since, I set out a large bed of rooted cuttings under a peach tree in the garden; a storm blew the tree down soon after, leaving them fully exposed to the blazing July sun, and

what made their condition more forlorn was that they were growing in soil thrown out in excavating for a cellar, almost solid yellow clay; a fact I had ignored when transplanting them from their nursery—a wooden box. Accommodating themselves to circumstances, the brave little plants began at once to throw out laterals, and before a month had passed the surface of the bed was entirely hidden by their luxuriant growth. They bloomed profusely till late in the fall, when they were lifted and removed to the cellar. This was my mode of treatment. Every day at noon, if the weather was dry or windy, I gave them a copious shower bath from a watering pot, loosening the surface soil toward sundown, to admit air to the roots and prevent it from baking. From first to last, there was not a particle of fertilizing matter applied, and, contrary to all rules, the water used was drawn from the cistern, as needed, instead of being left in the sun to become warm. I pursued this course in order to make one job of it, as I cultivate a comparatively large collection, and am obliged to divide my time giving each plant its portion in due season. Fuchsia cuttings will strike roots in three days, if they are taken from the succulent new growth. It takes much longer if the wood has become hardened, and the results are less satisfactory. Blossoms are larger and more profuse on young plants, which suggest vigorous cutting back of the ripened woods. This encourages new growth. I never cover cuttings. They are left out if the weather is warm. Trusting to the survival of the fittest, nine-tenths become thrifty plants, blooming, as soon as they begin to throw out laterals. They should be kept quite moist.

HARDY PLUMS.—THE CHICKASAW.

There seems to be quite an effort made at last to make something out of our wild plums. It is an effort that should have been made long ago, but we suppose that hope has not been wholly abandoned of yet getting the old favourites to do as they once did—that is to be grown free from the curculio. The great trouble with the garden plum is its liability to destruction by the puncture of this pest. It has been noticed that some plums do not rot or drop as readily after attacks, as others, and hence there has been a hope that some one might be found wholly curculio proof. May be so, but thus far the efforts are not promising. We think, however, that much of this exemption is local. That is, that the same variety in some soils and under some circumstances would rot sooner after being injured than in cases where everything is favourable to the highest health. However this may be, nothing definite has been discovered to save the plum sound to us, except such labour as few have time to bestow by daily shaking the trees, gathering up and destroying the insect, thus making the fruit comparatively scarce and dear.

None of these native plums are as good as the old-fashioned or new-fashioned kinds; but then if one can get no good plums at all, why not have some that he can get though hardly worthy of the name of plum at all? This is just how it is with these new wild kinds. They bear in great profusion; the trees are vigorous and healthy; the curculio attacks them and some of them succumb, but not near the extent to which the sweet plums suffer. One may manage to eat them raw, but they will make very good pies and preserves. One may never be without a plum in the house if he grow some of these. It is an advantage certainly; and then there is the hope that a real substantial improvement may in time be gained.

There is a new wild plum called the Chickasaw, which is a decided improvement on all the others. It is of a good size and of a red or maroon colour.

It produces its like from the seed, is a profuse bearer, and the attacks of the curculio are so slight as not at all to interfere with the crop.—*German-town Telegraph.*

ASPARAGUS BEDS.

No family garden is complete without an asparagus bed. This vegetable can be grown from seed, but the quickest method of procuring it is to put in roots, which should be one or two years old. The seed is sown in the fall or very early in the spring. There are two methods of cultivation, one being the digging of trenches, which are filled with well-rotted manure, setting in the roots so that the crowns will be below the surface. The second plan, which is better, but not generally practised, is to fill the trenches with manure and set the roots on a level with the ground, covering with rich earth. As they send up the shoots follow with a mixture of rich earth and manure, to which a fair proportion of salt has been added, and continue the hilling up until about two feet are attained. The beds will then be in the shape of high broad ridges, the cutting of the stocks being done with comfort and ease, and a neater appearance is secured. Asparagus should be cut when just peeping through the ground, with a long-bladed knife, and not when the stalks are six inches high. The less proportion of green stalks the better, for they are sufficiently tender when cut at the right period. Too much manure, compost, or soapsuds cannot be given them. The beds will be fit for cutting in two years after transplanting, and will last for twenty years or more. Conover's Colossal is the largest variety, and Defiance the earliest.

CURRANTS.

Currants prefer a moist, cool situation. Plant in rows four feet apart, and the plants three feet apart in the rows. Keep the ground mellow and free from grass and weeds. A thorough mulching is absolutely necessary for large returns. As soon as the leaves turn yellow and commence to fall, with a pruning knife remove all the old wood and cut back the young shoots one-third their length, cutting to the ground enough of these to admit light and air into the bush freely. Should the currant-worm appear, dust the bushes with powdered white hellebore (to be had at any drug store) while the dew is on. It will also exterminate them to dissolve an ounce of the hellebore in a pail of water and apply with a syringe—the best way to use it.

HOW TO GROW VERBENAS.

To grow verbenas successfully plant them in beds out in the turf. Chop the turf well, and thoroughly mix with a good share of well-decomposed stable manure. Never, on any account, plant verbenas in old and worn-out garden soil, as they will most assuredly fail. Give them a change of soil each season, as they do not thrive well two years in the same bed. As a house plant the verbenas is not a success. It is almost always sickly and infested with red spiders. They cannot be kept over winter in a cellar. With verbenas it is either growth or death.

The bulbs of the tube rose never bloom but once. They require a sandy soil.

In Europe fruit trees are planted by the farmers and cottagers with judicious care and discrimination in their fields and gardens. In an ordinary season they gather an abundance of luscious fruit—not only enough to supply their domestic wants, but also send large quantities to market; from which they realize an acceptable increase in their income.

BEES AND POULTRY.**THE GUINEA-FOWL.**

The Guinea-fowls are natives of Africa and Madagascar, where they are found under nine or ten species, constituting the genus *Numida*, which, with the allied genera *Ayolastes* and *Phasidus*, each represented by one species, make up the family *Numidie*.

The genus *Numida* is subdivided into three groups, of which one has a bone casque upon the head; a second has a crest or plume of feathers in the place of the casque, and the third, comprising but one species, is destitute of either casque or crest, and is called the Vulturine Guinea-fowl, from the vulture-like appearance of its head.

The domesticated Guinea-fowl owes its origin to the first group, and to either the species *Numida meleagris* or *N. ptiloryncha*, or both. *N. meleagris* inhabits the west coast of Africa, from the Gambia to the Gaboon, whence it has been imported into the Cape Verde islands, and also into some of the West Indies, where it is now found wild, and is sometimes extremely troublesome to farmers from its propensity to scratch up and eat the seed corn, peas, etc., and the yams and cocoas.

The ordinary Guinea-fowl retains much of its wild nature in domestication, in common with its cousins, the turkey and the peafowl. It will seldom roost in the fowl-house, preferring the lower branches of trees; the hen is very skilful in hiding her nest, and the young birds, after they are a few weeks old, thrive best to be allowed ample range.

The period of incubation is twenty-six to twenty-eight days; the eggs are most advantageously hatched under a small Game or Bantam hen, and the young chicks should have for the first few weeks, the same treatment recommended for young turkeys, except that it is imperative that they be frequently fed—they require food oftener than any other young fowls.

The Guinea-fowl is not a popular bird, on account of its harsh and incessant noise, which begins early in the morning, and is continued until night without intermission. To those who can endure its racket, however, it offers some points of value, being a persistent insect-catcher, a good layer, giving flesh of a gamey flavour much relished by some, and being so easily disturbed at night that when it can be induced to roost near the fowl-house it serves as an excellent hen-thief alarm.

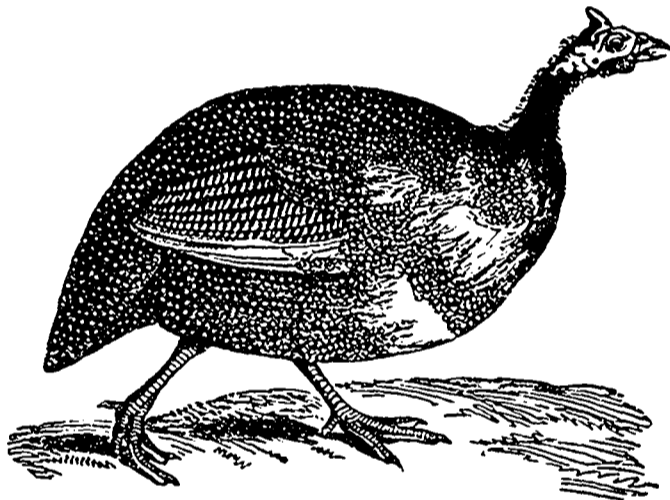
THE LENGTH OF LIFE OF WORKER BEES.

A correspondent in an exchange gives the following on this subject: I thought I would satisfy myself in regard to the life of the bee in the height of the working season. I had a colony of the little black bees, and on the morning of May 8th I killed the queen, and by carefully looking through the hive I found one black drone and destroyed that in the evening of the same day. I put in a cell for a yellow queen on the 2nd of June. She was hatched out and there were a few yellow bees in the hive on the 30th, just twenty-one days from the time the eggs were deposited. On the 7th of July a few yellow bees were to be seen playing around the hive, and on the 18th of July, just fourteen days from the time the yellow bees were hatched out, a few were seen at work with the black bees. Now any one can see that if the yellow bees hatched in twenty-one days the last black

bees were all out by the 80th of June, and if the yellow bees went to work on the 12th of July, the last of the black bees must have gone to work on the 4th of July, making fourteen days from the time they were hatched, unless one will go to work sooner than the other. This colony contained nothing but black bees, when the black queen was destroyed; on the 18th of July, just forty-nine days from the time the black queen was destroyed, there was not a black bee to be seen about the hive. I opened it, and not one was to be seen inside. I know that the bees will live longer at other seasons of the year, and I thought this would be a good chance to test in the height of the working season. The hive was examined every day during the whole time, so that no mistake might be made. From the above it will be seen that the lifetime of a honey bee, in the busiest working season, is but four weeks or twenty-eight days.

EARLY CHICKS.

And the chickens coop remind one of the chickens, and that it is time to set hens for early chicks—provided the hens are ready to sit. It will pay to get two or three broods of early chicks just to have the pullets for layers next fall. Plymouth Rocks, Brahmans, and Cochins hatched



in March and the forepart of April will commence laying before cold weather, and if provided with a comfortable house and the right kind of care and feed, will lay right along through the winter. Leghorns, Hamburgs, Houdans, and other small breeds should, if destined for winter layers, be hatched in May and June.

If you would have success in hatching early chicks, select trusty hens, see that the eggs have not been chilled, prepare a warm nest, don't give the hens any more eggs than they can cover, and don't set them where they will be bothered by the laying hens. When laying and sitting hens get together on one nest there is apt to be an argument, and the eggs get the worst of it.—*Fanny Field, in Prairie Farmer.*

EGG-EATING HENS.

As hens are sometime subject to this vice they are not always at fault. As we before attempted to explain that many breeders were responsible for "feather-pulling" among their fowls, so can we say the same for the eating of eggs by hens. As the hen is forced to provide the material for forming the egg, nature prompts her to select that which most clearly approximates to those substances from which the egg is derived, and as her appetite is the prompter in the matter, she makes no distinction of her own free will, harmlessly, as far as she is concerned, doing that which we do not wish—eating eggs. But hens only learn to eat eggs, and when the breeder throws refuse egg shells in the yard or allows the con-

tents of broken eggs to remain where they can be devoured, an acquired habit will be the result. This is not all. If the food is not of a variable character, containing all the necessary constituent elements that enter into the composition of an egg, shell also, the breeder must expect the hen to resort to any device within her power to comply with the natural law of supply and demand. But few cases are known of hens breaking the eggs to eat them until the art is taught them in some way, and then they are not ambitious of knowledge in that direction when they are fully supplied with all they need.

DISPOSITION OF BEES.

On this point a correspondent of the *Bee Journal* says: "The temper of bees is an effect, the causes of which comes from two sources, viz.: inheritance and treatment. My observations regarding their disposition (which have been more than ordinarily careful, since I have been breeding for good nature) have taught me that bees that are carelessly handled are the crossiest; those let alone, next; those that are properly handled, gentler than either. This, as far as treatment is concerned. Breed from your gentlest and best honey gathering colonies; never undertake to handle your bees until you have settled the question of "who is boss" beyond all doubt. Smoke first and jar all you wish afterward, and your bees are not offended. Jar first and smoke all you please afterward, and they show anger and resentment for days afterward."

FOOD FOR FOWLS.

Fowls kept in confined space should have soft food at least once a day, say first feed in the morning, and plenty of green food; lettuce during the season is excellent, also cabbage; the heads should be thrown in whole to the fowls, not chopped; it will afford employment. Meat should also be supplied, else they may eat each other's feathers. It is a capital plan to run a skewer through a bullock's liver and pin it to the ground in the centre of the yard; it enables the birds to peck off the meat in mouthfuls, without its being drawn all over their yard.

BONES can all be disposed of easily when one has a flock of fowls. Every hennery should have accommodations for crushing them to a suitable size, so that fowls can swallow them.

HENS are early risers, and do not like standing around on one foot waiting for their breakfast. The morning meal with them is the most important one of the day. Boiled potatoes, turnips, carrots, anything in the vegetable line, mixed with bran or shorts, seasoned with pepper and salt and fed warm, will make any well regulated hen cackle with satisfaction. Feed a few handfuls of wheat screenings at noon, and at night give a liberal feed of whole grain of some kind.—*Poultry and Farm Journal.*

EARLY chickens are desirable on every farm, and can be had when the owner will take proper care of them. Attention has often been called to the value of a barn cellar for this purpose, and as it has other good purposes one should be on every farm. Chickens will do admirably in mid-winter on a warm manure heap in the cellar, and with the chance to lounge in the sun when that luminary is shining. In spring or summer they are always getting into mischief of some sort when at large, but in winter they have the run of a dry manure cellar.—*Exchange.*

HORSES AND CATTLE.

THE BREEDING AND REARING OF HORSES.

The breeding and rearing of live stock has always been one of the most profitable branches of agricultural industry, and of all kinds of live stock horses have been and are the most profitable. A comparison of the market values of cattle and horses proves this very conclusively. Taking a central point, as Chicago for instance, as an example, the following figures, showing the values as taken from recent published market reports of sales, may be given :

CATTLE.		HORSES.	
Pounds.		Pounds.	
Fancy.....1,500	\$105 00	Fancy.....	\$1,000
Best.....1,500	90 00	Best.....1,100	825
Choice.....1,500	82 50	Good.....1,400	275
Good.....1,200	55 00	Fair.....1,100	175
Medium.....1,100	52 25	Common.....1,000	125
Common.....1,000	40 00	Inferior.... 1,000	85
Inferior.....1,000	30 00		
Cows.....	45 00		

These figures possess a world of significance. A high-bred steer, in whose breeding and rearing the best skill has been exercised, brings in the market seven cents a pound on foot. A horse bred and reared under similar circumstances, but at no greater cost, excepting, perhaps, for the service of the sire, brings \$1 per pound on foot ; a fair carriage horse bred from much less select stock, and valued mostly for its form and carriage, is worth about thirty cents a pound. As we approach the lowest grades a similar difference exists, always greatly in favour of the horse, until we reach the commonest grades, which unfortunately, but by no means necessarily, are the most numerous, and then it is found that while a poor steer brings three to four cents a pound, a poor horse brings eight and a-half cents. Indeed, it is a very poor horse that sells for so low a price as \$85, and such a one as any ambitious farmer would be ashamed to drive upon the road to anything better than a manure waggon, and even then he would feel meanly if a neighbour eyed his team too closely. Further east the difference is still greater in favour of the horse, but the above figures are sharply enough defined to make the comparison as strong as may be desirable. A very mistaken view is too often taken of this business. It is generally supposed that while beef is a staple article of food, the supply of it can never become too great for the demands of consumers ; yet there is a constant danger that horses may easily become too plentiful and so be found unsaleable at a profit. This is very true as regards beef, but quite wrong as to horses. For as business increases and the country grows the necessity for horses increases in a greater ratio ; while as wealth becomes more largely distributed a demand for the best kinds of horses arises which so far outstrips the supply that the breeder is enabled to put his own price upon his animals, in many cases, and it is paid without question or hesitation. In this business, then, there is room for all, but as in all others there is most room at the top ; and a most liberal recompense for those who have the tact and skill to succeed in producing the best article.

The greatest drawback, however, is found in the general absence of accurate knowledge in regard to the breeding of horses. With most farmers a horse is a horse, and nothing more. It is very rare that a mare is bred with any thought of its qualifications or a sire is selected with any regard to its special fitness for getting a sound, healthy, and well-formed colt. On the contrary, a worn-out, broken-down, diseased, unsound mare is chosen for the rearing of a colt because she can be better spared from farm work and in entire neglect or ignorance of the fact that her unsoundness and other defects will be surely transmitted

to her progeny, and will appear sooner or later, but oftener sooner than later, and before the animal is well matured and fit for work. In the same way a sire is too often chosen because the fee for service is the lowest and without any knowledge of the antecedents of the animal. He may be blind or spavined or constitutionally defective, but, if he is in good condition, fattened up, and fed for his season's work, and is well handled by his groom to make a show, he is accepted without further question, while a really good horse, for whose service a fee barely adequate for its actual value is demanded, is rejected. As a matter of course, a farmer cannot make a profitable business of rearing horses under such a system as this, and as the system is general the business is in considerable disrepute, poor horses being too plentiful. But yet the few good horses bring such tempting prices that farmers are anxious to know how they can get a share of the better part of the business of rearing them. In the first place, it is necessary to begin at the foundation and start right. This is by using only sound and good mares, and selecting an unobjectionable sire. This selection should be made with a view to some clearly defined purpose. If this is to rear a general purpose horse, one that will sell on sight in the nearest town or city as a light draft horse, or a farm horse ; or to raise a heavy draught horse for draying purposes, or a stylish animal for a carriage horse, or a speedy one for a roadster, the mare and sire should both be suitable, but especially the latter, for in breeding horses the sire possesses the greatest power of impressing his character upon the progeny, more especially if his breeding is superior.

For a large horse, a loose-built, large framed mare should be used ; while a compact, well-formed, high-boned mare will produce a horse that is qualified for a roadster in which speed or endurance or both are required. The Hambletonian strains, and that too much neglected strain, the Morgan, may be selected for either of these purposes, while for heavy horses the Clydesdales and the Percheron are without rivals. The Norman horses, of which so many have been introduced into the West, are to be selected with great care, for the reason that some of them have been badly bred, and seem to have been chosen for importation more for their size and weight than for their better qualities. But when well chosen Norman horses produce the most valuable colts for heavy draught purposes. However, it is quite clear that the farmer must study out this for himself, and only the general principle, viz., that he must first form a purpose and then take the requisite means for carrying it into effect, can be here laid down. To do this he must become acquainted with the various classes of horses and their adaptation to different uses by a close study of the subject.

In the second place the rearing of the colt must be such as not only to preserve all the good qualities inherited from the dam and sire, but to add to them a robust and vigorous constitution and a good form. To secure these the best feeding and the most careful training are necessary. Many a good colt is spoiled for want of care in respect of these, but at the same time many a really inferior colt is improved and saved by them. The feeding and the training, too, of an unborn animal may be begun with the dam. To nourish the foetus the dam requires excellent feeding, and every physiologist knows how the mental qualities of a young animal are impressed before birth by the nervous condition of the dam. The soundest and the best food should therefore be provided for the mare, and her management should be such as will preserve an evenness of temper, docility and confidence. To avoid whatever may irritate, alarm,

or disturb the mare in her sensitive condition should be the extreme care of her owner, because these effect the disposition of the colt to a very great extent, and the quiet, confident, and docile habits thus secured add very much to the ease and success of training and to the future value of the mature animal.

The feeding of the young colt should be generous, but regular and systematic. It is sometimes recommended that a colt should be helped in its early feeding by the addition of cow's milk to its rations. Probably few horsemen who advise this course know the danger that may be incurred by this practice. The milk of a cow is so very different from mare's milk that it can only be given with the greatest caution. The following figures prove this :

Per cent of	Composition of	
	Cow's Milk.	Mare's Milk.
Water.....	86.60	90.81
Solids.....	13.40	9.69
	100.00	100.00
Fat.....	8.86	1.05
Casein.....	4.66	1.95
Sugar.....	4.18	6.28
Salts.....	.68	.80
	18.40	9.67

The cow's milk contains three and one-half times as much fat and two and one-half times as much casein as the mare's milk, and only two-thirds as much sugar. Fat is not digestible in the stomach of a young animal, and a calf from a rich milking cow, a Jersey, for instance, is exceedingly apt to suffer from indigestion from this cause ; and diarrhoea is one of the most rapidly destructive diseases to any young creature. If the mare's milk is not thought to be sufficient it would be better to stimulate the secretion by extra food to the dam, rather than disturb the colt by giving it cow's milk, and do it a serious injury. A mess of scalded bran and oat meal, sweetened with sugar given to the mare would be of very great service to the colt, and would avoid the danger pointed out. But this even must be done with caution not to go to excess, and the feeding had better be begun three months before the birth of the colt rather than push it to excess afterward.

After weaning, or some time before—and the weaning may be done gradually and postponed as long as may be convenient—the colt may safely get a few oats. These may be given as soon as it will take them from the hand, or as soon as it is seen nibbling them from the feed-box. These should be of the best, free from smut and a year old. If the crop has been smutty the grain should be washed. Sugar in small quantity given occasionally is taken readily by a colt, and will be beneficial, as well as a great help in the training. The training should be begun very early and the colt gradually used to discipline. There will then be no need of "breaking" the young animal, for it will be as eager to fulfil its training as its owner can desire, if the management has been kind and judiciously firm.

POPULARIZING FINE STOCK.

The rapid increase of interest in improved stock—well-bred stock—among American farmers, is every way gratifying. In no country in the world is such interest so directly manifested. It is not "Yankee boasting" to say that in no other country is there an equally wide-spread interest, or equally energetic action, as a whole well considered, in the matter of improving the stock of the country. Surely American farmers manifest no narrow-mindedness in this matter ; and they do not show excessive prejudice in favour of stock reared in their own country. We are importing largely, and of many breeders from different

countries. In no other country is there more prompt and intelligent discussion of questions of breeding and management. The pages, reading and advertising, of our own paper are sufficient answer if any dispute these propositions.

Granting all this, and thankful for it, with high hopes for the future from what has been done in the past, and is now being done, it is still true that a very large percentage of American farmers have no direct interest in improved stock; do not believe in it; look upon pedigrees, herd books, questions of purity of breeding, etc., as "hum-bugs," and count herds or flocks of finely-bred animals as designed only for speculation on the part of wealthy or fancy farmers. Many take no pains to inform themselves of what is being done. The writer talked with an Illinois farmer of more than ordinary intelligence on many matters, something of a cattle raiser too, who had never heard of the black polled Scotch breeds of cattle. Ask a dozen general farmers in almost any neighbourhood—if they do not read a live-stock paper—concerning the characteristics of breeds of animals other than those found in their vicinity, and note the answers. Listen to the comments of farmers at any prominent exhibition of live stock.

Much yet remains to be done in the way of popularizing the improved breeds of live stock. There are many ways in which good work may be done; we are doing what we can; other papers, the agricultural societies, and live stock associations are doing effective work. Just now let us especially call attention to some things which breeders of such stock can and ought to do.

1st Each breeder should try to prove, practically, that the breed he has chosen deserves the name improved; that it is better fitted for some useful purpose than is the common stock about him. If his animals are kept only for show, if they are managed in so expensive a fashion that the practical farmer is repelled rather than attracted by knowing of them, the owner is not popularizing improved stock. Practice is more effective than precept; seeing makes believing probable. It is one of the crowning merits of the fat-stock shows at Chicago, that they have clearly proven that well-bred cattle are superior to common, unimproved cattle for beef production, and this under methods open to any farmer. The dairy breeds of cattle must rest their claims to continued favour, not on beauty, not on any fancy, but on their superior adaptation for the production of milk, butter or cheese. It is a strong argument against a breed, or else against the management of those who own animals belonging to it, if it has been represented in any community for a series of years, and yet has not met with favour.

2nd. Breeders of improved stock should pay more attention to individual, practical merit than to any fancy point, whether this be fashion in pedigree, or fashion in colour or other equally unimportant points. Where characteristics, unimportant in themselves, have come to possess great value as evidences of purity of blood, they cannot be lightly regarded, but it is always a mistake to needlessly multiply such points. It would be a misfortune, should leading Hereford breeders, for instance, attempt to create a prejudice against all animals which did not have a white spot on the back. Harm has been done in many cases by excessive praise of some one family in a breed, or helping to create an unfounded prejudice against some other family. The Short-horn breeder who sneers at the descendants of "Red Rose by Ernesty" isn't helping to popularize his own or any other good breed of cattle by such action.

3rd. Great harm has been done by overstating

the importance of "purity" of blood, meaning by such purity necessary descent from some one flock or herd, or from some one animal through certain lines. It does not make any breed more popular to insist that no possible system of "grading up" can ever reach practical purity. Over statements of any kind about the merits of any breed finally do harm. There are modern instances of breeds gaining wide-spread popularity in spite of foolish and absurd claims made in their behalf, but it is not wise to try the experiment. A broad-minded, generous course on the part of breeders as individuals and when associated together, hearty recognition of the merits of all good stock of whatever name, and the constant recognition of the fact that our domestic animals are kept for very practical and utilitarian purposes by the mass of farmers, will tend to make more popular every good breed.—*Breeder's Gazette.*

RAISING CALVES.

In reference to this branch of stock-raising, a correspondent of the *Rural New Yorker* gives his experience as follows: "Formerly I used to raise calves by feeding them skimmed milk twice a day, and I usually fed them until they were five or six months old and thought on comparing them with others not fed as long that it paid extremely well to do so; but last spring, not having conveniences to handle milk profitably, and wishing to send it to the factory, I tried a new plan. Oilmeal was bought at \$2.50 per cwt., and every morning a kettleful of porridge was made. One porringer full of the oilmeal was used, wet up in a pan with cold water and then stirred in boiling water. The kettle held about a pailful. This made a feed for ten calves both for morning and night. The meal swelled so when wet that it made the porridge sufficiently thick.

"When dipped into the pails to be fed, about a quart of skimmed milk was added for each calf, which amount of milk was decreased, and at last none was given as the calves got older. After a while a cup of middlings was used with the oilmeal. This kind of feeding was begun after the calves had been fed new milk until they were about four weeks old, and was kept up until they were five or six months old. Care was taken when this kind of feeding was begun not to overdo it at first, and they were accustomed to the new feed by degrees. The result has been all and more than was expected; the calves grew and thrived in a way that did credit to their feed. They were kept in a pasture where they had grass and fresh water and went into the winter in good condition, as good as any calves that we ever raised entirely on skimmed milk."

PRINTER'S INK AND BREEDING CATTLE.

Men formerly had to depend upon the notoriety acquired at fairs throughout the country by taking premiums and making sales in order to attract the attention of other breeders. This was a limited and expensive method of advertising, and it by no means always happened that the man with the best show cattle had the best breeding herd; but at present the owner of a fine breeding herd can stay at home and quietly make up his records, showing the absolute intrinsic value of his animals, and by publishing them through journals and by catalogue win fame not dreamed of by breeders in former times. The world moves, and it will be found that the art of breeding and reaping its rewards has moved also, and the man who does not keep abreast of the times in this regard has sadly mistaken his vocation.—*American Dairyman.*

CREAM.

THAT young lady who made 700 words out of "conservatory" last fall, has run away from home. Her mother wanted her to make three loaves of bread out of "flour."

Every tear is answered by a blossom;
Every sigh with songs and laughter blent;
Apple-blossoms upon the breezes toss them;
April knows her own and is content.

—Susan Coolidge.

A good deal of comment has been caused because a Georgia man broke his back with a sneeze; but how much more wonderful it would have been had he broken his knees with his back.

SOMEbody advertises in the *Herald*: "A house for a family in good repair." "In good repair" means, probably, one in which none of its individual members are partially cracked.—*The Judge.*

ONE of the saddest moments in life is when a man is looking through an old vest and thinks he has found a ten-cent piece, which, when brought to light, turns out to be a cough lozenge.—*Puck.*

Why not take life with cheerful trust,
With faith in the strength of weakness?
The slenderest daisy rears its head
With courage and with meekness.
A sunny face
Hath holy grace,
To woo the sun forever.

—Mary M. Dodge.

WHENEVER you see a man coming out of a country drug store, wiping his mouth with the back of his hand, you may know that the country is suffering under a combined attack of malaria and the license law.—*Western Exchange.*

THE DUSTY MILLER'S LOVE.

"Love me little, love me long,"
Sang the dusty miller
To his wheat art, and his song
Did a maize and thrill her.

"Bid me barley hope. O give
Me one grain of comfort;
I would eat on thee and live
Holding on to some fort.

"In your eyes now love looks shine,
There lies cereal pleasure,
Oh hominy joys are mine,
Filling up my measure."

Came the maiden's corn-full laugh
At the miller's fawning,
"You can't winnow girls with chaff—
Sir! to you good morning."

AN American and an Englishman were discussing the relative size of the Thames and the Mississippi. The American finished the argument thus: "Why, sir, there ain't enough water in the Thames to make a gargle for the mouth of the Mississippi!"

A WILLIAMSPORT disciple of Oscar Wilde the other day took a hot water bath, burned all his clothes inside and outside, limed his cellar, disinfected the whole house by having the windows up all night, made his wife bathe and burn all her clothes, and all because his grandmother told him that her grandmother had killed a polecat.

"PLEASE, sir, there's nothing in the house to eat," said Brown's landlady. "How about the fish I sent in?" "Please, sir, the cat 'ave eat them." "Then there's some cold chicken—" "Please, sir, the cat—" "Wasn't there tart of some sort?" "Please, sir, the cat—" "All right, I must do with cheese and—" "Please, sir, the cat—" "Then, darn it, cook the cat, and let's have it all at once."

This is what a circus performer does, as described in the bill, when he rides a bicycle up a spiral incline and back: "He makes his way along the dizzy curving track, seated upon his writhing, racing, fickle wheel, at a breakneck speed. The variation of an inch from the centre of gravity and the desperate man would incur instant death; but he gracefully emerges with his quivering wheel into the arena, amid the wild and deafening applause of the enthusiastic multitude."

GOOD PAY TO AGENTS.

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

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

The Rural Canadian.

TORONTO, MAY, 1883.

FIELD work is now pressing on the farmer; but, in the midst of it, the garden and the house yard must not be neglected. The yard, especially, should show neatness and taste. Every particle of rubbish should be cleared off, and every unsightly object removed or covered over. Flowers are a great attraction to the farm house, and climbers will soon make the rough places beautiful.

In South Australia a bonus of \$10 per acre is given to owners who successfully establish not less than five acres in trees, which if in strips must be at least 100 feet wide. The Governor is empowered to proclaim parts of the country to be "forest districts." A Conservator of Forests has been appointed and in five years nearly 3,000 acres of public land have been planted, nurseries, etc., started, and fire-breaks made and kept clear.

A good rule in house-cleaning is, to begin at the top and clean down. Another, just as good, is to finish one room at a time, leaving as much as possible for decent occupation. Another is, to put such heavy and dirty work as carpet-beating in the hands of a man. It will be better done by the man, if he has wit enough not to go at it by "main strength and stupidity," and the woman's strength will be reserved for necessary scrubbing and scouring.

It is said that two rabbits will eat as much as a sheep. If this is true, there are not many farmers in Ontario who can afford to harbour a flock of two or three hundred. We hear of a small vineyard in the neighbourhood of this city that has been completely ruined by rabbits, every vine being girdled. In the neighbourhood of London, according to the *Advertiser*, nurserymen and market gardeners are trying to abate the nuisance with the help of poison.

The corn-root worm is a new pest, which is proving troublesome to the farmers of Illinois. It is a slender white grub, not thicker than a pin, one-fourth to three-eighths of an inch in length, with a small brown head and six very short legs. It attacks the small roots, usually near their extremities, and gradually eats its way to the stalk, beginning operations in May or June. A dozen or two at a hill will soon leave the stalks without support or nourishment. We have not heard of the appearance of this pest in Ontario yet, but farmers should look out for it.

Boys are supposed, says the *N. Y. Tribune*, to be universally cruel by nature, but in this country they don't often choose steers as the subject of torture. English steers, however, seem to be sufficiently meek for that purpose. At all events, five boys, all under twelve years of age, discovered thirteen steers in a pasture the other day, and immediately proceeded to "have fun with them," tying their tails together and chasing them around the pasture for half an hour. When this joyous pastime was finally interrupted portions of seven tails had been wrenched off. The boys were afterwards fined twelve shillings each, and no doubt they thought the sport was worth the money.

HOP CULTURE.

The high price of hops is likely to induce many farmers to go into hop culture this year, for experience teaches that when one occupation becomes profitable every one will desire to follow it. But it is well to remember that the hop market is limited, and is easily glutted. Four or five years ago prices were so low that farmers ploughed up their hop fields. Then a scarcity ensued, and prices rose with the demand, reaching the absurdly high figures of last year. Soon there will be a drop again, and so it will go on. There is nothing certain about hops excepting this, that when top prices are reached many farmers will raise hops, and when they are low farmers will plough up and sow the ground with something else. The wise farmer will not put his trust in hops.

A HINT FOR PROFESSOR BROWN.

The experiment stations in New York and several other neighbouring States are conducted on the plan of making frequent reports of the results obtained. There is much to be said in favour of this plan, and we think it might be adopted with advantage at our own Agricultural College. Printed slips furnished to the newspapers and farm periodicals of the Province would always be acceptable, and the mass of the community, in whose interest the college is maintained, would be reached much better than through the official medium of an annual report. Prof. Brown, we are sure, would make such reports valuable and instructive, and he could not fail by them to add to the usefulness and popularity of the college.

PLANTING TREES.

A few words about planting trees. It is a reasonable topic, and much might be said upon it. There are, of course, differences of opinion as to the best time for transplanting. Some maintain that spring is the proper time, and others say better results are obtained from fall planting. Our own opinion is that it makes no difference, as long as the work is carefully done. The strong argument in favour of fall planting is, that farmers have then more leisure on their hands, and they can then afford to spend time in doing the work well. But, no man should undertake what he has not time for doing, whether in spring or fall, else he may find that time, labour and money have been spent in vain. We have all heard of Hodge, a type of man made famous in the cartoons of *Punch*. Hodge is not the right sort of person to be entrusted with the task of transplanting trees.

"I rams 'em in, now thick, now thin,
For what cares I if they grow or die."

No; Hodge will never do, unless master is beside him and directs every movement. Strength is by no means the best recommendation, either in taking up or setting out trees. Skill pays; so does patience. Two men are needed, and three are better. The holes should be roomy; deeper and wider than the roots require, for, with a margin of loose earth, the rootlets will speedily stretch out in search of food supplies. With a bushel or so of muck for each hole, to form a bed for the tree and a partial covering for the roots, the chances will be greatly improved. Place the roots naturally in the ground, and pack the earth firmly about the tree, at least as high as it was before removal. If the work is well done in this way, and with occasional watering, if the season is dry, the loss need not exceed one in a hundred. But, of course much depends on the condition of trees at the time they are set out. If they have been carried a long distance, and have been

roughly handled, it is just possible that no kind of care can save them. In the case of a mutilated tree, it is far better to stand it aside and lose it at once.

THE LATE CHARLES ARNOLD.

In the death of Mr. Charles Arnold, of Paris, which occurred the other day, Ontario has lost one of its most useful citizens. Mr. Arnold was a quiet man, and never made much noise in the world, but, as an intelligent and successful hybridist, he has done vastly more for the country than many men of much greater pretensions. In addition to scientific knowledge, the hybridist needs the gift of patient experiment—for to make trials patiently is indeed a gift. He fails far oftener than he succeeds, and the fact that it takes years to prove the worth of an experiment is evidence enough of the kind of courage that is required to carry on the work. A new variety of wheat, or corn, or of potatoes, suitable to the soil and climate of the country, possessing improved food properties, and capable of reproducing itself on a liberal scale, may be worth millions of dollars to our farmers. This was the kind of work in which Mr. Arnold was for many years engaged, and by which he is best known. He accomplished much, and his name deserves to be held in honoured remembrance. One can only regret that he did not reap a larger reward for his labours—that, as too often happens, he sowed the seed and others gathered the harvest. We think that, in addition to what is now being done for the encouragement of agriculture in Ontario by grants of public money in aid of agricultural and other societies, and by the maintenance of the Agricultural College, a special and very important service might be rendered by encouraging the hybridist in the prosecution of his work. The RURAL CANADIAN has already suggested a scheme whereby this might be done—a standing premium of \$5,000 or \$10,000 for new varieties of standard merits, and such premiums to be awarded by a commission of specialists. There are too few men in Ontario who devote themselves to experiments in hybridizing in the spirit that the late Mr. Arnold did, and some extra inducement is needed to lead more to follow his footsteps.

MAKE a dry walk to the barn, milk yard, and smoke house. It costs but little, yet it saves an immense amount of labour to the domestics in keeping a clean house—the pride of a good farmer. Boards are better than nothing, but a more permanent walk is made with brick, flat stones, or by cutting a furrow or trench fifteen inches wide, throwing in cobble stones or brick bats and covering with soil and sand.

THE Board of Agriculture of the Province of Manitoba offers prizes of \$50 and \$25 respectively, or medals of equal value, at the option of the successful competitors, for the best and second best essays on the most judicious method of farming in Manitoba, either by rotation of crops or otherwise, so as to produce the largest yield of crops annually from the soil. Essays will be received up to the end of September next.

BOYS and girls living on a farm are given to "playing" ownership of the finest of the livestock, particularly of the young animals. A good present from the real owner to each child is a colt, calf, lamb, pig, or fowl—but let it be done in good faith, and the transaction put on record, if the memory is not as retentive as the account book. Children have intense satisfaction in caring for growing creatures that belong to them, and from which they expect to derive substantial benefit. A lasting good will result from such presents in more ways than one.

ONTARIO TREE-PLANTING ACT.

The provisions of the subjoined Act are practical, and it is hoped that it will affect the desired end—namely, the clothing of the highways with shade trees. The following is the text of the Tree-planting Act:—

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. This Act may be cited as "The Ontario Tree-Planting Act, 1888."

2. Chapter 187 of the Revised Statutes of Ontario is hereby repealed.

3. Section four of this Act shall not apply to any incorporated city, town, or village, unless the Council thereof first passes a by-law making the same apply thereto.

PLANTING TREES.

4. Any person owning land adjacent to any highway or to any public street, lane, alley, place or square in this Province, may plant trees on the portion thereof contiguous to his land; but no tree shall be so planted that the same is or may become a nuisance in the highway or other public thoroughfare, or obstruct the fair and reasonable use of the same.

(2) Any owner of a farm or lot of land may, with the consent of the owner or owners of adjoining lands, plant trees on the boundary lines of his farm or lot.

(3) Every such tree so planted on any such highway, street, lane, alley, place, or square, shall be deemed to be the property of the owner of the lands adjacent to such highway, street, lane, alley, place or square, and nearest to such tree; and every such tree so planted on a boundary line aforesaid shall be deemed to be the common property of the owners of the adjoining farms or lots.

(4) Every tree now growing on either side of any highway in this Province shall upon, from, and after the passing of the Act be deemed to be the property of the owner of the land adjacent to such highway, and nearest to such tree, shrub, or sapling.

MUNICIPAL BOUNDS.

5. The Council of any municipality may pass a by-law for paying out of municipal funds a bonus or premium not exceeding twenty-five cents for each and every ash, basswood, beech, birch, butternut, cedar, cherry, chestnut, elm, hickory, maple, oak, pine, sassafras, spruce, walnut, or whitewood tree, which shall, under the provisions of this Act, be planted within such municipality or any highway, or any boundary line of farms as aforesaid, or within six feet of such boundary.

(2) Such by-law shall further provide for the appointment of an inspector of trees so planted; for their due protection against injury and against removal by any person or persons, including the owner, excepting as authority may be given therefor by special resolution of the Council; for the conditions on which bonuses may be paid; and generally for such regulations as are authorized by chapter 174 of the Revised Statutes of Ontario, section 454 (16).

(3) Printed copies of the said by-law, together with sections four, five, six and seven of this Act, shall be posted throughout the municipality, and all claims made to the Council referred under the provisions of the by-law shall be referred to the inspector to obtain proof of the same, and report thereon.

DUTY OF THE INSPECTOR.

6. The inspector shall make to the Council one report for each year, if required so to do, giving the names of all persons entitled to any bonus or premium under the by-law, the number of trees

of each species planted, and the amount of bonus or premium to which each person is entitled, and certifying that the distance between any one tree and the tree nearest thereto is not less than thirty feet, that the trees have been planted for a period of three years, and that they are alive, healthy, and of good form; and upon the adoption of such report the bonuses or premiums shall be paid.

PROVINCIAL TREE-PLANTING FUND.

7. The Treasurer of the Province, upon receiving a copy of the inspector's report, certified by the Reeve and Clerk, shall recoup to the Treasurers of the municipality one-half of the sum paid by the municipality under the authority of this Act, the said copy to be forwarded on or before the first day of November in each year.

8. The sum of \$50,000 is hereby apportioned and set apart for the object of the foregoing section, and shall be known as "The Ontario Tree-Planting Fund."

PENALTIES.

9. Any person who ties or fastens any animal to, or injures or destroys a tree planted and growing upon any road or highway, or upon any public street, lane, alley, place, or square in this Province (or upon any boundary line of farms, if any such bonus or premium aforesaid has been paid therefor), or suffers or permits any animal in charge to injure or destroy, or who cuts down or removes any such tree without having first obtained permission so to do by special resolution of the Council of the municipality, shall, upon conviction thereof before a justice of the peace, forfeit and pay such sum of money, not exceeding twenty-five dollars, besides costs, as such justice may award, and in default of payment, the same may be levied on the goods and chattels of the person offending, or such person may be imprisoned in the common gaol of the county within which the municipality is situated for a period not exceeding thirty days.

(1) One half of such fine shall go to the person laying the information, and the other half to the municipality within which such tree was growing.

TREE BY-LAWS.

10. The Council of every municipality may pass by-laws:

(1) To regulate the planting of trees upon the public highway.

(2) To prohibit the planting upon the public highways of any species of trees which they may deem unsuited for that purpose.

(3) To provide for the removal of trees which may be planted on the public highway contrary to the provisions of any such by-law.

CHEERFUL ROOMS.

We are so influenced by our surroundings that it is very desirable they should be as pleasant as possible. It is not always in the power of the house-mother to live in the locality she prefers or to change its features to suit her tastes, but she may so furnish and arrange the interior of her house that it shall be charming and restful. The charm of a cosy room resides inherently in the mistress and not in what the furnisher and upholsterer can do to make a house comfortable. If fine mirrors and velvet carpets and plush covered furniture, and elegant carving made happy homes, what blessedness would reside in a furniture store. Not till love faces are reflected in a mirror is it made at all precious to us; not till footsteps for which we fondly listen have pressed the carpet is its inanimate web, dear to us; not till chairs and sofas have been consecrated by holding the forms of our friends, do these soulless objects, however costly, have to us other than a mere commercial value. Unassociated with

human feelings and sympathy the most expensive and elaborate interiors are like roses without scent, like marbles without life. Every thoughtful person knows all this well enough, but for all that we are too apt to fancy that possessions like these bring happiness, while we suffer to lie unused such as are at hand and potent to yield abundant pleasure.

One of the chief requisites for a cheerful room, whether in palace or cottage, is sunshine. In the hot summer time a north room is endurable, but in winter we love those rooms best where the sun comes earliest in the morning and lingers longest in the evening. In such a room should the family life pass. And in its sunniest corner should be the invalid's chair, the grandmother's rocker, the baby's cradle.

In rooms into which the sun never shines recourse must be had to various devices to make up, so far as may be, for this grave lack. A sunless room should have bright and joyous colour in its furnishings. The walls should be warmly tinted, the curtains give a roseate glow to the light that passes through them. An open fire may diffuse the sunshine but lately imprisoned in oak or hickory, or ages ago locked up in anthracite. Ferneries and shade loving plants may contribute their gentle cheer to the room and suggest quiet forest nooks.

No less requisite than sunshine to the comfort of rooms is order and neatness. This should be impressed upon every part of it. There is a certain *négligé* look to all attractive rooms, certain evidences of personality and individuality, but these are as far as possible removed from disorder and carelessness. A book left lying on the table, a bit of needle-work on the window-sill, an open piano, may indicate the tastes and occupations of the inmates without suggesting that there is not a place for everything in that room. There is such a thing as being too neat and too nice to take comfort in everyday life, and this is anything but cheerful. And then there is such a thing as being so disorderly and negligent that comfort and cheer are impossible. If the house-mother cannot rest while there is a finger-mark on the paint, or a spot on the window-panes, she may make a neat room but her splint will keep it from ever being cheerful. If she has no care for the "looks of things" her failure will be equally sure.

A bird singing in the window, an aquarium on the table in some corner, plants growing and blooming, domestic pets moving about as if at home, these give life and brightness to an apartment, and afford constant opportunities for the pleasant occupation and companionship. Books people a room, and pictures, on the walls, if selected with taste, are ever fresh sources of enjoyment. You may gauge the refinement and cultivation of a family by these infallible tests, unless they have been selected by some outsider. Bits of embroidery, or scroll work, and a thousand tasteful devices may contribute to the charm of a room and make it irresistibly attractive. The room in which one lives takes on the complexion and prevailing state of mind of the occupant. If one is sunny, cheerful, tasteful, these qualities will be impressed on his surroundings, and you will know him by them just as you would know a crab by his cast off shell. There are lovely rooms in which there is not one piece of fine furniture, one bit of elegant upholstery, but where the tastes of the occupants have found beautiful expression in calico and ingrain, and wood engravings and such resources as bounteous nature bestows on us all—ferns and flowers and sunshine and domestic pots.—*New York Tribune*.

I THINK we couldn't better employ spare time than by filling up the waste places of our farms with timber for future growth.—*Utica Herald*.

SHEEP AND SWINE.

THE GADFLY AND ITS GRUB.

Farmers who study the habits of their sheep have observed that in the hot months they gather into bunches on bare spots, with heads close together and noses to the ground, and kick and stamp and snuff, seeming to be on guard against some wily foe. The enemy is the gadfly, and at the first chance it dodges in and deposits eggs in the nostrils of the sheep. These soon hatch into larvae, or young grubs, and crawl up into the cavity of the head and attach themselves to the membranous linings and remain there until the next spring and grow to be an inch or more long, and then descend to the ground, and when the proper season arrives for laying eggs are developed into gadflies, ready to attack the sheep again. Some claim that this grub in the head is fatal to well-cared-for sheep; others deny this. Some writers say there are never more than two grubs in a sheep's head, one in each nostril, and that they sometimes produce blindness; others claim to have found a score or more. The first sign of this malady is an aimless wandering around, and a twisting about of the head, and when much advanced a discharge at the nose, occasionally streaked with blood.

The remedies are various. Randall, and the America Stock Book, both good authorities, say tobacco smoke blown through the stem of a pipe into the nostrils; or tobacco-water thrown up the nostrils with a syringe (being careful not to let much of it get into the throat) is efficacious. Another writer says: Mix turpentine and sweet oil, half and half, hold the nose up and pour in slowly and carefully to prevent choking by the fluid entering the windpipe and lungs. This is said to be very efficacious. Dr. Johnson, a veterinary surgeon, says: Turpentine and linseed oil, equal parts, eight ounces; add half dram carbolic acid crystals: mix, give tablespoonful on tongue every night. Some claim that turpentine on the side of the head opposite the locality of the grub, letting it soak in some, will cause them to let go, and the irritation thus produced will cause the sheep to sneeze, throwing the grub out. Other remedies might be mentioned but the above are considered as good as any. It is the opinion of many shepherds that grubs are not very fatal in flocks well cared for, but among poorly kept sheep is where they do the most harm.—*Carlos Mason, Lake County, Ohio.*

SOUTHDOWN SHEEP.

Confessedly at the head of the several varieties of middle wool sheep stands the Southdown. While some might question the priority in the matter of individual merit, none will gainsay the claim that to the Southdown most other types of middle wools are indebted for their "best blood."

The Southdowns are not conspicuous shearers. Their fleeces are dry, coarse and light, in comparison with the weight of carcass. The fibre is strong and insures good service in the fabrics for which it is adapted. One of the most intelligent modern writers of Scotland, William Brown (Edinburgh, 1870), estimates the average shearing of the "Downs" of Great Britain at four pounds, and the number of such animals at near one-fifth the total sheep of the kingdom. This estimate of fleece would be too low if applied to the Southdowns of the United States and Canada, where are now to be found some of the best specimens of these justly-prized animals, and is very considerably below that of the flock of Jonas Webb, which stands credited with six pounds per fleece. Southdown wools are used in manufactures requiring combing, as well as those requiring carding, before placing on the spindles—an ac-

count of which peculiarity they are classified in both the first and second class of the tariff schedule, under the terms "Down Clothing" and "Down Combing" wools—a prominence given no other wools enumerated in the law.

The prominent characteristics of the Southdowns—vigour, precocity, fecundity, thorough breeding, and propensity to develop well-marbled flesh at the most desirable points—especially commend them for crosses where mutton production is chiefly sought. They will improve the quality of the flesh of any of the other breeds without reducing the weight, except in rare instances. Their value for cross-breeding may be estimated to a certain extent by a study of those varieties into which their blood has been infused before inbreeding would be depended upon for retaining existing merits and acquiring advanced ones.—*From Sheep, their Types and Characteristics, in Breeder's Gazette, Chicago.*

MANAGEMENT OF YOUNG PIGS.

The greatest danger to which young pigs are subject is overfeeding. A pig at weaning has a very small stomach and very limited powers of digestion, and yet these young animals are permitted to gorge themselves with sour milk and meal slops as soon as they are weaned, until their sides are swollen. This overfeeding produces indigestion, with disorders of the brain, or so-called staggers; nervous disorders, with paralysis or epilepsy; the growth is arrested, the breath is fetid, the teeth become black, and some persons ignorantly believe that the black teeth are doing it all. The teeth are knocked out with a stone or bolt in some rough manner, and the mouth is made so sore that the pig refuses to eat for a while, and then recovers from the abstinence. So that the removal of the teeth is claimed to be the real cause of the recovery. This is precisely your case. Black teeth do not cause disease; they are a symptom of it only, and when the health is good the teeth are all right. Had the pigs been fed moderately and not given all they would eat, the trouble would have been avoided. Half a pint at a time of sweet skimmed milk is a sufficient meal for a weaned pig.—*Minnesota Tribune.*

WEIGHT OF FLEECE.

In average weight of fleeces the American stands first, reaching over five pounds. In France the average is 4 5/6 pounds; in Great Britain, 4 1/2 pounds; in Australia, over 4 pounds; in the German Empire, 3 1/2 pounds; in the Austro-Hungarian Empire it is three pounds, and the South American average is about the same, but with wool of much lower grade.

Again, the weight of British sheep may be classified according to breeds, as follows: The Lincoln and Cotswolds may be placed at 6 pounds per fleece, the first-named, however, being the heaviest; the Leicesters will average 7 pounds; the Southdowns, 4; the Cheviots, 3; the Black-faced sheep, 2 1/2, and the Welsh, 2 pounds per fleece. Of the sheep of Great Britain the Leicesters comprise more than one-third of the whole number. The Downs one-sixth, the Blackfaces nearly as many, the Cheviots one-eighth, leaving about one-eighth for the other breeds. Exceptional fleeces of some of the British herds may be stated as follows: The wool of Lincolns has reached 9 inches in length, with a weight of 15 pounds; Cotswolds in the United States are reported to have sheared 18 pounds per fleece, and probably nearly as much in England; Oxford Downs in England are reported to have sheared as high as 20 pounds. A good average fleece, however, is given at 8 to 10 pounds for ewes and 15 pounds for a ram. The Shropshire Downs

are reported to yield about 7 pounds of washed wool.

Coming now to Merinos, the improvement in the weight of fleeces within the last quarter of a century is surprising. Then the heaviest fleeces, as shown in Connecticut, are reported to have been five pounds from ewes and from five to six pounds from rams. Now, sixteen pounds are taken from the best ewes, and twenty-six and even thirty pounds from the best rams, as the growth of twelve months. Of course this wool will naturally shrink much in washing, far more than that from the long-woolled breeds. Yet it is altogether probable that no other breed will produce so much clean wool as the American Merinos, in proportion to weight of carcass.

WHAT MAKES SHEEP PROFITABLE.

It may be noticed that there is a saving on the farm effected by keeping sheep. They are excellent foragers, and they are not dainty in their choice of food. The newly-sprouted weeds, obnoxious grasses and tender shoots of shrubbery are palatable to them, and they thus keep down many plants that would otherwise be troublesome to farmers, as well as converting into marketable flesh and wool much that would not only be lost, but also which could not be otherwise economized by the farmer in any other way. It is this that partly makes them profitable, for every item saved in the expense of keep, provided such economy is not falsely practised, it is so much added to the gain.

Sheep should not only be utilized in every possible way, but also must be kept growing and fattening at the proper time, so as to derive every possible result in the matter of profit. Our common sheep are active, and, being native, are accustomed to the sections in which they exist, and for that reason it is much better for farmers to breed from them with thoroughbred rams than to attempt at once on the venture of a whole flock of thoroughbreds, as this would require pastures adapted to the purposes in view, and also care in sheltering and system in feeding.—*Farmer's Magazine.*

The fleece should be put up so as to be comparatively loose, light, and easy to inspect and handle. Lay the fleece on the table, turn in the head, tail and flanks, and roll it up, commencing at the tail end. Tie with two strings to keep the roll in place, and then with one about the ends. The strings can be laid in grooves sawn into the folding platform, so that the fleece can be tied quickly.

Long grass is distasteful to sheep; they never feed it down evenly, but will trample down half of what they do eat. They seem to do better on the aftermath of grass, but they should not be allowed to feed it too close, or it will be long recovering. A frequent change from field to field is better than giving them a long range; the latter often encourages them to rove, and makes them discontented.

Thus is the way a sound-headed Virginia farmer got rid of sheep-eating dogs, after having had twenty or more killed and worried, as reported by a contemporary. He piled the twenty sheep's carcasses in a heap, built a close rail fence about them, and smiled a quiet smile. The fence was made so as to form a sort of a half covering over the mutton, in shape like an Esquimaux hut, with a hole at the top, so that, while any kind of a dog could run on the outside and jump in, no possible dog could ever jump out. The next morning the granger strolled out to the trap with a shot-gun and killed the suspected cur. But he let the trap remain and repeated his strolls until he had shot forty-six dogs, and our contemporary adds, there is not now a bark to be heard in all the town.

THE DAIRY.

ENSILAGE FOR DAIRY COWS.

Such grave uncertainties seem to pervade the minds of many farmers as to the use of ensilage as food for milch cows, such doubts as to a possible peculiar taste of the milk, cream or butter made from this food, that with your permission I will give my experience of last season, hoping it may lead some of the doubters to the right track.

Last year I built a silo of 200 tons capacity, wholly of stone and Rosendale cement, with a frame and roof for cover. It is a good one (I believe in no other); no water can get in; no sap from the corn can get out, as so many complain of when their silos are not half built, or made from stale cement, or any poor material. On account of the long extended drouth in this part of New Jersey, I was able to scrape together of good, bad and indifferent, half-dried, wilted, grown and half-grown corn, some thirty tons of ensilage after cured. This, however, was enough to satisfy my mind on this subject, if there had ever been any doubts. I used it as food for cows 110 days continuously, until all was fed out. Within a week from the time we began feeding hay, and though with an addition of grain, the cows lost at least twenty-five per cent. of milk; the cream did not make as much butter, and the butter was not of as good colour or flavour. During the time of feeding ensilage we were unable to discover any other than the most satisfactory taste to milk, cream or butter. The cows were in the most perfect state of health, and kept in fine condition.

I raised a Jersey calf dropped in September, which had all it wanted of ensilage, and I will show it any day beside any man's calf six months older. I fed for ninety days eight western steers, which averaged a gain of over one and one-half pounds per day. The ration for cows and oxen was twenty-two pounds of ensilage morning and night, and fifteen pounds of cut cornstalks at noon. The cows had three quarts of corn meal and two quarts of wheat bran per day, and the steers had four quarts of corn meal for forty-five days, and five quarts for the last forty-five days. Our success with the steers quite astonished my neighbours, who feed in the old way. The butcher says the cattle slaughtered well, and the meat was remarkably fine, and gave him every satisfaction. The use of poor ensilage, made from corn half ripe, or frost bitten, I have reason for believing, would not give such satisfactory results. I am one who believes that to make good ensilage the corn should be cut at the right time, cut the right length, put away in a good silo, and covered over nicely, and then well and thoroughly weighted down.

The seed planted should be the Southern gourd-seed, drilled in rows thirty to forty inches apart, and the ground cultivated the same as any corn. The ensilage should be cut three-eighths to three-quarters of an inch long, and cut with the New York Plough Company's cycle cutter, for the reason that this cuts a drawing stroke, does not bruise the stalk or squeeze out the juice and open the fibre to be filled with air, as the chopping machines of necessity must. It is important to have a good water-tight silo and heavy weighting—300 to 350 pounds to the square foot of surface. I believe in giving the animals all they will eat up clean, be it more or less. Contentment means fat in the bovine tribe, as well as "riches" in the human.—*W. W. M., in Country Gentleman.*

When milk is once contaminated—and it is a wonderfully active absorbent of gases—nothing can be done to make it perfectly pure again. More butter is spoiled "at the pail" than during any other process through which the milk and butter passes.

HOW TO HAVE A GOOD COW.

You may have too many cows to keep them well; then sell off till you have the right number. Never keep a lot of cows at "a poor-dying rate." It were better to even give away all that you can not keep in good condition.

If we could believe in metempsychosis we would think that some gentle and loving woman of the long ago had found rest for her soul in some of the beautiful cows we have seen. How like a gazelle they turn for loving kind attention, some gentle caressing. But whatever taste we may have for the beautiful, we do not care to keep a cow just to look at. There is a business end to this business that we must look to, for here is where the pay comes in.

A well fed cow, one properly cared for in the winter, is a good cow all summer. Corn and grain may be high, but a good cow is your best market. She may ask for a little time—give it to her; she will pay you sixty fold. Give her a fair show this winter. Do not let her wear an overcoat of sleet and snow. Two or three quarts of meal a day, and what hay or straw, or corn-fodder she will eat, then a good warm shelter and kind treatment, and you will receive a generous reward. There are no cows of any breed that can resist this treatment. Yet there are breeds that will give you better milk than others, better butter and more of it, for the same feed and care. I have tried it and know; you try it and you too will know.

WHEAT BRAN FOR MILCH COWS.

It is well known that phosphorus is an essential ingredient in the formation of bone, and, indeed, that bones are the principal source of our supply of phosphorus. Wheat bran is rich in phosphoric acid. Wheat contains in the whole grain 8.2 per cent. of phosphoric acid and corn only 5½ per cent.; but nearly the whole of the phosphoric acid of the grain exists in the husk or bran. Thus wheat bran contains nearly twenty-nine per cent. of this valuable substance. What percentage is in the bran of corn we have no means of ascertaining, but it is certainly less rich in phosphoric acid than wheat bran. Rye bran is richer still than wheat bran, containing over thirty-four per cent. of phosphoric acid, which is a larger proportion than is contained in any other article of food for stock. Wheat bran is also far richer in lime than corn, and is therefore a better food for poultry than the latter. If wheat bran is preserved free from damp or mold it will not deteriorate in quality by keeping for any moderate length of time, a year for instance. Our dairy farmers and stock-raisers will see by this the value of brans for feeding purposes.—*Prairie Farmer.*

HOW BUTTER MAY BE SPOILED.

Good butter may be spoiled in churning. The *American Dairyman* says on this point: Over-churning ruins the texture and changes the proper waxiness to a disagreeable, sickly greasiness. This is the more easily done in a churn with dashers, which will press the butter against the sides of the churn and squeeze and rub it until it is spoiled. Too long churning spoils the quality by the oxidation of the butter and the premature formation of strong flavoured acids in it, the full presence of which we call rancidity. It may be spoiled at too high a temperature, by which it is made soft and oily and of greasy texture and flavour. No subsequent treatment can remedy this error. It may be spoiled before the cream reaches the churn by keeping it too long, or what is practically the same, by keeping it in too warm a place; fifty degrees is about the right temperature if the cream is kept a week; if it is kept at sixty-

two degrees, three days is long enough. White specks are produced in butter by over-churning or by having the cream too sour. Either of these faults produces curd in the milk, and the small flakes of this cannot be washed out of the butter. So will the use of salt containing specks of lime, which unite with the butter and form insoluble lime soap. White specks are covered up to a large extent by using good colouring, which is made of oil as the solvent. But this use of colouring being used to disguise a fault and to add an undeserved virtue, is worthy of denunciation.

FEED THE CALVES WELL.

Good feeding is always profitable, and never more profitable than when bestowed upon young animals. The younger the animal the less is the cost per pound for the increase of flesh obtained. A given amount of food will produce more pounds of flesh when fed to a calf three weeks old than to one three months old. In an experiment in feeding several calves it was found that during the first week of feeding eleven pounds of milk were required to produce one pound of increase; the second week, twelve pounds; the third week, thirteen pounds; the sixth week, fifteen pounds; at the ninth week, seventeen pounds, or a third more than the first week. The wise farmer will readily see the importance of generous feeding while the animal is young. The less cost of increasing weight is not the only advantage derivable from generous feeding while young. If the young animal is furnished with so scanty a supply of food that his growth is checked and he falls out of condition, he is permanently injured. It is seldom that he can by subsequent good feeding be brought to as good a condition as he would have attained if the feed had been good all the time. An experienced Irish farmer says: "As a breeder you must be careful not to lose the calf-flesh. If you do so by starving the animal at any time of his growth you lose the cream, the covering of flesh so much prized by all retail butchers. Where do all the scraggy, bad-fleshed beasts come from that we see in our markets, and what is the cause of their scragginess? It is because they have been stinted and starved of their growth. If the calf-flesh is once lost it can never be regained." Those who wish to have thrifty, fine-looking animals should feed well while they are calves.

The kind of fodder a dairy cow requires is that which makes the greatest amount of rich milk and keeps the cow in good health. The latter, however, depends somewhat on treatment in addition to fodder. Cleanliness, good water, some carding, good bedding, and a sufficient variety of food, have a close relation to health.

By raising the temperature of the cream high, white butter is the result. In summer the temperature is apt to be thus, especially in dog days, and hence there is white, frothy butter and less of it, and it takes longer to bring; so in winter, with hot water, butter is scalded, as it is called, all in temperature. This, when high, causes the sugar to ferment and produce acid—lactic—and the acid acting upon the salt liberates the casein or cheese principle, which then curdles, and a white mass of cheese and butter is made—much of the butter remaining in the milk, while the butter has an undue quantity of cheese. The remedy is, take care of the temperature, not only in the churn, but the milk and cream before they get there. There then will be absolutely no difficulty.

Absence of ventilation; badly arranged entrances of light, and hay-racks over their heads, permitting seeds and dust to fall into their eyes, are referred to as prolific sources of blindness in horses.

SUNDAY AFTERNOON.

FAIR DEALING.

The amount of adulteration and substitution that is daily going on in the production of various articles of food, as well as in many other manufactured substances, has become so great that a keen observer often feels almost afraid to purchase even the barest necessities of life, lest he may in some way be deluded and cheated not only to the detriment of his pocketbook, but also of his health. Legislation has of late been resorted to in endeavours to stop some of these abuses; but in most cases the laws passed have proved inadequate to conserve the purpose of their passage, either through their unfortunate unconstitutionality or through their possessing some defect which affords a loop-hole of escape for the transgressor of their actual spirit.

Many manufacturers and producers claim that they are benefiting mankind in turning out articles which are really healthier and cheaper than those which have the virtue of being "strictly pure and genuine." This may be so; we live in an age of invention, and also of progress in hygienic and gastronomic knowledge, and it would be strange if there were not improvements in food, clothing, etc., as well as in mechanics and other sciences. But that does not excuse putting false labels upon these goods, calling oleomargarine butter, cotton seed oil olive oil, and like deceptions. Why not call an article by its right name and give the public a fair chance to try its good qualities in comparison with those of that for which it is a substitute? The only true answer that can be made to this question is, that the sales of these goods would be infinitely small in comparison with what they are now under this deceptive practice. Such an answer puts many persons, both producers and agents, in a very bad light; yet in plain fact there can be no doubt that they are deliberately dealing fraudulently with their customers in order to acquire money; for that which is supposed to be given them is an entirely different article. No matter how these misnamed goods may affect the health of the consumer, they are undoubtedly guilty of conscious fraud in palming off on him that which is not what it purports to be. Last year there were seventeen million pounds of oleomargarine disposed of in this way, and without doubt many other articles were sold in the same manner.

The legal remedy for this evil has yet to be discovered; and it is to be hoped some ingenious statesman will soon appear up and propose efficacious legislation upon this subject. Such a man would rank high among the world's philanthropists.

But there is another view to be taken of this practice. It tends to impair the morals of all trades, and raises barriers of distrust between man and man. The buyer cannot trust the seller, and the seller is fearful lest his customer will try some sharp dealing with him. If this feeling of distrust existed in business alone it would be bad enough, but its influence extends even farther. Men meet in the church and in society; they profess Christian principles and form friendships; but how can they believe that either are absolutely genuine when they know that a few hours afterwards they will meet again, this time in commercial centres, and each will not scruple to delude the other? From an ethical and moral point, these dealings cannot be excused, and a man should think well before countenancing in any way such traffic. The quality is no excuse, in fact worse than no excuse; for some trading might be done upon its merits without disguising its true origin. A man that engages in such trade knowingly and deliberately is committing a

double sin—first, in defrauding the purchaser; and, secondly, in setting a bad example to employees and the trade at large, for whose future integrity he is in a measure responsible.

SLANDER.

'Twas but a breath—
And yet the fair good name was wilted;
And friend once fond grew cold and stilted
And life was worse than death.

One venomed word,
That struck its coward, poisoned blow,
In craven whispers, hushed and low—
And yet the wide world heard.

'Twas but one whisper—one,
That muttered low, for very shame,
The thing the slanderer dare not name—
And yet its work was done.

A hint, so slight,
And yet so mighty in its power,
A human soul in one short hour,
Lies crushed beneath its blight.

ALPHABET OF BIBLE PROVERBS.

- "A soft answer turneth away wrath."
 "Better is a little with righteousness than great revenues without right."
 "Commit thy works unto the Lord, and thy thoughts shall be established."
 "Death and life are in the power of the tongue."
 "Even a child is known by his doings, whether his work be pure or whether it be right."
 "Fools make a mock at sin."
 "Go to the ant, thou sluggard; consider her ways and be wise."
 "He that is soon angry dealeth foolishly."
 "If thine enemy be hungry, give him bread."
 "Judgments are prepared for scorers."
 "Keep thy heart with all diligence, for out of it are the issues of life."
 "Lying lips are an abomination to the Lord."
 "My son, if sinners entice thee, consent thou not."
 "A naughty person, a wicked man walketh with a froward mouth."
 "Only by pride cometh contention."
 "Poverty and shame shall be to him that refuseth instruction."
 "Remove far from me vanity and lies."
 "Say not, I will do so to him as he hath done to me."
 "The eyes of the Lord are in every place, beholding the evil and the good."
 "Understanding is a well-spring of life unto him that hath it."
 "Evil pursueth sinners, but to the righteous good shall be repaid."
 "Whoso mocketh the poor reproacheth his Maker."
 "Xalt her, and she shall promote thee."
 "Yet a little slumber, a little sleep, so shall thy poverty come as one that travelth, and thy want as an armed man."

HOW TO SAVE THE BOYS.

Women who have sons to rear and dread the demoralizing influences of bad associations, ought to understand the nature of young manhood. It is excessively restless. It is disturbed by vague ambitions, by thirst for action, by longings for excitement, by irrepresible desires to touch life in manifold ways. If you, mothers, rear your sons so that their homes are associated with the repression of natural instincts, you will be sure to throw them in the society that in some measure can supply the need of their hearts. They will not go to the public houses at first for love of liquor—very few people like the taste of liquor; they go for the animated and hilarious companionship they find there, which they discover does so much to repress the disturbing restlessness in

their breasts. See to it, then, that their homes compete with public places in attractiveness. Open your blinds by day and light bright fires at night. Illuminate your rooms. Hang pictures upon the wall. Put books and newspapers upon the tables. Have music and entertaining games. Banish demons of dullness and apathy that have so long ruled in your household, and bring in mirth and good cheer. Invent occupations for your sons. Stimulate their ambitions in worthy directions. While you make home their delight, fill them with higher purposes than mere pleasure. Whether they shall pass boyhood and enter upon manhood with refined tastes and noble ambitions depends on you. Believe it possible that, with exertion and right means, a mother may have more control over the destiny of her boys than any other influence whatever.—*Appleton's Journal.*

WHAT MAKES THE HOME?

Home is not made up of spacious rooms, new carpets, old tapestry, far-fetched pictures and decorated china. Wealth, taste, that most indefinite nebulae called "culture," and accomplishments will not of themselves make home. They are most valuable in their place, but they cannot give out what is not in them. Nor is the absence of these things a guarantee for a home. Dirt, impurity, intemperance, and want of feeling, can add misery to the poet's cherished "lowly cot." To make a home we need gentleness, kindness, fitting employment, good sense, principle that controls selfishness, and conscience trained to respect authority, duty, and Deity. We must have woman's gentleness, giving out fragrance as a rose does, and woman's ingenuity making rough places smooth. We must have man's presence, strength and honour, his force, his firmness on the side of right. We must have forbearance bred of love, and patience, and prudence, and sweet-voiced charity. And we must have, like the pure air of the dwelling filling all, a heart-deference to One above, a God, a Father, whose will fixes duty, and whose approval is the joy of the sensitive, innermost soul.—*Ex.*

PROFANITY.

Vast effort and much time are devoted to the temperance cause. Grand results have been attained in this work, and we still implore the divine blessing upon every true effort put forth to crush the insidious monster. But while many a heart quakes at the wine-cup's glow, how often the foolish, wicked *oath* is passed unheeded by! Comparatively little is thought of it. Many an active temperance worker is not arrested by that frightful sound, but rushes on to his reform club where he discourses both long and loudly upon the evils of King Alcohol, not for a moment realizing that he has just passed, unheeded, the widest gateway his foe in question ever had opened for his admittance. Numberless efforts have been instrumental in staying the liquor traffic, but what one public attempt has been made to stay the dangerous foe, profanity! If a human being libels his neighbour, our law provides for the offence, yet the name of the Holy and Just One may be continually defamed without rebuke. God's name cannot be impaired, though polluted lips breathe curses upon it; yet He who said, "Thou shalt not kill," said first, "Thou shalt not take the name of the Lord thy God in vain."

While we believe something should be done openly to crush this evil, much more can be done by domestic effort. Let every parent, brother and sister trample upon the serpent, that its deadly fangs poison not those surrounded by their influence.—*Lisa, in the Morning Star.*

HOME CIRCLE.

A CHINESE ENCYCLOPÆDIA.

The celebrated "Chinese Encyclopædia," which was purchased some months ago by the trustees of the British Museum for fifteen hundred pounds sterling, has been safely lodged in that institution. It forms the most important acquisition to the great national library which has been made for some time past. The work is remarkable as having nothing parallel to it extant in other countries. It is comprised in 5,020 volumes, and consists of a vast thesaurus, into which is digested the entire mass of Chinese literature extant to the date of its publication, classified under appropriate headings, and accompanied with illustrative drawings, plans and maps. It includes treatises ranging from 1150 B.C. to about the year 1700 of our era, and it professes to represent every branch of Chinese literature, with the single exception of works of fiction.

It was compiled in the early part of the eighteenth century by an imperial commission under the orders of the great emperor Kang Hi So, well known to us, from the accounts of the Jesuit missionaries, whom he favoured and assisted, and who were his instructors in European art and learning. The emperor was himself a great writer, and he was struck in the course of his literary investigations by the alterations and corruptions which were being gradually introduced into the texts of standard works. He therefore conceived the idea of reprinting from the most authentic editions the whole body of Chinese literature then in existence. A commission of high officials was appointed to select and classify the texts, and its labours extended over forty years, terminating in the publication of the work in 1726. For the purpose of printing it a complete font of copper type was cast under the direction of the Jesuits, who probably superintended the printing.

Only one hundred copies were printed, the number of which has been much reduced since the time of the issue by various casualties. The whole impression was distributed as presents among the princes of the imperial family and the great state officials. The type used in the production of the work is said to have been melted down shortly afterwards, and converted into money to meet the exigencies of the government during a financial crisis, and in this way the means of producing a second volume was destroyed. The copies which still exist are in the hands of the families of the original recipients, from one of whom the copy thus happily brought to London has been purchased. So completely private is the ownership of copies of this encyclopædia in China that no copy is known to be accessible for reference to the general body of students of that country.

AN ANGRY TREE.

A gentleman of this place has a tree which is a species of acacia. It was grown from a seed brought from Australia. The tree is now a sapling some eight feet in height, and it is in full foliage and growing rapidly. It is leguminous, and very distinctly shows the characteristics of the mimosa, or sensitive plant. Regularly every evening, about the time the "chickens go to roost," the tree goes to roost. The leaves fold together, and the ends of the tender twigs coil themselves up like the tail of a well-conditioned pig.

After one of the twigs has been stroked or handled, the leaves move uneasily, and are in a sort of mild commotion for a minute or more. All this was known about the tree, but it was

only recently that it was discovered that the tree had in it much more life and feeling than it had ever before been credited with. The tree being in quite a small pot, one which it was fast outgrowing, it was thought best to give it one of much larger size. Yesterday afternoon the tree was transferred to its new quarters. It resented the operation of its removal to the best of its ability.

Arriving at his residence about the time the tree had been transplanted, the gentleman found the house in grand commotion. On asking what was up he was told that they had transplanted the tree according to orders and the operation had "made it very mad."

Hardly had it been placed in its new quarters before the leaves began to stand up in all directions like the hair on the tail of an angry cat, and soon the whole plant was in a quiver. This could have been endured, but at the same time it gave out an odour most pungent and sickening—just such a smell as is given off by rattlesnakes and many other kinds of snakes in summer when teased. This odour so filled the house and was so sickening that it was found necessary to open the doors and windows. It was fully an hour before the plant calmed down and folded its leaves in peace. It would probably not have given up the fight even then had it not been that its time for going to roost had arrived.—*Virginia (Nev.) Enterprise.*

HOW SIR GEORGE JESSEL GOT THROUGH HIS WORK.

Some few years since I appeared before the late Master of the Rolls as party to a friendly family suit, where the advice and whitewashing by the Court of Chancery was sought by trustees, of whom I was one. The case was simple. A discrepancy between a marriage settlement and a will, both drawn by the same firm of lawyers and never contemplated by the testator, involved a point patent of solution to any outsider, but which, after acres of counsel's opinions and legal pour-parlers, the lawyers persuaded the trustees to take it before the Master of the Rolls. Never shall I forget the electrical rapidity with which Sir George Jessel grasped the facts. In fewer minutes than I take to pen these lines he asked why he had been troubled in so simple a matter, stating that if the beneficiary were not rich he should have ordered the trustees to pay the costs out of their own pockets, thus marking his objection to their wasting the court's time by obtaining an opinion from him that was not wanted in so clear a case. So struck was I with this great judge's perception that once in Chancery I could not get out of it, and I remained for the next case. Some trustees for a young lady, a minor, whose fortune was growing potentially, applied for increased alimony, and the counsel quoted a decision of Lord Mansfield's in support of his application. Sir George, listening for a moment, asked counsel if the testator was in his right mind when he made his will. "Yes, my lord," answered the learned gentleman. "Then I shall not alter its terms or provisions. The testator knew best what he wanted for his child; I am here to carry out those terms and provisions and, though Lord Mansfield was a clever man, yet he was not God Almighty. Mr. So-and-so, you may sit down. What is the next case?"

A LITERAL TRANSLATOR.

A copy of Moody and Sankey's volume of hymns lately reached one of the Turkish Post Offices in Armenia to the address of an American missionary. Of late the imperial restrictions on the importation of foreign literature, as well as on

the printing press, have become more stringent than ever, so, as a matter of course, Moody and Sankey must pass under the eagle eye of Bukhsheesh Effendi, the Governor-General's factotum, who knows a few words of English. He was all the sharper on this occasion because he had very recently passed by inadvertence a book consisting of letters from one of the New York papers, the author of which roundly denounced the misgovernment he had witnessed in Armenia during the campaign of 1877. And this volume was addressed to the same quarter as the present hymn book. "Dogs," exclaimed Bukhsheesh Effendi, as he turned over the leaves. "Hold the fort! What fort? Treachery, as I live! May Satan seize them!" They were patriotic songs for the use of the Armenians, those hymns, and the musical notation proved it; and that particular song, "Hold the Fort," must have reference to an intended insurrection. So "Hold the Fort" was cut out by order of Bukhsheesh, and the expurgated volume sent to its destination.

THE POWER OF IMAGINATION.

There has just died at Charenton, near Paris, a man who has had a very curious history. Thirty years ago this person, whose name was Roussot, was condemned to death at the Seine Assizes for the murder of an old gentleman, M. Demoury. The case had excited considerable interest, and the court was crowded with spectators. Among the persons standing immediately behind Roussot, who was flanked by a pair of gendarmes, was one Planchat, an employé of the *Presse* newspaper, who had somehow contrived to wriggle himself into that position without attracting notice. Scarcely had the sentence been pronounced when Planchat, moved, as he afterwards explained, by an uncontrollable impulse, passed the side of his hand over the prisoner's neck in imitation of the keen blade of the guillotine, at the same time emitting a whirring sound. Roussot instantly fell forward with a shriek of terror, and the bystanders, indignant at this heartless and shocking act, rushed upon Planchat and roundly abused him. Planchat was subsequently condemned to two years' imprisonment. As for his victim, he never recovered the shock, but remained insane until the day of his death. He was pardoned by the Emperor, and confined, first at Bicetre, and afterward at Charenton, where he has just expired. The unfortunate man was under the impression that he had been actually beheaded in the Palais de Justice, and when relating the story was in the habit of imitating the sound that haunted him for thirty years.

HONESTY IN WORK.

We are all of us workers in one way or another, but how many of us are possessed with an earnest desire that the work we put from our hands shall be a thorough, honest faithful performance that shall fulfil its purpose, and withstand the ravages of time? The great difference in labour is not what is done—not the kind of work we perform—but in the spirit we put into it. From the cleansing of a room to the purification of a government, from the clearing of a forest to the chiselling of a statue, from the humblest work of the hands to the noblest work of the heart and brain, it is the determination to make it of the best possible quality that places it in the front rank. The work that is performed only for the sake of what it will bring, not for what it will carry forth, is like cloth of shoddy, which may please the eye, but will not wear. It is cheap, flimsy stuff, woven with no nobler purpose than to hold together long enough to be bought and paid for.

YOUNG CANADA.

ELSIE MARLEY AND HER PIGS.

"Elsie Marley is grown so fine,
She won't get up to serve the swine,
But lies in bed till eight or nine,
And surely she does take her time."

(Mother Goose.)

Now, dear little people, I happen to know more about Elsie Marley and her pigs than Mother Goose does—a little pig told me all about it! Elsie's mamma and papa lived on a little farm in the country, and such a snug little cottage. They had two children—Elsie and her baby brother, just two years old. One day in June before daybreak Mr. and Mrs. Marley were moving about the house, preparing to go to town, four or five miles away. Mr. Marley was to take vegetables, fruit, chickens and eggs to sell, and his wife wanted to get some muslin and calico and see her aunt, who lived in the town. The baby was to go too, but Elsie was to be left at home as there was not room for her in the spring wagon, and then some one must feed the chickens and pigs.

Just before she left Mrs. Marley gave Elsie, who was sound asleep, a good shaking, and told her she must get up right away, and must be sure and feed the pigs and chickens and tidy up the house. "Oh, yes, ma'am," said Elsie brightly, but after her mother left and all was quiet, she could not resist another nice little nap—"just for a few minutes," she told herself sleepily. But we all know what that means! The hours passed, and still lazy Elsie slept and dreamed the time away! The sun stared in at the window and tried his best to wake her, but in vain!

In the meantime the pigs were getting hungrier and hungrier! "Squeak, squeak!" said one little pig; "I'm starved to death nearly. Why don't someone bring me something to eat?" "You nearly starved to death! You are always thinking of yourself," grunted a mamma pig crossly. "How do you suppose I feel?"

"It is too bad we must depend upon lazy little girls to give us our breakfast," said the wise papa pig; "they do not know what it is to be hungry." "Ugh, ugh," snorted an impatient and very fat little pig, "I can't wait any longer. I feel that I'm growing thinner every minute." Gradually the pigs gathered closer together and held a consultation—and this is what they decided to do.

Elsie's bedroom was on the ground floor, and they determined to try and waken her themselves. The whole herd ran across the barn-yard—frightening the ducks and chickens out of their feathers, who though hungry were naturally more patient and less greedy than the pigs—straight on to Elsie's window, where they gave her such a serenade! You never heard a louder one, I'm sure! Still Elsie slept like the seven sleepers!

The impatient little pig could stand it no longer! He darted around to the back door. Now, as luck would have it, Mrs. Marley had left this door open, and the baby had run back to kiss Elsie "good-by," and left all the others open. When the little pig found this out he squealed triumphantly to the others,

In a second they were around him. In the house they went, grunting and squealing, running against chairs, upsetting buckets, until they burst into Elsie's room itself. Here was fun, for Elsie was a very careless little girl and left her things on the floor and everywhere. One pig chewed her hair-ribbon, another picked up her doll in his mouth, getting her fine clothes all wet, and frightening her terribly. They scattered her clothes; all the time making such a commotion that at last Elsie awoke.

She thought at first it must be a dream when she sat up in bed, and was very much frightened. When she realized that it was really true, she soon scrambled out of bed and drove them out. Then she hurried to dress, ate her breakfast, and gave the pigs, ducks and chickens theirs. But it was so late now, and so hot, that she decided to wait until late in the afternoon to tidy the house—and what do you think? Her mamma and papa came home before she had made the beds or dusted and swept!

Just think how ashamed she must have been! Do you think she ever slept so late again? The little pig that told me about it did not know.—D. R. C.

THE SISTER MONTHS.

(By LUCY LARCOM, in *St. Nicholas*.)

When April steps aside for May,
Like diamonds all the rain drops glisten;
Fresh violets open every day;
To some new bird each hour we listen.

The children with the streamlets sing,
When April stops at last her weeping;
And every happy growing thing
Laughs like a babe just roused from sleeping.

Yet April waters, year by year,
For laggard May, her thirsty flowers;
And May, in gold of sunbeams clear,
Pays April for her silvery showers.

All flowers of spring are not May's own;
The crocus can not often kiss her;
The snowdrop, ere she comes, has flown;
The earliest violets always miss her.

Nor does May claim the whole of spring;
She leaves to April blossoms tender,
That closely to the warm turf cling,
Or swing from tree-boughs, high and slender.

And May-flowers bloom before May comes
To cheer a little April's sadness;
The peach-bud glows, the wild bee hums,
And wind-flowers wave in graceful gladness.

They are two sisters, side by side,
Sharing the changes of the weather,
Playing at pretty seek and hide—
So far apart, so close together!

April and May one moment meet—
But faraway sighs their greetings smother;
And breezes tell, and birds repeat
How May and April love each other.

YOUNG RATS NURSED BY A CAT.

A few years ago, when visiting a neighbour's house, it was mentioned in the course of conversation, that there was then on the premises a singular case of a cat having adopted children from a nest of one of her natural victims. On my expressing a wish to witness this phenomenon, I was at once taken to the stable yard, and there shown a fine female cat nursing a family composed of two kittens and two handsome young rats, the whole four living in perfect harmony. On my enquiring the history of this remarkable group, I was informed by the coachman in charge, that shortly after the cat-mother had given birth to a litter of

kittens, she had been deprived by him of all but three. The mother evidently did not approve of this reduction in her family, became restless for a time, and, on her again settling down, it was discovered she had replaced one of her murdered children by a fine young rat. Seeing this, and knowing that cats were too numerous to please the game-keeper, the coachman determined to destroy one of the three remaining kittens, which was done. On the following morning the coachman, on visiting the cat's nursery, was not a little surprised to discover that the mother, in lieu of her murdered offspring, had introduced into her nursery a second young rat. The two kittens, in company with the two rats, had been impartially nursed, and were, when I saw them, living in perfect harmony. They were at that time about two months old, and were residing together in an old wine-case, with a piece of wire netting thrown over the top. The young rats were pretty looking, sleek creatures, with brown eyes, and evidently well nourished. They were, however, of different dispositions, for while one would with confidence return the visitor's gaze, the other disliked being looked at by strangers, and would, on the approach of the latter, make frantic endeavours to conceal itself amongst the fur of its foster-mother.

"THE WORK OF OUR HANDS."

"The work of our hands establish Thou it." I read the words over again, going back a little. "Let the beauty of the Lord our God be upon us, and the work of our hands establish Thou it."

"The work of my hands day by day," I said almost scornfully, as I thought of the homely work my hands had to do, the cooking, the house-work, the patching, the mending, the rough, hard work I sometimes had to put them to. And I smiled as I thought of such work being established forever. I smiled again almost bitterly as I thought, "It is established that my hands must work, if not forever, for all my earthly time."

"Please comb my hair now, mamma; the first bell is ringing," and Neddie tapped my hand with his comb.

I patted and smoothed my boy's tangled locks. "The work of my hands," I said, and perhaps more gently than usual turned up my boy's face to kiss his lips as he went to school. I turned to the sitting-room, drew up the shades in the bay-window, so that my few geraniums might have all the sun's rays they could, shook down the coal in the stove, dusted the chairs, straightened out the table-cover and books, and brushed the shreds from the carpet, sighing a little over the thin places that the best arrangement of mats could not quite cover. The rooms looked neat and tidy. "The work of my hands," I repeated, mechanically. Just then the sun shone out bright. It lit up my room like a kind smile. "The beauty of the Lord our God." I repeated softly.

I went to my homely work in the kitchen. Patiently I tried to go through my every-day routine of duty. For I said to myself, "If this is always to be the work of my hands, surely I must let the beauty of my Lord rest upon it."

VITAL QUESTIONS!!

Ask the most eminent physician Of any school, what is the best thing in the world for quieting and allaying all irritation of the nerves and curing all forms of nervous complaints, giving natural, childlike refreshing sleep always? And they will tell you unhesitatingly "Some form of Hops!"

CHAPTER I.

Ask any or all of the most eminent physicians: "What is the best and only remedy that can be relied on to cure all diseases of the kidneys and urinary organs; such as Bright's disease, diabetes, retention or inability to retain urine, and all the diseases and ailments peculiar to Women?"

"And they will tell you explicitly and emphatically "Buchu." Ask the same physicians "What is the most reliable and surest cure for all liver diseases or dyspepsia, constipation, indigestion, biliousness, malarial fever, ague, &c.," and they will tell you: "Mandrake or Dandelion!"

Hence, when these remedies are combined with others equally valuable And compounded into Hop Bitters, such a wonderful and mysterious curative power is developed which is so varied in its operations that no disease or ill health can possibly exist or resist its power, and yet it is

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CHAPTER II.

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A SECRET.—The secret of beauty lies in pure blood and good health. Burdock Blood Bitters is the grand key that unlocks all the secretions. It cures all Scrofulous Diseases, acts on the Blood, Liver, Kidneys, Skin and Bowels, and brings the bloom of health to the palid cheek.

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Flies, roaches, ants, bed-bugs, rats, mice, gophers, chipmunks, cleared out by "Rough on Rats." 15c.

The worst Scrofulous Sores, the most indolent Tumour, and the most foul Ulcer known, may be cured by the combined use of Burdock Bitters and Burdock Healing Ointment. Ask your Druggist for these infallible remedies.

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It is the common observation that the standard of natural health and normal activity, among American women, is being lowered by the influence of false ideas and habits of life, engendered by fashionable ignorance and luxurious living. It is a happy circumstance that Mrs. Lydia E. Pinkham has come to the front to instruct and cure the sufferers of her sex.

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Scientific and Useful.

CANNED pineapple can be greatly improved by cutting the slices in small pieces, adding sugar to it till it is as sweet as preserves, and letting it boil until the pineapple is clear and almost transparent. It is much less awkward to serve and to eat if cut in small pieces, and if prepared in the way recommended no one will suspect you of serving any but pineapple of your own preserving.

If you have any doubt in regard to the age of a turkey or any large fowl, it is a wise precaution to steam it until you can lift the wing from the body with ease. Do not stuff it before steaming, but two or three stalks of celery may be placed in it, and they will give a delicious flavour to the meat. It is better to use twine than skewers to keep the turkey's limbs in proper place, there is so much danger of tearing the skin. It should be the cook's aim to preserve the good looks of the fowl as far as possible. If it is well dredged with flour, after it is put in the dripping-pan to roast, and then little lumps of butter laid on, it will help to give it the desired delicate brown.

TO CLEAN PAINT.—When painted work is badly discoloured, put a teaspoonful of ammonia water into a quart of moderately hot water, and with the aid of flannel wipe off the surface. Rubbing is not necessary. When the discoloration is not great, the following method is preferable: With a piece of clean flannel wet with clean, warm water, and then squeezed nearly dry, take up as much whitening of the best quality as will adhere, apply this with moderate rubbing to the painted work, and afterwards wash the surface with clean water and rub it dry with chamois leather. This method is superior to the use of soap, requires but half the time and labour, and leaves the surface cleaned, looking as good as new. It will not injure delicate colours.

IRISH STEW.—Some persons object to the stew gravy in which potatoes are cooked, in which case the vegetables of this recipe must be separately prepared and added ten minutes before serving. Take the "best end" of the neck of mutton, remove all the fat. (You can always dispose of some clear mutton fat in your starch, as it makes a smoother preparation than wax, even.) Put a layer of peeled and sliced potatoes at the bottom of the stew-pan. Place a layer of onions, sliced in rings, upon the potatoes. Pepper and salt the meat thoroughly, and lay that on the vegetables. Then build up with onion and potato layers. Add half a pint of water. Be sure to moisten the top. Place a weight on the lid of the sauce-pan. Do not let the stew come to a boil. Let it cook for two hours or three, according to the size of your piece of meat. Do not stir it up from the bottom and spoil the looks of the dish, and if you know you have the proper heat, do not waste time by lifting the lid and looking at it.

The season is near at hand for putting seeds of tomatoes and other tender vegetables or flowers for which our Northern summers are too short, in warm, moist, light, rich soil to germinate. Potatoes of early sorts may be had the earlier by bringing the seeds into a warm room three or four weeks before they can be possibly planted. For this sprouting of seeds and tubers only warmth and sufficient moisture are wanted—such warmth, day and night, as the housewife chooses to secure the rising of her dough, or the brewer for the development of the yeast. But as soon as leaves begin to appear the fullest light that clear glass will admit must be added to the other conditions, and the plants must be so thinned by pulling out the weakest, or setting out part in another box, and preferably on cubes of sod, as to prevent them shading and weakening each other. Set them in full outdoor light on every opportunity of mild, still air, but don't trust them out over night, or into the garden bed until the soil has become effectually warmed, not till June 16 for the very tender kinds.—Quis-quis.

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Said She, "I know it, almost everyone, no matter how well ordinarily, needs a thorough course of physic in the spring to cleanse the system of the accumulated humours caused by the indoor life of the winter months, no other remedy is so good as Kidney-Wort for this purpose. It is a mild but efficient cathartic, and acting at the same time on the Liver, Bowels and Kidneys it relieves all these organs and enables them to perform their duties perfectly. Headaches, Biliousness, Jaundice, and all such spring diseases yield at once to its curative power."

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