FARM AND FIRESIDE.

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Current Comment.

ACCOMPANYING this, the initial number of the fourteenth volume of FARM AND FIRESIDE, is our annual premium list. We wish to call the special attention of our patrons to it, as it has been thoroughly revised and contains many articles of unusual merit. In making up this list, great care has been taken in the selection of the articles offered, that our patrons may get their money's worth, or be well paid for their labor in securing new subscribers to FARM AND FIRESIDE. We buy these articles direct from the manufacturers at wholesale cash prices, and offer our subscribers better bargains than they can get from ordinary dealers. Give our premiums a trial. Read over the list carefully, select the articles you wish, and get up a club of subscribers in payment for them. Now is the time to subscribe. Now is the time to get new subscribers.

TO PROVE that white flour does not meet the requirements of the body, says the *Science Amateur*, Magendie fed a number of dogs exclusively on it, and they died at the end of forty days. White bread is principally starch, and contains only three of the fifteen elements required to sustain the human system, and these are carbon, hydrogen and oxygen—or only heat and fat-producing elements. Other dogs, to which Magendie fed nothing but wheat meal, containing all the nitrogen, phosphorus and other elements contained in the wheat, "were in first-class condition at the end of the forty days." It is declared that "more than half of the children under twelve years of age have decayed teeth, owing to the insufficient supply of the required mineral ingredients, and this deficiency is caused, as a rule, by eating white bread. Dyspepsia, constipation, loss of nerve power, and many other diseases, are produced by improper eating. Sulphur is required for the growth of the hair, yet white flour does not contain a trace; the phosphates are also notably lacking. The "false, esthetic taste, which demands a white loaf," is severely denounced. We ought to be careful that our food contains a proper balance of carbonaceous and nitrogenous elements, lest our tastes become vitiated and our bodies diseased.

The above contains much food for reflection. Some of the most important improvements in milling machinery made in recent years were for the special purpose of producing the white loaf demanded by fashion. When the demand, founded on common sense, comes for the loaf that contains all the valuable food elements of wheat, the millers will make the flour for it.

The most probable reason that the effects of the white loaf are not worse than they really are, is because it is not used as an exclusive article of food, and, owing to the variety of foods consumed, the important food elements it lacks are supplied from other sources.

Under the present fashion for the white loaf, the most nutritious food elements of wheat are taken from the flour and become food for our domestic animals. This may be good for them, but it is bad for man.

The white loaf represents a great waste, as well as an incomplete food inimical to health, and the sooner the "false, esthetic taste" is reformed, the better for health and true economy.

THE tariff bill passed by the Senate provides that all sugars not above No. 13 Dutch standard of color shall be duty free, and that all sugars above that standard shall pay duty as follows: Sugars above No. 13 and not above No. 16 Dutch standard, three tenths of one cent per pound, and all above No. 16, six tenths of one cent per pound. It also provides that a bounty of two cents per pound shall be paid to the producers of sugar in the United States, for the protection and encouragement of the industry here. Coffee, tea and hides are on the free list. To these articles the principle of reciprocity is to be applied in order to extend the commerce between this country and the Latin American nations. The reciprocity amendment to the tariff bill adopted by the Senate reads as follows:

That, with a view to secure reciprocal trade with countries producing the following articles, and for this purpose, on and after July 1, 1891, whenever, and so often as the president shall be satisfied that the government of any country producing and exporting sugars, molasses, coffee, tea and hides, raw and uncured, or any of such articles, imposes duties or other exactions upon the agricultural or other products of the United States, which, in view of the free introduction of such sugar, molasses, coffee, tea and hides into the United States he may deem to be reciprocally unequal and unreasonable, he shall have the power, and it shall be his duty, to suspend, by proclamation to that effect, the provisions of this act relating to the free introduction of such sugar, molasses, coffee, tea and hides, the production of such country, for such time as he shall deem just, and in such case, and during such suspension, duties shall be levied, collected and paid upon sugar, molasses, coffee, tea and hides, the product of, or exported from, such designated country, as follows; namely:

All sugars not above No. 13 Dutch standard in color shall pay duty on their polariscopic tests as follows; namely:

All sugars not above No. 13 Dutch standard in color, all tank bottoms, sirups of cane juice or of beet juice, melada, concentrated melada, concrete and concentrated molasses, testing by the polariscope not above 75°, 7-10 of one cent per pound; and for every additional degree or fraction of a degree shown by the polariscopic test, 2-100 of one cent per pound additional.

All sugars above No. 13 Dutch standard in color shall be classified by the Dutch standard in color, and pay duty as follows; namely, All sugar above No. 13, and not above No. 16 Dutch standard of color, 1¾ cents per pound.

All sugar above No. 16 and not above No. 20 Dutch standard of color, 1⅞ cents per pound.

All sugars above No. 20 Dutch standard of color, 2 cents per pound.

Molasses testing above 56°, 4 cents per gallon.

Sugar drainings and sugar sweepings shall be subject to duty, either as molasses or sugar, as the case may be, according to polariscopic test.

On coffee, 3 cents per pound.

On teas, 10 cents per pound.

Hides, raw or uncured, whether dry, salted or pickled, Angora goat skins, raw, without the wool, unmanufactured, asses' skins, raw or unmanufactured, and skins, except sheep skins, with the wool on, 1½ cents per pound.

Reciprocity has come to stay. It will be the controlling principle in the commerce between this and other nations, whether protection or free trade be the future policy of the government. It is only by applying the principle that real free trade can be readily secured at all. To abolish all tariff legislation, to admit every article imported free of customs duty, would not give this country real free trade, unless the countries with which we trade would, at the same time, remove their export and import duties. Nearly every civilized nation except England has a system of protective tariff. Even England's system contains some protective features in disguise. So, the way to secure absolutely unrestricted trade is to apply the principle of reciprocity, and make the nations with which this country trades enlarge their free lists as we enlarge ours.

In the amendment given above we have the principle applied in one line. But reciprocity is a broad policy, and can be easily applied in other lines. This amendment applies to over one fourth of our imports. The imports for the last fiscal year aggregated $789,222,228, the largest in our history. The imports of coffee, hides, tea, sugar and molasses, the articles to which the amendment applies, aggregated $202,200,000.

ON THE question of protection and free trade, the position of every patriotic citizen should be this: If protection is the better policy for this country, let us have it; if free trade is the better, let us have that. It is a business question that has been made one of partisan politics. Instead of being guided by their plain, every-day, business sense, the majority of men blindly follow their party, whether its declarations on this subject are good or bad. Take a tariff plank from a political platform, and strike the party name from it, and there are very many voters who would be utterly unable to identify it. For example, take the following from an 1890 platform:

We favor a tariff which, yielding a revenue adequate to support the government economically administered, will fully compensate for all differences between the cost of manufacturing in this and foreign countries, including the cost of labor; and we demand that the present tariff be reformed so that the duties upon imported goods shall bear less heavily upon articles which laboring men are compelled to buy than upon luxuries, and that, as far as practicable, raw materials for manufacturing be put upon the free list.

Now, how many voters, simply from reading that resolution, would know what party adopted it? There are many who are considered well-informed politicians who cannot tell whether it is the work of western Republicans or eastern Democrats. It is a plain, moderate statement of sound doctrine; it is neither high protection nor theoretical free trade. If this plank, or one similar, were adopted as part of the next national Democratic platform, nearly every Democrat in the country would heartily support it; if it were adopted as part of the next Republican platform, nearly every Republican would support it, and nearly every Democrat oppose it. This is politics. It is not business.

WITH the awakening caused by the advent and development of manufacturing and mining industries in the South, there comes a better understanding and feeling between farmers and manufacturers. The friendly spirit that is growing there is shown by the following, from the *Age-Herald*, of Birmingham, Alabama:

The farmers see in Birmingham and the growing population here the light that beckons them on to better fortune. Birmingham and the principle that Birmingham represents means consumption for their products, and hence a more varied industry on the farm; it means ever-increasing transportation facilities, as railroad after railroad threads the fields on their way to the coal fields; it means new wealth and power in the state, fresh home and strength to every citizen in the state.

Birmingham sees in the farmers her friends and allies in the march of progress. On them she relies, as all the world must rely, for the means of living. To them she looks to buy of her merchants, and build up here a great mercantile city in the midst of the smoke-stacks that are her glory and pride. Above all, Birmingham recognizes in the farmers that great, conservative element that moves slowly, but with majesty, and always where law and order and the love of country, and the rights of property point them. In the union and harmonious workings of the great progressive element, represented by Birmingham, and the sound conservatism of the farm, lies Alabama's surest way to solid and lasting prosperity.

FARMERS are taking more interest in politics than ever before, and it is right that they should do so. It is their duty as citizens to take an active interest in politics. But, at the same time, they should not listen to the demagogue who is trying to make them believe that politics can cure all the ills that agriculture is heir to. It is well for them to attend to politics, but not to leave other things undone. On this subject, *Hoard's Dairyman* has the following pointed remarks: "How are you going to cure depression in agriculture, when the actual depreciation in the productive capability of the land from what it was, in a state of nature, is greater than the depreciation in the prices of general farm products between war and soft-money prices, and now. Legislation cannot evoke good crops out of a soil that lacks manure and judicious cultivation. But there are lots of men who would rather howl and carry a banner with some strange device imprinted upon it than to make a compost heap and apply it to soil gaping for food, and there are lots of demagogues who will egg them on. Depressed agriculture stalks in vengeance over land that is deficient in phosphoric acid, nitrogen and potash."

And the following, from the best woman farmer in the state of New York, is right to the point: "After congress has done all that can and ought to be done; after legislatures have done all they can; after Farmers' Alliances have done all they can, the farmer's prospects will depend upon the farmer himself, the attention he gives to every detail of his work, the thought and the brain he devotes to it."

FARM AND FIRESIDE.

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Our Farm.

SUGGESTIONS FROM THE STATIONS.

BY JOSEPH.

Paris Green and London Purple.—The hope of saving their fruit from insect attacks has induced progressive orchardists to take hold quite vigorously of the new method of spraying trees with liquid poisons. Many had to learn, however, that it pays to make haste slowly. London purple was at one time very emphatically recommended by our highest authorities as cheaper and generally better than Paris green. But its indiscriminate use on peach and plum trees has done much damage in some instances. Bulletin XVIII., of the Cornell University Experiment Station, tells of some experiments made for the purpose of getting at the real truth in this matter. Peach and plum trees were sprayed at various times with solutions of both poisons in various degrees of strength. The outcome justifies the following conclusions:

1. Peach trees are very susceptible to injury from arsenical sprays.

2. London purple is much more harmful to peach trees than Paris green, and it should never be used upon them in any manner.

3. Injury is more liable to occur upon full-grown foliage and hardened shoots than upon young foliage and soft shoots.

4. The immunity of the young growth is due to its waxy covering.

5. Injury late in the season is more apparent than early in the season, because of the cessation of growth.

6. Injury from the use of London purple may be permanent and irreparable.

7. The length of time which the poison has been mixed appears to exercise no influence.

8. London purple contains much soluble arsenic, which is the cause of injury to peach foliage.

9. A coarse spray appears to be more injurious than a fine one.

10. A rain following an application does not appear to augment the injury.

11. Meteorological conditions do not appear to influence results.

12. Spraying the peach with water on a bright and hot day does not scorch the foliage.

13. Paris green, *in a fine spray*, at the rate of one pound to 300 gallons of water, did not injure the trees. Probably one pound to 350 gallons is always safe.

Corn Silage and Sugar Beets.—The Ohio station, as reported in the bulletin for June, has attempted to find out, by several series of experiments, which of the two—corn silage or sugar beets—is the better and more profitable food for milk production. Whenever the feed was changed to silage, there was a rapid falling off in yield of milk, and whenever it was changed to beets, this falling off was checked, and in several cases the flow of milk increased. One lot of cows was continuously fed on silage. During the first period, there was a rapid falling off, after which the flow remained stationary during the second period, and slightly increased, in the case of two of the cows, when the silage ration was increased during the third period. On the whole, the results indicated that beets are more favorable to milk production than corn silage. In regard to flesh production, however, the results of two trials are contradictory. Another important fact was developed; namely, that beets increased the cows' appetite for other food. Cows fed with beets consumed more hay than cows fed with silage. The question, therefore, which is the cheaper of the two, is hardly, as yet, settled.

Silage and Dry-cured Fodder Corn.—The same bulletin gives a summary of results of experiments made by different stations to ascertain the relative values of corn cured as silage, and cured in the ordinary way. The conclusions are that there is practically no difference between the feeding values of a given quantity of corn cured in one way and the other, provided equally good husbandry has been practiced in both cases. Whether corn may be cured and preserved more economically by the one process or the other, depends largely upon local circumstances and seasonal peculiarities. Among the objections to the silo are the fact that its filling comes just at wheat seeding, and that it involves an immense amount of very heavy work. On the other hand, the fodder once in the silo is secure from the weather, and is in convenient shape for feeding, and the laborious jobs of husking and stacking the fodder are dispensed with.

Cotton-leaf Worm and Hessian Fly.—The entomologist of the Tennessee station, at Knoxville, tells us in a special bulletin (E) that the simplest and least expensive way of treating the cotton-leaf worm is by the dry application of pure Paris green. Suspend from each end of a pole, eight feet long, a bag, eight by ten inches in size, made of eight-ounce Osnaburg. Pure, dry Paris green is placed in the bags, the middle of the pole rested on the pommel of a mule's saddle, and the mule ridden between the rows of cotton. With an eight-foot pole, four to six rows of cotton can be poisoned at once. The amount of poison can be increased by shaking the pole more, either by hand or by trotting the mule. This should be so regulated that about one pound is distributed to the acre. It is not necessary to select a time when plants are wet with rain or dew. A light wind does not interfere, and even may be of some advantage; but a heavy wind prevents successful application. Fifteen to twenty acres can thus be gone over in a day by one man and mule. Of course, the Paris green can also be applied in dilution. If it is to be mixed with flour (although the advantages of this dilution are doubtful), the bags should be larger and of more open material. If to be applied wet, one pound of the poison is diluted with forty gallons of water, and the use of a spraying machine is necessary. In applying the poison dry, the rider should keep out of the cloud of dust as much as possible; his hands should be covered, and the portions of his body touching the saddle or mule should have an extra layer of clothing, which should be well shaken every night. Both rider and mule should be washed at night, and better at noon, also. With these precautions, there is practically no danger of causing sores where the body is rubbed. The poison should not be applied by the dry method when a strong wind is blowing towards land used for pasturing. I will only add that I, myself, would wish to be excused from applying Paris green in this mule-back fashion.

As to the Hessian fly, there is only one practical remedy yet known. The adult flies, which are lying in wait to deposit their eggs on the young winter wheat, are mostly destroyed by the first sharp frost of autumn. By delaying the planting of the wheat, until it will not have time to appear above ground until after the first frosts, practically complete immunity from the ravages of the Hessian fly may be obtained. If all the farmers of the district would persist in late planting for several years, the fly might almost be exterminated. Several other remedies have been suggested, among them pasturing with sheep in the autumn and in the spring, burning the stubble, application of lime, rolling the ground when wheat is young, and high culture.

Pasturing with sheep can evidently be of service only when carried on before the eggs hatch, as after that the maggot is below the surface of the ground. Pasturing in spring, to be effectual, must be after the eggs of the summer brood have been laid. Spring pasturing cannot destroy the pupa (or flax-seed stage) of the insect, nor the adult fly. Burning the stubble is of very questionable utility, as it may do more harm by destroying parasites of the fly, than good by destroying the fly itself. High culture cannot be regarded as a remedy. It simply enables the plant to better withstand the injury done by the fly.

The Silk Industry.—About twenty pages of the department report are devoted to the rearing of silk-worms, but it will hardly be worth our while to read them through. The pages might just as well have been left out, or devoted to a more profitable subject. The money which congress is pouring into the investigation of silk culture, at the rate of $20,000 per year, is simply money thrown away.

Feeding Lambs.—Bulletin 37, of the Massachusetts Experiment Station (July, 1890), tells of some experiments with lambs, made for the purpose of ascertaining the cost of feed when fattening lambs by means of winter fodder rations. The results seem to demonstrate the superior feeding effect of a daily diet rich in digestible, nitrogenous food constituents when raising lambs for the meat market; also that the profit obtained from feeding lambs variously fed were due to the commercial value of the fertilizing constituent contained in the obtainable manure. But to appreciate this value properly it needs to be considered that in determining the financial results of the experiment, all home-raised fodder articles were counted on the basis of their retail selling price in the vicinity of the station. Sheep are known to produce one of the best home-made manures. Corn ensilage as a substitute in part for rowen gave very satisfactory results. The fodder combinations given to the one division of three lambs, which gave the best returns (the daily quantity being regulated by the appetite of each animal) were as follows:

1. September 16th to 30th.—2 pounds of rowen, 1 pound of a mixture consisting of wheat bran, 2 weight parts; gluten meal, 1 weight part.

2. October 1st to December 31st.—2 pounds of rowen, 1 pound of a mixture consisting of wheat bran and gluten meal, equal weights.

3. January 1st to 20th.—1 pound of rowen, 3½ pounds of corn ensilage, 1 pound of the same grain mixture as in ration 2.

4. January 21st to February 3d.—7½ pounds of corn ensilage, 1 pound of grain mixture as in ration 2.

POTATOES FOR EARLY MARKET.

BY JOSEPH.

This is an important subject, because there are few localities where the production of early potatoes does not offer excellent chances of making money to the grower whose skill and experience enables him to put his crop into the market a few days in advance of his competitors. This is also the case with growing tomatoes, but of this I will speak at another time. The premium here, and in many other instances, is on earliness.

The query is, how to proceed in order to catch the big prices usually prevailing before the rush comes. The first thing to be looked after is the soil and site. We must have a warm soil with plenty of sand in its make-up. Wet, sticky clay will not do. The land must have good, natural drainage. It should, if possible, be slightly sloping to the south, southeast or east, but under no circumstances to the north or west. Nothing in this respect is of greater importance than this proper selection of land and locality. Of course, in a neighborhood where all land is clayey or wet, or underlaid with cold clay subsoil, the warmest and earliest land that can be had should have the preference.

Soil thus selected should be further warmed up and quickened by the presence or addition of plenty of humus. Well-decayed manure can hardly be given in too large quantities. A crop of clover and clover roots, plowed under the year before, is a good thing. Plow in autumn, and provide for thorough surface drainage, so that the land will be in condition for working as early in spring as possible.

Next comes the selection of variety and seed. The grower should understand that there are varieties that are about a week earlier than the Early Rose. Whoever persists in growing this for early market, forfeits his chances of success if he has to compete with people who grow the Early Ohio, Ohio Junior, Early Sunrise, Burpee's Early, etc. I believe yet that the Early Ohio is yet the earliest good market potato we have; and I have found it entirely reliable. Next, I would depend on Early Sunrise. It is true, these varieties may not succeed everywhere, and they may not yield as much as would the Rose, or many other sorts, under less favorable conditions. But with me, and wherever I have seen it, the Early Ohio yields well under high culture—and the man who is after the big prices of the early season has no use for slovenly culture. If the grower finds any other, however, just as early and better suited for his purposes, this is the one for him to plant.

Get good, plump seed. This is no great difficulty with the Early Ohio, since this, in addition to being the earliest sort, is also one of the best keeping sorts in existence. I prefer to plant whole, or half, medium-sized tubers. The seed may be forwarded by exposing it, uncut, and in a thin layer, to the light, for a few weeks before planting. If you have a warm garret, spread them thinly on the floor, near a window, or in any other convenient, light place. This will slightly start the strongest eyes. In the meantime, prepare the ground. Plow deep and harrow well; then strike out furrows thirty to thirty-six inches apart, and if the subsoil be clay, follow with a subsoil plow in each furrow. Don't omit to scatter some good, high-grade fertilizer (say Mapes' potato manure) in and next to the furrows. You may use your own judgment as to quantity. I usually put it on at the rate of not less than eight hundred pounds per acre, with a second dressing after the seed is planted and the rows covered. Now plant the seed, one piece to each foot of row, and about four inches deep, covering at first only with about two inches of soil. All this, of course, is done as early in spring as the ground can be got in good working order.

The after culture is the same as that practiced with other potatoes. The harrow (smoothing) is at first run freely over the field, both with and across the rows. This helps to gradually fill in the depressions over the rows, to keep the surface mellow and prevent all weed growth. Afterwards, the cultivator and, if necessary, the hoe come in play. These first early potatoes may be slightly hilled, unless they encounter a drouth, when this is not needed.

There is a possibility that a crop planted this early may be threatened by a late spring frost. If the indications point in this direction, there is still one salvation, and that is to plow a furrow upon each row of plants, covering them entirely out of sight. In a small patch this may be accomplished with the hoe. When the frosty period is over, cultivation may be resumed again. The plants will hardly suffer much from this covering.

After the tops show indications of turn-

ing yellow, the crop may be dug and marketed at any time. This matter requires good judgment and often good luck, for it is quite often that prices in the early season fluctuate up and down, and sometimes after having been quite low, they all at once take a sudden upward turn later on. At other times the price drops gradually and steadily as the season advances. It is usually best to put the crop on the market just as soon as mature.

TREES OF STRIKING FORM OR COLOR.

A reader of FARM AND FIRESIDE writes me, saying he wishes to purchase some ornamental trees and shrubs a little out of the common line. He is tired of the half a dozen varieties of evergreens and the small list of deciduous trees and shrubs to be seen everywhere in the central states, and wishes a list of some striking and scarce ornamentals that are hardy and likely to grow in Ohio or Indiana. He does not mention just what he refers to as so common, but I think, in all probability, I can steer clear of naming any he dislikes, and yet mention several very desirable and striking trees.

In doing so, however, I must be allowed to say that many ornamental trees that are common in the middle states are so on the principle of the survival of the fittest. The sugar maple, the Norway spruce and the rose wiegela are examples in point. They are easy to transplant, and once started have few enemies, so they are to be found in all grounds. The double flowering hawthorns, red and white, are as hardy as the single varieties everywhere growing wild, but they are difficult to transplant, and it is probable that not more than one in fifty sold by agents throughout the country ever leaf out after delivery, yet, in congenial soil and properly located, they are among the showiest and most beautiful of flowering trees.

Another tree, desirable and beautiful in large grounds, is the purple beech. It is sold upon orders by agents to a considerable extent. Yet, it is a rare tree, simply because it cannot withstand the ordeal of root drying, which such a system of tree introduction entails. The purple beech is not a tree to group, but should have plenty of elbow room, and is most effective where it has a background of closely planted trees, either evergreen or deciduous.

Another tree, not common, but easily transplanted, is the Japan ginke, or maiden's hair. Its leaves are nearly the shape of what ladies call in quilting shell-shape, only they are scalloped on the edges and the ribs are very prominent, running from the center to the edge, like the ribs of a fan.

Another Japanese tree that I have never seen in Ohio, but grows successfully in New England and New York, is the sophora. It has a wealth of foliage something similar to the common locust, but thicker and more abundant, and blooms freely in August, the flowers being in racemes and cream colored. The foliage is a dark bluish-green and the twigs a bright, shining green in winter. There is a weeping variety, and good specimens of all sizes can be seen around Boston.

Among trees with colored foliage, the golden oak is one of the prettiest, and the fact that it does not grow very rapidly is not against it, as it permits being planted where more robust trees could not be tolerated. This is simply a form of the ordinary white oak, and I once observed some beautiful specimens in a second-growth oak forest in southern Wisconsin, growing wild, having come from seed.

A comparatively new candidate for public favor is the Prunus pissardi, a plum tree with very dark purple foliage and small, edible, purple fruit. It seems as easily grown as a common plum tree, and will soon be found in many collections, and doubtless will often be planted in positions where good landscape effect does not call for it.

South of Philadelphia, Pittsburg and Indianapolis, the liquid amber, or sweet gum tree, is a very desirable tree, resembling the maple in form and foliage, and like that, changing to brilliant colors in autumn. The Kentucky coffee tree is another native tree that is not often seen, but is in some respects unique in both foliage and habit of growth. It grows in scattering patches within thirty miles of Lake Erie, and is therefore hardier than the sweet gum. Both trees increase by suckers, which is not a serious objection in grounds kept closely mowed. The coffee tree is quite unique in winter, from the tortuous and crooked growth of its branches. A specimen in Eden Park, Cincinnati, is peculiar in this respect.

Much has been written of the Japanese maples, but they do not as yet give as good satisfaction as might be expected from the general success obtained with many Japanese productions. The largest specimens I have seen are on the grounds of Geo. Elwanger, in Rochester, N. Y. There is one variety that I wish might prove hardy and easy to manage, but I fear it will not, as I have as yet seen only very small specimens. The leaves of this are about the size and shape of sugar maple leaves on a middle-aged tree, and the color is a very dark reddish-purple, extremely showy and beautiful.

Of native trees I will call attention to two others. One is the heart-leaved cucumber, which has very large leaves and is much shorter and broader in its habit than the common cucumber. The other is the sycamore. I have noticed several variations from the normal type in trees of this species, and one growing near my home is broad and low in its growth, and its branches are as crooked and peculiar as that of a mature coffee tree. Its manner of growth and white bark make it quite interesting as a winter tree.

As a change from the usual line of maple planting, I would suggest the use of the Norway and sycamore-leaved maples. Both are distinct, and the former makes a much more massive and distinguished looking tree than the sugar maple, as it develops a few large limbs instead of many small ones. Its top breaks into masses instead of preserving the regular and too symmetrical outline of the sugar maple, and its spread is greater, some specimens I know having a drip of over eighty feet, and covering more than twenty rods of ground.

Much of interest might be added in reference to weeping trees and conifers, but it must be deferred to another time.

Summit county, Ohio. L. B. PIERCE.

THE COTTON HARVEST.

The cotton harvest began over two months ago in the counties along the coast, and the first new bale of Texas cotton was sold in Galveston on July 8th. It was a large bale, weighing 620 pounds, and sold for $100. While cotton picking has been going on in the coast counties since July 1st, it was just getting under good headway along the thirty-second parallel September 1st.

Those readers of the FARM AND FIRESIDE who never saw a cotton field will doubtless feel interested in the way cotton is gathered. They are all aware, perhaps, that it is all picked from the stalk by hand. As yet, no successful cotton picking machine has been invented, and the human hand is the only means by which our six and seven million bales are annually harvested. In the lovely September mornings the cotton pickers strive to get to their work as early as possible, while the dew is still on the fleecy locks. They are paid from fifty to sixty cents per hundred pounds, and as no deduction is made for dew, it is to their interest to get to work before the cotton is dry. The few pounds of moisture gathered in the early morning are no disadvantage to the cotton, however, as this moisture brings about a gentle heat, or "sweat," in the cotton, which causes it to shed the lint from the seed cleaner when it is ginned.

Each cotton picker has a long, canvas bag or "sack" slung from the neck by a wide, cloth band. The lower end of the sacks drags the ground slightly, in order to relieve the picker's neck and shoulder of part of the weight. The picker is also provided with a strong, white-oak, splint basket, capable of holding from seventy-five to one hundred and fifty pounds of cotton. Placing his basket in a convenient place, he proceeds to pick a section of a row, and when his sack gets inconveniently heavy, he empties it into the basket, tramping it in tightly. The cotton is usually taken to some convenient house or temporary shed, at noon and at sundown, and weighed. An average day's work is about one hundred and fifty pounds, but extra good pickers sometimes double this amount. There is no class of labor in which individual capacities vary more than in picking cotton. Some of the strongest men are often distanced by delicate women and girls, whose slender, agile fingers seem just suited to the task of rapidly removing the soft, snowy locks from the open bolls, or pods.

Cotton picking is quite trying to one's back for the first few days of the season, especially when the stalks are low, as they usually are on poor land. The pickers can relieve themselves very much, however, by using the lower end of their pick sacks for cushions, and kneeling down at each stalk until all the cotton is gathered from it. It is generally necessary to pick over a field of cotton three times. The first picking is usually the best and cleanest cotton, and the first bales brought to market generally bring handsome prices. Cotton should all be gathered by November 1st, as the weather from that time on is usually cold and wet. There are few more disagreeable tasks than trying to pick cotton with benumbed fingers. It is often the best policy to let the cows eat what cotton is in the field after November 1st.

While it is not definitely known yet what number of bales will be harvested this season, the general opinion among farmers seems to be that the crop will fall under six millions. Many sections have suffered from drouths, while others have been inundated, and between drouth and flood we may expect a short crop.

While Texas usually sends in the first bale of new cotton, Georgia beat her this year by three days, her first bale being received at Albany July 5th, and sold the same day for 15½ cents per pound. Mrs. M. Housman, a lady farmer of De Witt county, Texas, has sold more "first bales" than any other individual in the cotton belt. She usually ships her cotton to Houston, and always gets a handsome premium price for the first bale.

Texas. DICK NAYLOR.

IRRIGATION FOR STRAWBERRIES.

I put up an extensive plant in Illinois, for the purpose of trying irrigation on strawberries and other things. My well, 104 feet deep, inexhaustible, was on the highest point on my place. The water was pumped up by wind power into large tanks, where it was allowed to become of the warmth of the air before using. It was conveyed by pipes to the strawberry beds, and was applied both by running it between the rows and by showering overhead. The results in either case were not nearly so good as I had anticipated, but very much the better where the water was applied between the rows. Where it was showered on the plants from above, there was too much disease—rusts and blights. Where run between the rows, there was but little more of these than on plants not irrigated. It is true, I got a much larger and longer season of fruit from the irrigated plants.

And here comes in a point that was quite mysterious to me at first, but I believe I have it studied out correctly now. It is this: One season I was irrigating some plants that were roofed over to prevent their tops' foliage from wet. It was a season when there seemed to be fully sufficient rain for strawberries. The surplus water from the above plants ran down quite freely into a bed of strawberries just below. Those where the water reached them made an immense crop of very large berries. My explanation of this is, that the pressure of the atmosphere—state of the barometer, as we term it—has a great deal to do with the size of strawberries and most other fruits. When the barometer is low, therefore the air pressure less, the berries swell out big. When the air pressure is above normal, they cannot do this.

I irrigated strawberries one season when it was very dry. The berries on the irrigated plants were but very little larger than on those where water was not used, though there was many more of them. Toward the end of the season there came a light sprinkle of rain, with quite a low barometer for a time, when the berries on the irrigated patch swelled out wonderfully large, while it seemed to injure rather than help those not irrigated. Therefore, it follows that we can pump the water in, but we cannot pump up the low barometer to give us big berries.

Strawberries and raspberries are irrigated here in California by flowing the water in furrows between the rows, the plants growing on slight ridges, and the secret of their wonderful and long-continued healthy productiveness here is that their foliage is seldom wet except by dews, and these are generally dissipated in the morning while the sun is obscured by a fog; therefore, their foliage is, as a rule, very healthy. In fact, the tender, European strawberries, that are generally worthless east from foliage disease, do finely here. And one other thing, the reasons for which I have not studied out as yet, the berries here swell out as they do east under a very low barometer, no odds how fair and dry the weather may be.

The strawberries seem to be peculiarly adapted to climates with but very little rainfall, in case their roots can have moisture enough. Therefore, the proper way of irrigating them is first by running water between the the rows; second, and by far the best, subirrigation, combined with thorough underdrainage. This seems best for nearly every tree or plant on which it has been tried, not only because it gives the growing plant, every moment of its life, exactly the right amount of moisture for the best results, no more and no less, but also because it prevents, so far as possible, moisture in contact with the foliage, entirely so in rainless summer climates like California; it also permits of the surface of the soil being dry, for my experiments in Illinois proved that the near presence of moisture (in the furrows) generated foliage disease.

I had said in my articles that subirrigation combined with underdrainage was undoubtedly the best for all climates. It is very expensive in the start, but if put in right, I think it would pay better than buying United States five-per-cent bonds at twenty cents on the dollar. If the water can be had and brought to the land cheaply, surface irrigation will pay well, applied to strawberries and many other crops all over the prairie states and nearly everywhere else, but subirrigation would pay an hundredfold better.

D. B. WIER.

A COWARDLY INSINUATION.

"Does your cow cringe and curl," asks the *New England Farmer*, "and appear nervous and fidgety when you sit down to milk her?" Well, not much, she don't. She isn't that kind of a cow. She isn't one of your shy, timid, bashful cows. She just fixes her eyes on vacancy with a glare that will raise a blister on an oak knot, sticks her tail straight up in the air, stiff as a poker, plants three feet firmly on the ground, and then feels around with the other for the milk-pail, milk-stool and milkmaid; finds them; fires them up somewhere into the empyrean, and remarking, "Ha, ha!" amid the shouting, jumps over a six-rail fence, and tramples down an acre of garden. Don't talk about cringing and curling to a cow that has to be milked with a pipe line and pumping station.—*R. J. Burdett, in Chicago Journal.*

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

ETTUCE FOR WINTER.—Last Christmas a friend of mine wrote me quite enthusiastically about the fine lettuce he had been enjoying for some time, and the way he had managed to secure it at that season of the year, without the use of greenhouse or frames, was so simple that I give it for the benefit of any reader who is fond of that vegetable and may wish to enjoy it at a time when green stuff is usnally noted for its absence on the farmer's table.

Plants had sprung up promiscuously and in great abundance from seed scattered by plants left out in the garden. This spontaneous crop, favored by warm fall weather and plentiful rains, grew so exceedingly thrifty that my friend disliked to see the plants all perish by the approaching freezes, and made up his mind to try saving at least some of them. A few boxes were filled with good, sandy loam, and the half-grown heads, carefully taken up with soil adhering to the roots, planted in them as closely as thought to be safe. I might say they were crowded. The boxes were then set into the cellar, near a light window, and here the plants continued in good condition until used up. They lasted until after Christmas, and made a number of meals more enjoyable. Of course, a common frame with hot-bed sash, where at hand, may be put to good use in raising or preserving a crop of lettuce for use during the early part of the winter, say from Thanksgiving to Christmas.

I am sorry to have to say that I have next to no celery this year. From July until latter part of August, my soil was as dry as dust. Seven weeks without rain, and most of the time without dew—that is a treatment such as our clay loam on clay subsoil cannot stand without dire results. I had very fine celery plants ready to be set out, but the work had to be postponed from day to day and from week to week until too late. There was no use making even the attempt of setting a plant in the open ground, without facilities for irrigation. The sad consequence is, no celery for me this year. In order to have something in the shape of green vegetables, at Thanksgiving, Christmas, etc., and now and then between, I will have to fall back on lettuce, and I shall have it both in the cellar and in frames.

THE BUSH LIMAS.—I can see more good points in Henderson's Bush Lima than I discovered last year. *This variety has come to stay;* there can be no doubt about it. It is true, the pod is small, and so is the bean. But the plant, under good culture, is immensely productive; the pods are growing in close clusters and consequently are easily gathered; the beans are of very good quality, and come several weeks earlier than the large Limas, then lasting until end of season. In short, I can hardly speak too highly of this little bush Lima. It is the thing for sections where the common Limas do not succeed on account of shortness of the season; it is the thing for people who want Limas as early as possible; it is the thing for all lovers of a really good bean. It is a Lima that can be grown almost as easily as any common garden bean; and a small patch of it will supply a family during the entire season. I shall plant them largely next year.

Burpee's Big Bush Lima gives us the common large Lima in true bush form, and as such it is "boss." It is the novelty of the past season, and it will have the biggest boom of any novelty in years. The bush is quite stout, and grows to a height of two feet or more. I have one standing up two and one half feet. While the pods are not as numerous as those of Henderson's Bush Lima, they are large and well filled. After I can once get seed enough of this kind, the trellis and pole varieties will be no longer needed, although I think I shall keep them up merely for the sake of adding an ornamental feature to the garden.

The Kumerle Lima does not please me near as well as the other two bush sorts. It is too dwarf and compact in growth, and altogether too late. Only a small part of the pods will mature this season. The Kumerle is a dwarf form of the excellent Dreer's Pole Lima, but much to my regret, I think I shall soon discard it for Burpee's Big Lima. People who invested seventy-five cents for a package of four beans of the latter variety, if they succeeded in raising even a single plant, and are careful with the seed, will never regret having paid the apparently high price.

After all, however, it is not difficult to grow even the common large Lima, or any of that class, in bush form. I have a row which has been repeatedly cut back, no runner having been allowed to grow more than a foot high, and the plants now look for all the world like a genuine bush variety, with plenty of pods near the base. Seed of this row will be saved and planted next year, to be treated in the same manner. I am anxious to find out how many years of such treatment will be required to fix the bush habit. Among the Kumerle Limas I noticed this year one plant with a tendency to return to the old climbing habit. Of course, it was pulled up and thrown away.

NITRATE OF SODA.—I have repeatedly spoken of the really wonderful effects often noticed from the use of this fertilizer. I shall never fail to use it largely on spinach, onions, cabbage, celery plants, etc., hereafter. In fact, I do not see how I can afford to neglect using it. Fortunately for us, its price has a downward tendency, and if the demand should greatly increase, it is very likely that the cheaper grades may be made available for use by American people. In a letter received a few days ago, the writer, M. Munte, of Wayne county, Indiana, says: "I have quit buying concentrated fertilizers, and rely chiefly on nitrate of soda, with a little phosphate in shape of home-manufactured bone black, and ashes for potash, and I find that I raise better crops, and save a great deal of money. Nitrate can be bought now for two and one half cents per pound (two cents at the seaport), and as that is what we need more than anything else, it is a good and cheap way to make a high-grade fertilizer for but little money."

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

FALL OR SPRING FOR PLANTING.

Where trees are procured when fully matured, my experience is in favor of fall planting for apple, pear, plum and cherry; and spring planting for peach, apricot and evergreens and small fruits. The season preceding the setting out has a bearing on how early or how late in the fall trees should be procured; that is, if trees ripen up early they can be set with great assurance by the 10th of October, but should the season be such as to promote late growth, which frequently occurs, it is not best to plant before the 25th of October; and my experience in handling trees bears me out that half the loss occasioned by fall planting is caused by trees being moved before the wood is fully ripened.

Several years ago we had occasion to strip and dig a lot of trees about September 23d, and it happened that the boys in stripping had taken the leaves off of a few that were of a smaller size than those ordered. The ensuing spring quite a number of the trees were dead, and on careful investigation we discovered that those dead were the ones stripped and left over for spring. Now, a great deal is said about heeling in trees over winter; but few have assigned reasons for so doing. Trees procured late in fall, if not too dry to plant, should be set at once; but if the trees are received early, or show signs of shrinking caused by improper handling, or being dug too early, it is best to heel in until spring.

For spring planting, procure your strawberries as early as weather and ground permits, which, with us, is from the 20th of March to the 1st of April. Small fruits, such as strawberries, raspberries, etc., should not be tied up and shipped in such a manner as to cause "heating." It is best to have them sent by express, in crates prepared for giving plenty of air, and not packed too tight. Fruit trees are best set in this latitude from the 5th to the 20th of April, which enables them to receive the full benefit of the early rains, and thus to get well started to growing before our usual dry spell sets in.

The proper time to set evergreens we believe to be from the 1st to the 20th of May, as they do not do well in chilly weather, and should be haudled and planted carefully. Trees procured in fall should be heeled in, as any that are withered will fill out and be ready to grow as soon as set, whereas, if planted at once, the chances are that such trees will die. However, should you receive trees that you know are freshly dug and fully matured, my advice is to set at once if your ground is ready for them. Be careful in selecting varieties, planting but few kinds in large orchards, and when set for your own use, select such as do well and suit your own needs without reference to market. If you are not sufficiently posted, leave the selection to some one who is, and be sure to plant carefully and give proper attention to their culture. My experience is that the majority of trees, but little when once established, do not cause much trouble to be kept growing nicely.—*H. W. Freeman, in Exchange.*

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Plum for Name.—T. S., Centreville, Mich. I think the plum you send is Sharp's Emperor, or Victoria, but am not quite certain.

Book on Cranberry Culture.—W. H. C., Wyoming, Minn. For a good book on cranberries, and how to grow them, I refer you to a little book called "Cape Cod Cranberries," published by Orange Judd & Co., New York City.

Stable Manure for Strawberries.—L. S., Greensburgh, Ind., writes: "Will it do to give strawberries which are in strong clay soil a top dressing of rotted stable manure, or will they grow too strong in vines?"

REPLY:—Don't be afraid of too much stable manure on your strawberries. There is no danger of using too much.

Leached Ashes for Strawberries.—J. F. W., Hammondsport, N. Y., writes: "Will leached ashes benefit the strawberry plants set in gravelly soil?"

REPLY:—Yes, probably they would be beneficial by acting to make the soil more retentive of moisture and of fertilizers. In itself, however, leached wood ashes contains but very little plant food, as all the soluble portions have been washed out into the lye. Unleached wood ashes would probably give good effect on your soil.

Spring and Fall Setting of Plants.—E. N. G. Spring setting of plants is generally more successful than fall setting. Fall setting requires much more care, but is often done to save spring work. It is successful with very hardy plants when proper care is used to not set later than the last of October, to firm the soil around the plants and to mulch them. In the fall, the plants should be set out as soon as the wood is ripe, which is when the leaves will separate easily from the branch. With currants, this is generally some time in September, and with raspberries, the last of October.

Oak Girdler.—W. H. T., Romulus, Mich., writes: "Enclosed please find an insect pest I never saw before. Noticing limbs of oak trees scattered all over the ground led me to investigate. I concluded that the bug laid the egg on the limb, and it gradually ate its way in by girdling, thereby weakening the wood, when the limb dropped off. The piece of wood I send you contains a worm, also. Please name the insect."

REPLY:—The insect received is *Elaplicdion villosum*, or common oak girdler. Its habits are as follows: A beetle lays its eggs in June or July on the twigs. The larva hatches out and burrows into the wood, which it tunnels to a considerable extent. When it is very nearly fully developed it cuts the twig off, working from the inside, and then the twig, with the worm in it, falls to the ground, where the twig is protected by the leaves, and so the worm passes through the winter.

Strawberry Inquiries.—B. W. C., San Marcial, N. M., writes: "(1) What varieties of strawberries are best adapted to a sandy soil, with traces of alkali? (2) What fertilizer is needed? (3) What month may I set plants for spring bearing? (4) Will plants formed from runners bear setting this fall?"

REPLY:—(1) I do not know of any, and you can only find out by continual trying. You had better try the Crescent and Downer's Prolific, planted in alternate rows, as they are perhaps as vigorous as any kinds we have that do well at the North. Also try the Cloud Seedling, Michel's Early and Hoffman's Seedling; these latter varieties are vigorous, and do very well in the southern states. (2) This can only be told by trial, but probably the best fertilizer for you to use is well-rotted stable manure. (3) Probably you will be most successful by setting in the spring. (4) I think so, but will not be so certain as spring setting.

Grape-Vine Leaf Roller.—J. R. G., Brownsville, Tenn. The insect you mention is probably the common (though not generally very destructive) grape-vine leaf roller, *Desmia maculalis*. It passes the winter in the chrysalis state folded up in the leaf. In the spring the moth appears quite early and lays the eggs singly on the leaves. These soon hatch into little worms, which immediately commence folding the leaves for a nest to live in, from which they emerge to feed on the surrounding foliage. They are very active. Two broods hatch out each season, the eggs of the second brood being laid late in the summer. They seldom do much damage, but when troublesome, the folded foliage and worms may be destroyed. In the fall, especially, it should be seen to that all folded leaves are burned. They may also be checked by syringing the foliage with weak Paris green water during the feeding period of their lives.

Layering Vines.—W. B., Hopewell, N. Y., writes: "When is the best time of the year to propagate grape vines, and also raspberries, by layering? May it be done at any season? How long will it take them to root, and when should they be separated?"

REPLY:—Grape vines will root whenever layered, if allowed to remain covered for one season. I prefer to layer grapes in June, after the new growth has started about six inches. If then the cane is covered up carefully so as not to injure the new growth, roots will be sent out from each joint, and you may get a plant for every joint layered, which may be separated the following spring. If only one plant is wanted, cover the cane early in the spring, and it will be large enough to transplant the following year. It is a good plan to put some old, well-rotted manure near the layered cane, so that its roots can reach it. This will aid it much in forming roots. But do not put manure close against the cane.

Fertilizers for Strawberries—Tankage.—R. P., Fullerton, Cal., writes: "What do you think of horse manure for strawberries? Do you pull the suckers off the plants before bearing? How many plants are need to the acre? ——What is tankage?"

REPLY:—Horse manure is one of the best fertilizers for strawberries, but sheep manure, if well rotted, is rather richer in plant food. ——The suckers of strawberry plants are seldom removed from the vines unless they are taken off for starting a new plot. Sometimes, when they grow very thick and appear to be more than the land can carry, they are thinned out.——Strawberry plants should be planted eighteen inches apart in rows four feet apart. By this plan about seven thousand plants are needed per acre.——Tankage is a refuse product from rendering establishments. At such works they put all the bone and offal containing fat into a tank and keep it under a high pressure of steam until the oil is separated. The residue left in the tank, after taking out the oil, is evaporated to dryness and sold under the name of tankage. It is very rich in nitrogen, which is the element in manure that tends to make a very strong leaf or wood growth in plants; consequently, it is very valuable for such crops as cabbage or spinach or rhubarb, where foliage is desired, while for grain or fruit crops it should be used in connection with phosphoric acid and potash. As, for instance, it would be well to apply it to land that has had a good dressing of unleached wood ashes. However, wood ashes should never be mixed with tankage or any other nitrogenous fertilizer, for it starts chemical action, by which the nitrogen is thrown off in form of a gas called ammonia, or hartsborn.

Our Farm.

JERSEY ISLAND AND JERSEY CATTLE.

I HAVE read of Jersey, Guernsey and Alderney cattle, but very little of the islands upon which they are raised or bred. As I lived on the Island of Jersey for eighteen years, I thought I would write a brief sketch concerning the above mentioned islands and their breeds of cattle. The Channel Islands, as they are called, form a group consisting of Jersey, Guernsey, Alderney, Sark and Jetho. Jersey, the largest, is about eleven miles long and from three to five miles wide. The island is divided into twelve parts, called parishes, each presided over by a minister of the Church of England. The head minister is called dean.

The people, as a rule, speak two languages, French and English. There is a language spoken by the natives which is a corruption of French and English; it is very hard to spell, and is almost impossible for French or English people to understand.

The Island of Jersey is very fertile. Two crops of grass can be annually cut. Spring commences very early and the winter is very short. Plowing can be done in almost every month of the year. The climate is very mild, being tempered by the surrounding waters.

Cattle raising is a specialty, great care being taken with the breeding. Each parish has an annual cattle show, so that there are twelve different cattle shows or expositions in one year. Then there is one show where all the districts unite, making thirteen in all during the year. No other cattle are allowed to be bred on the island except Jerseys. Those of other countries must be slaughtered on arrival, for beef. Not enough beef is raised for consumption. Many of the finest cattle are exported to different countries of the world. Quite fancy prices are paid for well-bred cattle.

Farmers do not let their cattle run loose as we do, but tether them with a rope twelve or fifteen feet long, moving the cattle two or three times a day. Many acres of turnips, Swedes and mangel wurzel, parsnips and other root crops are grown for cattle. They feed heavily with roots.

Large crops of early potatoes are raised for the London markets. There is great competition in growing potatoes, as to who will get the earliest to market. They commence to dig them in May. The population of the Island of Jersey is about 60,000. Wages are very low.

Druidical ruins still remain on the islands, and thousands of tourists from France and England come there to spend a few months in summer, making it a large summer resort. J. C. P.

Blossburg, Pa.

SHEEP SKINS.

I once called on a friend who is a member of a firm engaged in handling sheep skins. With a force of men and experts in the wools and skins, they were handling from 1,500 to 2,000 skins a day. These skins were bought on the market, largely, and were from sheep butchered for mutton. They were a motley lot of all sorts, kinds and varieties—coarse, fine, white, black, spotted, young, old, and many of them lamb skins.

The first operation was to soak them, with a view to cleansing the wool. While wet, they were passed through a machine which took out all the burs, trash, lumps, etc. They were then carefully scraped to remove all the flesh from the flesh side of the pelt. They were then soaked in a solution to loosen the wool, and then dried by centrifugal machinery, preparatory to going to the men who removed the wool, throwing it into separate grades as they pulled it off. These skins had been graded carefully before by an expert, so as to have them as near of one sort as possible.

These skins, without the wool, were submitted to a most thorough process of cleansing and careful soaking in various solutions and baths to fit them for the tanners.

TANNING

Is quite another process of the business, and consists of sumac or alum processes, as the skins may be suited to a class of manufacture, or as may be desired for further use.

After the entire process of fitting for further manufacture was complete, these skins were ready for the market as tanners' sheep skins. If the market was not satisfactory, they were by an expert assorted into lots of a dozen. These were packed into barrels, in a pickle, headed up and put into the cellar to wait for a market. They would stay there any length of time, without any damage, until sold.

THE WOOL,

Assorted and graded, was passed over a screen, through which hot air was driven from the furnace below. The drying apparatus was immense in size and rapid in its work. Each grade was carefully sacked and sent to market. Nothing was lost of the whole pelt; what was wool was gotten for wool. The clean skins were for the tannery, and the rest was used as fertilizers.

Fine-wooled skins were worth the most money. A plain, Merino pelt was worth as much as a coarse-woolen pelt, plus the value of wool on it. A wrinkled, Merino pelt was worth less as a skin, but the amount of wool on it made it more than equal to a coarse pelt with little wool on it. A plain skin would sell for 30 cents; a wrinkled, Merino pelt would sell for 15 cents, but its larger amount of wool made it more desirable to the cleaners. They could well afford to sell it at 15 cents—one half the price of the best skins.

The whole work was interesting from first to last, and it was novel, besides. The wonder was, what did they use so many sheep skins for? The answer was, to make shoes, gloves, linings, book bindings, blank books and many other articles. Verily, the sheep business is important.

R. M. Bell.

EXTRACTS FROM CORRESPONDENCE.

From Ohio.—We have as good land here in south-eastern Licking and western Muskingum counties, for farming, as any of the other states may have. We can raise as good wheat, corn, oats, potatoes and garden truck as any other section, but we cannot raise as much per acre as some other sections. The man who cannot make a living here will not do it anywhere else. Crops this season are a little under the average. This is a good section for stock of all kinds, as the land is rolling enough for them. P. W. L.

From Indiana.—Our products are corn, wheat, potatoes, and all grasses that are grown in this latitude. The drouth cut crops short in this part of the state. Corn, wheat and potatoes are half a crop, but the hay crop never was better in this part of the state. Our corn crop usually runs from 20 to 60; wheat, 10 to 25; and oats, 20 to 50 bushels per acre. Monroe and adjoining counties have been a fine timbered section of country. The timber has been and is being manufactured into lumber, staves and spokes. The larger part of the land is rolling and hilly. Land ranges in value according to location, improvement and quality. Lands near the county-seat and towns can be bought at from $40 to $100 per acre. Back from the principal towns and railroads, from five to ten miles, unimproved land is $5 to $15; improved, $5 to $25. The larger part of the county is limestone, finely watered with good springs of the best of water. G. N. B.

Untonville, Indiana.

From Kansas.—Padonia is a small town in Brown county, on the Missouri Pacific railway, one hundred and twenty-five miles south of Omaha, and eight miles south of the Kansas and Nebraska state line. It has two large grain elevators and a large flouring mill. Corn, wheat, oats and potatoes are the principal crops of the surrounding country. Fruits (except peaches) and berries of all kinds do very well here. Peaches make a crop about every fifth year. Stock raising is carried on. Corn will make 30 bushels per acre. It has been dry all summer, but corn stood the drouth very well. Land is worth from $40 to $50 per acre, and the soil is very good. There is no timber except along the streams, but there are hundreds of fine groves that have been set out. Hiawatha is our county-seat. There are many good streams in the county. Good schools and churches are found all over the county. The winters are cold, with lots of snow, and the summers are hot and dry. Our rainy season is from April to July, and from September to December. J. R. D.

Padonia, Kansas.

From Minnesota.—Redwood county is in the south-western part of the state. The Minnesota river runs east of it, forming the boundary between Redwood and Renville counties. Wheat is the staple product, although oats and corn are raised in lesser quantities. The weather has been dry since June, in consequence of which potatoes are not good. Crab apples are the only kind of apples that can be grown here on account of the severe winters. Small fruit can be grown here as elsewhere. The hog business is good. Cattle do not bring a good price. There is some vacant land here, bought up by speculators, who hold it for sale at $10 or $12 per acre. I came here from Wisconsin, over six years ago, and though the summers are pleasant, the winters, with their dreadful blizzards, are enough to make me sigh for Wisconsin shores again. In summer there is usually a slight breeze, which tempers the fierce rays of the sun. Redwood Falls is the county-seat, and is situated on the Redwood river. There is a good deal of building going on here this summer. Redwood Falls has a fine, brick schoolhouse, costing about $16,000. The churches are Presbyterian, Methodist, Christian, Episcopal and Catholic. C. J. C.

Redwood Falls, Minn.

From Kansas.—Finney county is a fine country, watered by the Arkansas river. Thousands of acres are irrigated by means of canals, taking water from this river. Immense crops are raised every year, under irrigation, and I refrain from giving the quality and quantity raised, as my word and honor would be questioned by many in the East. This has been rather a dry season, though outside of irrigation considerable wheat and rye were raised, but the corn crop was almost a total failure. A large amount of wheat will be sowed here this fall; the heavy rains have put the ground in fine shape for seeding. I must say I never saw a finer stock country anywhere than here. Buffalo grass gives us fine pasture for winter, and stock will graze nearly all winter, and do well. Owing to the failure of crops east of us, we are realizing good prices for everything in the feed line. Alfalfa hay, $5 per ton; corn, $1.25 per hundred; wheat, 85 cents to $1 per bushel; oats, 35 cents, and potatoes, $1.50 per bushel. As in all other countries, there are some who are anxious to sell their farms cheap, or trade for eastern lands, and I want to say, right here, that eastern men who want to farm and raise stock could get fine bargains in trading for some land here while it is so cheap.

Garden City, Kan. B. S.

From Florida.—There are no prairie lands except overflowed lands. The cost of clearing pine land is $5 to $10 per acre; hammock land, $10 to $30. The soil is sandy loam, very easily cultivated. We have but few weeds to contend with in growing crops. Crab grass generally comes in about the second year; it grows very fast, and soon after the crop is gathered we can cut it for hay, which is as good as the hay shipped us from the North. It is a profitable crop of itself. I have been here over seven years, and have bought only one bale of hay, and have saved as high as ten tons in a season. We have no mud, as the rains are absorbed by our lands as soon as it falls. We have but few colored people here. The best time to come is early in the fall. I have suffered less with the heat since I have been in Florida than I did in the North. We nearly always have a good breeze, and it seldom gets to 90° or above it. As to snakes, we have the big, yellow rattler and the ground rattler, also two kinds of moccasins. I have seen a few centipedes. Our spiders are of the common kinds, but numerous. Fleas are no worse here than North; they are bad the first year, in a new place, but if it is cleared up nicely and all rubbish burned, they are not so bad. Mosquitoes and cockroaches are our worst pests.

Minneola, Fla. C. H. C.

From Missouri.—Bates is an agricultural and mining county, and in point of wealth, stands fourth in the state. Butler and Rich Hill, two rival towns, are situated in this county; the former is the county-seat, and the latter is surrounded by a mining district, each containing about 5,000 inhabitants. We hear so much concerning the drouth in other localities, while we are enjoying a bountiful crop of almost everything. Wheat was excellent, and oats and flax were the heaviest crops ever raised in the county. We will have a fair potato crop, also a good corn crop. Old corn is now worth 30 cents per bushel. Peaches are plentiful, and the apple crop was never more abundant. There are several apple buyers here from the North and East, who are paying us 40 cents per bushel for good, fall apples. Our apples are of fine quality, smooth and nice, and the farmers of this county will realize more money from the flax and apple crops than from any other two crops raised this season. A great many cattle will be fed in the county this winter. Kansas City is our market for hogs and cattle, being a distance of sixty-five miles directly north. Bates county is noted for its fine horses and mules, its good crops, abundance of coal and its pretty girls. Land sells for from $20 to $60 per acre, and rents, some for the third, some for two fifths and some for cash—$2.50 to $3.50 per acre. The farmers are thoroughly organized into an alliance, and have out a county (Union Labor) ticket, and are certain of success. Money don't grow on trees here, but any person with a fair amount of energy can make money. I have been here ten years, and I have not failed to raise a good crop each year. We therefore invite parties who are seeking a good farming locality to come and inspect this county for themselves. But none except honest, industrious home seekers are welcome.

Butler, Mo. W. A. B.

From Texas.—The writer having recently returned from a trip through a portion of the state of Texas, by way of the Denver and Fort Worth, and the Texas and Pacific railroads, can testify to a feeling of open-mouthed wonder at this view of the mammoth state and its wonderful resources. To convey even a faint idea of the soil, climate, products and commercial advantages of the state would require a volume, and even then the dwellers of the East, hemmed in by mountains, forests and streams, would consider an exhaustive compilation of the wonderful advantages of Texas in the light of fiction, fairy lore or "Nebraska lies." The state of Texas has long been noted for its vast extent and cattle interests, but very few of our readers have the least comprehension of either its vastness or its many and varied interests. All lands that are destitute of trees resemble one another, on account of their uniformity of surface. It is only necessary, as on the sea, to scan the horizon in order to find proofs of the earth's rotundity. The tops of distant hills and trees appear first, then, as we approach, they rise, until trunks and bases are seen. The surface of the plain slopes down toward the horizon like the back of an immense shield, while above stretches the enormous dome of the atmosphere, with its variable play of light and shade, its clouds chasing each other, now collecting, now dispersing, drawing out into horizontal lines, and again gathering into dark masses. The Texas plains are unsurpassed by any others for scenic grandeur. The flowering grasses growing on them wave and quiver in the wind like the ripple of the waves, and the clumps of trees are dotted about like islands. Here and there the islands are grouped into archipelagos, and the arms of the prairie surrounding them fork out and unite again like arms of a grassy sea. One single prairie is often so vast that as far as the eye can reach not a tree can be seen, and then again the clumps of trees follow one another in rapid succession. Along the Texas and Pacific railroad there are about 3,500,000 acres of land granted by the state to this road, comprising some of the finest lands in a most beautiful portion of the state; they are all adapted to stock raising, fruit growing or farming. The eastern portion of this section is particularly good, and fruit growing and farming may be extensively carried on without irrigation. It is well watered and exceedingly fertile. The rainfall averages 25 to 35 inches yearly, and good crops are grown five years out of seven. In choosing a new home, where we may have room for growth and development, we are usually advised to go West, and by that term we generally understand West to mean Dakota, Wyoming, Colorado and Kansas. All these states have their advantages of soil, water or climate; some have soil and climate, but no water; others, plenty of water, but a severe climate. In removing from the older settled East, with its advantages of culture and education, we wish to combine all the good points possible in the new home selected. We want good soil, fine, healthy climate, plenty and cheap fuel, with capabilities for farming and fruit growing, forestry and grazing; and a section that combines all these attributes may be found east of the Colorado river, in Texas, along the Texas and Pacific railroad. This land lies between the Brazos and Colorado rivers, and is well watered by the tributaries of these great streams. The land is a series of prairies rising to the westward from 100 to 200 feet. The soil is a sandy loam, black in some places, chocolate brown in others, and bright red in others, all exceedingly fertile, as was testified by the growing crops thereon. The products are cotton, corn, oats, wheat and fruits. Water for household use is obtained from wells 30 to 60 feet deep. Considerable timber may be found, especially along the banks of the streams; among the varieties noticed were elm, pecan, hackberry and mesquite. The elevation is from 750 to 2,297 feet, and is considered very healthy. Traveling westward between the Colorado and Pecos rivers, we cross 1,000 000 acres of this same land grant, located in fifteen counties, and while not as favorably situated as the eastern portion, still presents many advantages to the home seeker. The greater part of this section is devoted to the raising of horses, sheep and cattle, farming as yet being somewhat experimental. In some localities fruit growing is receiving considerable attention, with great promises for the future. The people of the state are waking up to their own interests, and companies are being organized to induce immigration and to encourage agriculture, horticulture, vine growing and general farming in these unoccupied districts, also to prepare for irrigation when this is found necessary. Some experiments have shown that within this section nearly every product of the temperate zone finds suitable soil and climate. The raisin grape, standard American and European grapes, as well as apples, peaches, prunes, quinces and blackberries flourish. Further west, the grant covers a portion of the Liano Estacado, or staked plain. Here irrigation is necessary for farming, and the principal occupation of the people is stock raising. Water may be obtained from 10 to 100 feet, and several tracts cultivated in fruits are showing satisfactory results. The altitude is greater, and it is notably healthful, particularly to those suffering from lung and throat trouble. Twenty thousand acres have already been placed under irrigation in the past year; the trees and vines are in a flourishing condition, and from two to four crops are grown yearly. This section is a part of what is known as the Panhandle of Texas, and consists of prairies intersected by tracts of broken country containing rugged hills and gorges. The prairies are covered with a variety of rich grasses, among which may be mentioned the mesquite and gramma, blue stem, bunch sedge and buffalo. The ravines contain pools and streams of water which seldom dry up. By July 15, corn was in shock, and from almost every station fruits, watermelons, cantaloupes, peaches and grapes, tomatoes, cabbages and other vegetables were shipped. A. B. H.

Pontiac, Texas.

Our Fireside.

THE LAND OF USED-TO-BE.

Beyond the purple, hazy trees
Of summer's utmost boundaries;
Beyond the sands, beyond the seas,
Beyond the range of eyes like these,
And only in the reach of the
Enraptured gaze of memory,
There lies a land long lost to me—
The land of Used-to-be.

A land enchanted, such as swung
In golden seas when sirens clung
Along their dripping brinks, and sung
To Jason in that mystic tongue
That dazed men with its melody;
Oh, such a land, with such a sea
Kissing its shores eternally,
Is the fair Used-to-be.

A land where music ever girds
The air with belts of singing birds,
And sows all sounds with such sweet words
That even in the lowing herds
A meaning lives so sweet to me.
Lost laughter ripples limpidly
From lips brimmed o'er with all the glee
Of rare, old Used-to-be.

Lost laughter and the whistled tunes
Of boyhood's mouth of crescent runes,
That rounded through long afternoons,
To serenading plenilunes,
When starlight fell so mistily
That, peering up from bended knee,
I dreamed 'twas bridal drapery
Hung over Used-to-be.

Oh, land of love and dreamy thoughts
And shining fields and shady spots,
Of coolest, greenest, grassy plots,
Embossed with wild forget-me-nots,
And all the blooms that cunningly
Lift their faces up to me
Out of the past; I kiss in thee
The lips of Used-to-be!

I love ye all, and with wet eyes
Turned glimmeringly on the skies,
My blessings like your perfumes rise,
Till o'er my soul a silence lies
Sweeter than any song to me,
Sweeter than any melody
Or its sweet echo, yea, all three;
My dreams of Used-to-be!

—*James Whitcomb Riley, in Minneapolis Journal.*

WAS IT THE ATMOSPHERE?

MIRIAM.

TALMAGE declares he has more veneration for every other antiquity than for stale air. If we are guilty of unmercifully riding a hobby, it is that of fresh air. Yet we have not gone so far on our pet steed as to sleep with our windows wide open, with the thermometer several degrees below zero. We imagine, however, it is not exactly the theory that fresh air is wholesome and absolutely necessary to the health, comfort and happiness of the present age that induces the vast multitude to forsake comfortable homes and flee to the mountains, seaside, anywhere and everywhere, when summer smiles upon the earth.

No; it has become the fashion, the rage, for every woman who would secure and keep a position among the creame de la creame of swelldom, to hie herself away to some fashionable resort and patiently suffer discomforts she would escape at home, in order to assure her dear friends her house in the city will be closed during the heated term, etc.

So great has become this craze that it is no longer confined to our large cities, but the smaller ones, even our villages, have their summer exodus of the would-be hon-tons, seeking freedom from care, rest, fresh air. And they are rewarded with discomforts of every order. The foul atmosphere of narrow, contracted apartments, illy ventilated, in a miserably-ordered summer resort; enduring, uncomplainingly, what they never could endure at home, all for the sake of the prevailing fashion of a deluded class of pleasure-seekers.

If there is a class of people in this world for whom I feel profound pity and a moist-eyed compassion that does not endanger my own comfort or peace of mind, it is for the poor women who have husbands working the year around for a modest salary; who have comfortable homes in cool localities, but, poor creatures, who would suffocate with wounded pride if they could not follow the deluded multitude and humor their own deluded fancy in this summer outing.

It was an Alexandrian mother, between thirty and forty years of age, who wanted an experienced nurse to take charge of a child. We fancy it would have been better for all concerned had the proud parents of pretty, petted, wayward Shirley Dean secured the services of a competent nurse for their tender offspring about the time she aroused their rebellion by announcing her determination to wed, at an early date, the handsome, young journalist, Edgar Bertram, a youth who, on a modest salary, had performed the marvelous feat of keeping up a respectable appearance, escaping starvation, and making himself quite attractive on an income not even so prospectively elastic as to solicit a greater burden of expense.

When our heroine encountered opposition to her pet plans, she boldly and romantically threatened elopement. This aroused the irate father (the villain of the play), who proceeded to attempt blackening the young lover's character in hope of defeating the proposed consummation of "love's young dream," and then persuade his daughter, if possible, to wed a rich suitor, who had agreed, in the event of success, to pay the debts of his prospective father-in-law.

Of course, the villain's purposes were thwarted, and the spoiled beauty achieved a triumph that resulted in a rash and early marriage, wherein neither infatuated party took thought for the morrow what they should eat or drink, or wherewith they should be clothed.

Edgar Bertram was envied by his fellow quill-drivers and his host of companions belonging to his fraternity. He brought his bonnie bride to the aristocratic boarding-house where he had secured a handsomely-appointed suite of rooms, a little extravagant for one of modest means; "but then," the infatuated lover reasoned, "I have an incentive to labor, now, and can manage to do extra work and thus meet extra expenses."

The happy pair had been enjoying their honeymoon so profoundly that they had not noticed they were not receiving the homage due a bride and groom, until one rainy, gloomy day, when Shirley had been caged within doors by the rain, and Edgar had been prevented, by pressing work, from even appearing at lunch, and time was a little heavy on the bride's hands, at least.

When the young husband arrived late to the late dinner, he found a shadow on the pretty face of his wife, which provoked the prompt inquiry, with the first, loving greeting:

"Why, my pet, what has come over your bright spirit? You look sad, dejected. Tell me quickly, my own, what is it?"

A mist came into the bright eyes, and the voice was low, yet wondrously sweet to the waiting, anxious husband, as the young wife confessed:

"Edgar, I have been trying to solve a little enigma, to-day, in my loneliness and quiet. Here we have been for nearly two months, and aside from your friends of the newspaper fraternity, I have had very few calls, and some of those from people whose acquaintance I do not care to cultivate."

Edgar Bertram laughed aloud (but it was a soulless laugh), as he tried to excuse the negligence of the little world within the boarding-house, and console his young wife by saying:

"The truth is, a very unpleasant experience of a few months past is still fresh in their minds. A heartless detective appeared, one evening, in their midst, and carried away a lovely pair who had enamored the whole house. They had fairly taken them in their arms and to their hearts; had showed them the sights of the city, and even quarreled over which church they should attend. These charming people were disguised criminals, badly wanted in another city. It is the remembrance of this touching incident that makes people hesitate about making new acquaintances."

"Oh, my dear Edgar, I am too old a bird to be caught with such chaff. This excuse does not reflect well upon you. You are certainly well known throughout the city, and highly-esteemed people should have confidence in your choice of a wife."

"Why, my pet, don't you know, Washington City is quite a place, and I never lived in this aristocratic locality until I secured my aristocratic wife. Give people time to discover our ancestral claims, and you will be deluged with flattering attention. What care we for the very elect 'four hundred,' so long as we have each other? You have heard the story about Mrs. S. asking what had become of that Mr. Villars we used to hear so much about in society, and Mrs. R. replying, 'Oh, he's married, and in love with his wife.'"

"Sweet consolation, indeed, my dear," returned Shirley, with a suspicion of sarcasm in her tone.

As the days went by and lengthened into months, one morning the young couple were awakened to the fact that they had been married just one year—a year of lights and shades. Edgar Bertram found, very soon after his marriage, he had drawn a prize of beauty in the matrimonial lottery, yet, alas, quite an expensive luxury—a spoiled, humored child, who grew impatient at the refusal of any desire or demand she might express. He found it required not only extra toil and economy on his part to maintain his prize, but also a goodly stock of patience, for her whims were varied. Even with all his blinding love, he could not fail to observe his heart's idol was selfish and exacting, and when he found it impossible to humor her wishes and demands, she became irritable and discontented.

Two years went by, and a little treasure came to brighten the lives and, let us hope, unite these young hearts with a stronger, more hallowed bond. Like a child with a new toy, for a time Shirley seemed so delighted with the innocent, young life given to her loving care that she was forgetful of those things that had hitherto annoyed her. She grew less selfish, and fond-hearted Edgar fancied she seemed more loving and mindful of his interests. Alas, it was but for a season, and when the time of year arrived for the summer flitting of the birds of fashion from the city when those about her began to hie away to the seaside and mountain resorts, again Shirley became discontented.

They had recently taken a suburban cottage, handsomely furnished it at great expense, and were equipped with a good cook and a maid, who cared for the baby and performed other services in a very quiet, orderly way. Edgar Bertram, to gratify his wife in this new arrangement, had involved himself in considerable expense, and was even now greatly perplexed to know how he was to meet his financial obligations; but how could he resist the pleadings of his wife, who said, again and again:

"Edgar, the baby and I need a change. Look how pale the little dear is. Every one is surprised I have remained so long in the city with him."

"Why, my dear," returned the perplexed husband, "that was the very argument you employed in coming here. This is not the city. We are as much in the country here, and more so, in some respects, as we were at Long Branch or—"

"Oh, hush!" interrupted Shirley. "You are making fun of me, now. It's so tame here, so quiet—yes, lonely."

"Why did you not think of this when you urged me to take this cottage, Shirley?" asked Edgar, more seriously.

"Well, it was better here than to die penned up in a city boarding-house; such a second-class affair as we were in, at least."

This aroused the young husband, who had sacrificed so much and toiled so hard to make his young wife's surroundings and associations harmonious with her tastes, and gratify her proud aspirations, and provoked Edgar Bertram to speak as he never before had spoken to his sensitive wife:

"Shirley," he said, "you should have considered my financial standing before the fatal step was taken. I have done the best I could for your comfort and happiness, and you are not contented or happy."

Shirley could not believe her patient, indulgent husband was serious until a glance at his face discovered a stern, wearied look, then the little heart was broken, and the tears sprang to her eyes, yet she proudly retorted:

"I suppose I have committed an unpardonable sin by longing for a little pure, fresh air for my poor boy and myself."

"Question your own heart and be candid, Shirley," quietly responded the young husband. "Is it the fresh air you crave, or a desire to follow in the wake of those about you who are financially able to seek selfish enjoyment at any cost?"

In the silence that followed this question Edgar Bertram resolved once more to yield to a foolish whim of his humored wife, even while his better judgment admonished otherwise, and he well knew he could ill afford the expense this new departure must needs incur. Not trusting himself to further expression of his true feelings on this delicate question, he arose and left the apartment, lingering a moment as he passed through the pretty yard of the quiet, cottage home to look at some exquisite pansies, double violets and buttercups, in the heart of which had fallen a tiny, diamond dewdrop.

"I wonder," reflected the perplexed and worried husband, "if this is the nature of womankind! Never contented, always reaching for something new—chasing the ignis fatuus, pleasure."

Edgar Bertram possessed a handsome face, a frank, honest eye and fine physique. He possessed, also, a wonderful magnetism, that had always proved a potent factor in his success and popularity, with a cordial, dignified manner that wins friends in all classes. He therefore had little patience with this fungus aristocracy found in all our cities, and even villages, in this morbid, mushroom age.

Shirley Bertram was happy for the present. She had again triumphed, and was preparing for a sojourn at a seaside resort of a decidedly fashionable character. When bidding adieu to her young husband, on the eve of her departure, she consoled her conscience by saying, so sweetly, so tenderly:

"How much it will detract from my enjoyment, Edgar, dear, that you cannot be with us."

Edgar returned to his hot, city office to toil and endure, while the thoughtless, young wife selfishly settled herself in the delightful quarters secured for her at the seaside. She was bright and attractive; her maid's caps were irreproachable, and what flirting she was tempted to was artistic enough to be a pleasure to look upon; but, to her credit, she was seldom artistic in that way, and therefore became popular with matrons and maids. The gentlemen admired her, and "all went merry as a marriage bell" for many a day, until somebody ill-naturedly asked, "Where is Mr. Bertram, and who is he?" Nobody but Mrs. Bertram could answer these busybodies, and she did not volunteer any information on the subject. So gossip, having nothing to feed upon, grew rapidly, as is the way, and in a week Bayview began to believe something must be wrong.

It happened that Shirley had brought one letter of introduction to the resort, hurriedly written by a young friend about to take flight to Europe, and this, under the keen scrutiny of a female committee of investigation, appeared to lack satisfactory details about the unknown head of the Bertram family. "I do so hope you will like my charming little Mrs. B.," the letter ran. "She can see so little of her poor husband, I fear it will be horribly dull for her out there unless some one takes pity on her loneliness. I fear she frets over her husband, sometimes, but how can it be helped now? But, then, she has—" Here the writer drifted into matters never intended for the public ear. When the letter was first received, the sentence about the husband attracted no attention, but now, with a cloud of suspicion gathering, the gossips fancied there must be something very, very wrong with Mrs. Bertram's absent spouse.

Mrs. Bertram was seated on a secluded balcony, one evening, the personification of innocence and beauty in her becoming attire of dainty white goods, when one of the cruel-hearted matrons approached, saying, guilelessly

"When are we to see that faultless husband of yours? We will begin to think him a myth if he does not soon appear."

A sweet little pout was visible as Mrs. B. replied:

"Really, I don't know. He is at Auburn, now, with that miserable wretch, Brevont, I believe."

"There is a prison at Auburn, and that wretch is one of the noted prisoners," promptly reflected the interviewer.

It is not difficult to create a mountain from a mole hill, if you are in the proper frame of mind, so it followed, when Mrs. Bertram entered the little chapel the next day, there was a confusing rustle of silk throughout the pews, and the devout prayer silently arose from anxious hearts that the sermon should condemn hypocrisy. but it did not. Mercy was the theme, which proves that pulpit and pew are not always in harmony.

When poor, little Shirley joined the group of devout worshipers in the vestibule, after service, she discovered that the thermometer had fallen half a dozen degrees or more. She could not account for the sudden change of temperature. Nobody quite cut her, but the social air seemed full of little icicles. The little woman wandered homeward alone, wondering what could be the matter. The next day one of her dear intimates called upon her, indulging in a little postscript as she retired, saying, as women are wont to do, the important part of her communication to the last, just as they write letters, you know.

"How is that mythical husband of yours?" she queried.

"He has been sent to Elmira," innocently answered the wife.

As there is a reformatory at this point, the answer was in harmony with the rapidly-growing suspicious. There was a private gathering, that night, of the anxious, who hastened to post themselves on New York penal institutions. The next day, those who had admired and caressed the husbandless victim most, passed her unnoticed on the street. No one called, and her name did not appear on the list of patronesses that were pledged to make a tennis party a grand success. Shirley, however, attended the party, but was greatly puzzled by the peculiar treatment accorded her. Every one seemed to hold themselves aloof from her except a handsome youth, who was said to have gone astray in a wholesale house in the city, and who had never before paid her much attention; he really betrayed a brotherly kindness and interest. She could not comprehend it.

One by one her former ardent friends grew cool, until, finally, the entire tribe of pleasure-seekers deserted her and she dwelt in perfect solitude, until, one day, one of the more curious ventured to call. She, however, entered the cottage with a decided business air. After an icy salutation, she said to her hostess, in a blunt, decided tone, speaking "like one having authority," etc.:

"Do you really know where your husband is at present, Mrs. Bertram?"

"I think, without doubt, he is now at Sing Sing," promptly answered the innocent victim.

This decided the visitor, who quickly responded:

"You will pardon, me, Mrs. Bertram, but, while I extend to you my sympathy, I must insist that the intimacy hitherto existing between you and my daughter shall entirely cease." And away dashed the anxious mother like a meteor, remembering Lot's wife, or, for some other substantial reason, never glancing backward.

About this time in the history of our persecuted heroine, a man was discovered, one moonlight night, hastily leaving her cottage. She followed him to the gate, where, several witnesses declared, there were parting kisses exchanged. This satisfied the gossips; this hushed all doubts. The landlord waited on the poor, bewildered Shirley, the next day, and ordered her to vacate the place, as the reputation of his house would suffer.

"Sir," said Shirley, pleadingly, with tears in her soft eyes, "I do not understand this treatment; I pay my rent promptly; I never neglect to meet all my obligations of this character here. What mystery is this? I am almost driven to desperation by the strange treatment to which I have recently been subjected."

"I wish to have no argument with you, nor enter into any explanation. I insist upon you vacating this cottage immediately."

The brave, little woman was able no longer to stand the pressure of the mystery oppressing her. Her heart seemed breaking. There were footsteps sounding on the path leading to the cottage door. An instant more, with a glad cry like a wounded dove, Shirley flew to the wide-spread arms of her husband.

"Why, my poor, little Shirley, what does all this agitation—these tears—mean?"

Shirley could not speak for joy, but, pressed close to the great, loving heart of her noble husband, she rested so sweetly while the landlord told the story.

"And the miserable gossips imagined I was a criminal, and was imposing my wife, with all her disgrace, upon their virtuous society."

Need we inform the reader that the city journal employing the valuable services of Edgar Bertram had been sending him to discover and report the inner workings of these institutions for the punishment of crime? Need we tell the reader that a purer, nobler, more honorable man never lived than Edgar Bertram, who to-day stands at the head of his profession, and whose devoted, happy wife learned a lesson in the school of experience she never will forget? A lesson that remodeled her into a contented, unselfish, happy wife, who found her chief pleasure in the society of her husband. It was, indeed, a dear lesson, but most valuable.

TO MEASURE SPEED ON A TRAIN.

Several veteran railroad men were seated in the smoking compartment of a Pullman car the other day. The train was due in Detroit about two hours later. A discussion arose as to the rate of speed that they were traveling. One of the party guessed that the train was going over forty-eight miles an hour, another estimated the speed at forty-five miles, another at fifty, and so on. Finally, one of the men took out his watch, held it in his hand less than half a minute, looking at it steadily all the while.

"We are going forty-six and one half miles an hour," he said, looking up from his watch. One of the other men thereupon took out his watch, held it in the palm of his hand and kept his eyes riveted upon the dial, never once looking out of the window. After the lapse of half a minute he looked up and said that they were traveling at the rate of forty-seven miles an hour.

"How can you tell the rate of speed by simply looking at your watch?" inquired an interested witness of these proceedings.

"Why, easy enough," replied the railroad man. "You know every time the car passes over a rail-joint there is a distinct click. Just count the number of these clicks in twenty seconds and you have the number of miles the train is going per hour. This is a simple matter of arithmetic, as the length of the rail is uniform."—*Detroit Free Press.*

CORN CHEAPER FUEL THAN COAL IN KANSAS.

"Some people seem to be horrified when they hear of corn being used for fuel," said a Kansas man the other day. "Now, if corn is cheaper than coal, what possible objection can there be to using it for fuel? A Kansas farmer can get 13 cents for a bushel of corn. Let us see, that is $3.70 for a ton. To get that he may have to haul his corn six or eight miles to market. If he buys coal, he will pay $4 to $5 a ton and haul it the six or eight miles back home. The matter simply comes down to the question of how he can get the most effective fuel for a dollar. You could hardly expect a farmer to pay a bonus in order that he might burn coal, if he could get the heat some other way. Corn at $3.70 a ton is cheaper fuel than coal at $5 a ton, and, besides, it has in its favor the fact that the farmer has the corn at home. There is no more reason for an objection to burning corn than there is to burning wood."

THE HABIT OF RAPID WORK.

Edward Everett Hale, in an article in the *Forum*, expresses his surprise that clergymen should spend so much time, frequently a week, in composing a sermon of not more than thirty-five hundred words.

The average newspaper man, Mr. Hale says, writes easily and rapidly. He has to do it, or get left. He must have his information in his head, or at hand. He may be required, late at night, to write a column about a great man or a political event, and he cannot spend a week thinking the matter over.

The newspaper man, too, knows that he will have no chance to revise his copy when he sends it late to the compositors, page by page. So he writes carefully, and attends to the paragraphing and punctuation.

It will strike the preacher that this is work at high pressure. So it is, but it becomes a habit. When writers know that they must work in this way, they think quickly and clearly, and put the right word in the right place without the slightest hesitation.

The newspaper habit of rapid writing results in fairly good work that will compare favorably with the more deliberate compositions of the preachers. When a thing must be done, that settles it.

It will not do to sneer at this rapid writing for the newspapers. It moves the world, entertains, instructs and shapes public opinion. It gets into histories and other books, and in many instances is a model of style.

Yet the average newspaper man will write 700,000 words of good matter in a year, and stick to his work without a vacation, while the preacher has to take a month or two off every year.

It is largely a matter of habit. Under somewhat similar conditions the preachers would do in one day the work that now stretches out through the week, and the probability is that there would be no loss in quality and quantity. In this rapid age we must cultivate the habit of rapid thinking and rapid action.

POCKET MONEY FOR WIVES.

One of the crying evils of the time, Mrs. Alice E. Ives tells us in the *Forum*, is the lack of pocket money, or pin money, for married women, with its consequence of their slavish pecuniary dependence on their husbands.

She fortifies her argument with illustrations drawn from actual life, where wives of rich men maintaining luxurious establishments are kept practically penniless themselves. Their husbands, with more or less grumbling, pay their millinery and haberdashery bills, but leave them unprovided with a private purse from which they can draw at pleasure for their little wants and charities. If the wives need money, no matter how little, they must beg it from their lords, and give an exact account of what they propose to do with it. They are looked upon by their neighbors as rich and enviable, but in truth they are poorer than their very servants, and with less liberty. They are treated as if they were children not to be trusted with money, and as of no financial discretion.

Accordingly, after the manner of the enslaved, the wives use deceit and trickery to obtain the few dollars they want to expend in their own way. They "get their milliners to send in a bill for forty dollars instead of thirty, the real price, in order to take the extra ten for themselves." Others of these miserable creatures are too conscientious for that, and Mrs. Ives draws a really pathetic picture of their attempts to escape from pecuniary bondage by secretly working for the pittance of the sewing girl, whose independence they envy.

BUTTERMILK AS A CURATIVE AGENT.

That old domestic remedy, buttermilk, should not be passed over for more modern prescriptions. A young lady patient of the writer's was suffering from a severe consumptive cough. None of the usual anti-spasmodics, expectorants, etc., seemed to do any good, simply because her stomach was too weak to bear enough medicine to effect the purpose. Finally, I suggested to her mother the use of hot buttermilk. It was adopted at once. Her first night's experience was one of comparative freedom from cough and pain, and a pleasant slumber for several hours. It was continued for a long time, with an unvarying relief of all her previous distressing symptoms, and an almost perfect freedom from cough for several hours after each draught of the hot buttermilk. Lingering at one time for weeks from an attack of congestive fever, dosed with calomel and quinine almost beyond endurance, the writer began to desire buttermilk to drink. The physician didn't "believe in humoring the whims of patients," as he expressed it; besides, he contended that a single drink of the obnoxious fluid might produce death, as acids and calomel were incompatible dwellers in the same stomach. But I was a good persuader, and my mother was a susceptible subject. The buttermilk, "fresh from the churn," was procured and drank. No evil resulted; instead, came a perspiration and speedy recovery. There are people, however, who cannot use buttermilk at all.

Our Household.

OCTOBER.

In these still days earth takes a moment rest;
The bare, brown fields lie placid in the sun;
They are content, knowing their labor done.

There is no pleasant green place; every nest
Is empty now; the branches are all bare,
And the sweet singing birds no longer there.

The crisp, brown leaves lie deep; we go in quest
Of ripe, full nuts that drop down lazily
Into our laps from many a loaded tree.

And after all sweet hours we think the best,
And are so glad for fair October days,
When earth is seen through gold and purple haze.

For of her bounty we have been the guest
Through the pale spring, through summer's golden prime,
Through all the rich, hot days of autumn-time.

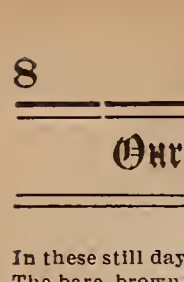
We've wept and laughed with her, been sad and blest;
We've tried our love in every changeful mood,
And now with earth we rest awhile and brood.

For this year's sun sinks grandly to its west,
Knowing how sweet and gracious are its ways,
How beautiful and fair its many days;

And sitting hand in hand, our love confessed,
We calmly rest in still October's calm,
Hearing in our own hearts a low, glad psalm,

And knowing we have garnered all the best,
The sweetest hours of love, and that our store
Is now so rich that life can ask no more.

HOME TOPICS.



Dish-cloths and Holders.—Young housekeepers, especially, are sometimes puzzled to know what to use for dish-cloths, as they have no old linen. New linen is stiff, and old wears out so quickly that it is not very satisfactory. New cheese-cloth makes very good dish-cloths; it is soft, easily kept clean and dries quickly. Take a piece twice as large as you wish your dish-cloth to be, and sew it into a bag; then turn it, fold in the edges and stitch the open end together. Quilt it across three or four times, and you have a good dish-cloth. It will take but a few minutes to make three or four of these. The checked linen that comes for that purpose makes the best cup-towels. They should be one yard long, and one should have at least four of them. Be sure that they are washed, rinsed and hung up to dry, out of doors in pleasant weather, every morning, and go into the family wash every week, and they will always be sweet and clean.

Never permit either dish-cloth or cup-towel to be used as a holder. Have two or three holders made of three thicknesses of crash, with a brass ring sewed to one corner to hang them up by. These can be washed and kept clean. A square of crash toweling is better than a holder for lifting bread, cake, etc., from the oven, but keep it for this purpose only. I know one woman who has a piece of tape about three quarters of a yard long, sewed to the bands of her kitchen aprons, and when she puts on her apron she slips the end of the tape through the ring in the corner of the holder and fastens it with a slip-knot, like a halter knot, then her holder is at her hand when she wants it, and she is not tempted to use her apron for a holder.

Old, woolen stocking legs make good ironing holders. Cut as many pieces as you like, tack them together with needle and thread—a good way is to overcast the edges together. Make covers of heavy, unbleached muslin or crash, with one end open, slip in the holder and baste the open end together; then when the cover is soiled it can be slipped off and washed.

The Little Children.—Vacation is past, and once more the children are in school. But the little ones who are too young to go to school will miss their older playmates, and mother will need to give them more time. I was lately visiting a young mother who seemed to get along so easily with her little ones that I asked her secret. She said: "Last Christmas mother sent me the *Mother's Portfolio*, and it has been a perfect mine of wisdom and helpfulness to me. I had regretted very much that I could not send Paul and Jessie to a kindergarten, for I am an ardent believer in the value of its teachings; in the symmetrical training of eye and hand, of head and heart. Here was a kindergarten teacher come to me, and I have found it of untold value to me in surmounting many of the difficulties to be met with in the every-day life of the children." Then she showed me the book. It contains four hundred pages, with many beautiful illustrations, and is replete with helpful hints. It has a series of typical lessons for every day in the year, on seeds, plants, flowers, insects, birds and animals, which read like fairy stories; songs, with music for the wee ones, and much more that busy mothers, who wish to begin the education of their little ones in the best way, will find to be just what they need. I do not know whether this book is for sale by booksellers generally or not, but it is published at 161 LaSalle street, Chicago, and any one can find out about it by writing there.

The mother armed with this *Portfolio* will not be puzzled when she hears the familiar sound of "Mamma, what can I *do?*" for all the time he is doing the things herein taught or suggested, he is being trained in the right direction to prepare him to take up school work when he is a few years older. The little child must of necessity be constantly learning something, and how important it is, then, that all its faculties be systematically developed! The most important question to parents is how to rear children strong in body, mind and morals. A great factor in the solution of this question is a mind occupied with good, beautiful and useful thoughts, and this training of the child cannot begin too early. Maida McL.

DRESSES.

Our merchants, in bringing on the fall goods, astonish us with the most startling plaids ever seen. Besides the established

Fig. 1.

clannish plaids of the old Scots, than which nothing was ever so beautiful for children's wear, there are others much larger and of much darker colors.

Perhaps from last winter you have enough of a good, plain-colored dress to make a plain waist and plain, mutton-leg sleeve like No. 4. A very simple dress to make, and if a simple overdress of some pretty plaid is made sleeveless, like the cut, it can be used even with a white waist for more dressy wear. A sash of wide ribbon, finished in bows at the front, and some kind of a braid or passementerie design to finish the neck, is all it needs to be a stylish and dressy gown.

Fig. 2 is another plaid, simple in design, and finished in white embroidery. This must be of the very fine and sheer kind when used in combination with a wool material.

Figs. 1 and 3 are the same, but represent different materials in the make-up. If the bretelles are used of embroidery, take it single; if of the material, take it double upon the bias. They must be 6¾ inches wide and 28¾ inches long. This dress has two skirts—an under one of silesia to match, one yard, 19¼ inches wide and 12¾ inches long; the upper one two yards, 26½ inches wide. The bodice and skirts are sewn together at the waist line. The waist is made of hand-sewn tucks, left in folds and not pressed flat. The sleeve is simply a little fuller than the lining, and the cuffs made of soft tucks like the waist.

Black will give way to gayer colors for winter wear. Scarlet is in high favor. If you have a good black, summer dress, make the inside waist and sleeves of scarlet. This, with a pair of red, high shoes, will make the little one a very stylish, fall suit. A black hat with black feathers completes the costume, or a black hat with plaid silk to match the plaid, wool dress.

In the Scotch plaids, silk and wool come alike. Merchants will not furnish samples of plaids to any one, but any one willing

Fig. 2.

to rely upon my taste in purchasing, may command me, as in former times.

A dark child looks well in bright colors, a fair one in more subdued ones. The prices range from 75 cents to $1.25 for good wools, these being of extra width, though cheaper grades can be got for 50 cents.

Louise Long Christie.

VISITING CARDS.

We look upon and speak of the Chinese as "heathen," and yet, since the opening of their kingdom to all the world, we find that to them we are indebted for many things we, in our ignorance, think have just been discovered. As long ago as the Tong dynasty (618-907), visiting cards were known to be in use in China. That is also the introduction of the "red silken cords" which figure so conspicuously on the engagement cards of that country. From ancient times to the present day the Chinese have observed the greatest ceremony with regard to the paying of a visit. The cards for this purpose are large and of a bright red color.

When the Chinaman desires to marry, his parents intimate the fact to a professional match maker, who thereupon runs through a list of her visiting acquaintances and selects one whom she considers a fitting bride, and then calls upon the young woman's parents, armed with the bridegroom's card, on which are inscribed his ancestral name and the eight symbols which denote the day of his birth. If the

Fig. 3.

answer is an acceptance, the bride's card is sent in return; and should the oracles prophesy good concerning the union, the particulars of the engagement are written on "two large cards, tied together with red cords." From that custom comes ours, no doubt, of tying the cards together with a white ribbon. The styles in all kinds of cards with us are constantly changing, but just now the neatest visiting card is a fine, cream-white card with a beveled edge, or of very fine bristol board, with the name engraved. There is a style of type in imitation of engraving which is readily recognized by the initiated. Just now the name, "Miss Roberts," is considered sufficient. If there are other sisters, "Miss Gladys Roberts," and so on through the family. It is well to be provided with a card with your name and address whenever you are traveling.

Exchanging cards with new friends bring them to mind when you might have forgotten the name and remembered all the rest of the acquaintance.

In calling upon a friend, you should always send up your card by the person answering the bell. If your hostess comes herself, leave your card upon the table during your call.

Ladies who have a large visiting list keep a book and note down the date of the call, and keep every call in order. Some think a society lady has nothing much to do. Indeed, you who criticise her would hardly be willing to change places with her and give up your ease, for her busy, busy life—often worse driven than if she did your work. Every one of us are required to complete the duties of our position, be it high or low, and a wealthy position doesn't always bring ease and comfort. Christie Irving.

SOME TIMELY RECIPES.

Cantaloupe Sweet Pickle.—Take seven pounds of melons, not quite ripe, lay them in a weak brine over night. Then boil them in weak alum water till transparent. Lift them out and put them in a jar. To

1 quart of cider vinegar, add
2 ounces of stick cinnamon,
1 ounce of cloves,
3 pounds of granulated sugar.

Let this boil, and add the fruit, cooking it twenty minutes longer. Pour it in a jar and cover close. Scald it over for two mornings. Then seal it up tight.

Tip-Top Pickle.—Take one peck of green tomatoes and one dozen large onions; slice both on a slaw-cutter. Have them in separate vessels, sprinkle salt between the tomatoes and let them stand two hours; pour scalding water over the onions and let stand till wanted. Then squeeze them both out and arrange them in a crock in alternate layers, sprinkling between them celery seed, white and black mustard seed. Pour over this a quart of vinegar and pint of sugar brought to a boil. It is ready for use when cold.

Ripe Cucumber Sweet Pickles.—Pare twelve large cucumbers and take out the pulp. Cut them in strips about two inches wide, and three or four inches long. Let them stand a few minutes. Take

2 pounds of sugar,
1 pint of vinegar,
1 ounce of cinnamon,
½ ounce of cloves.

Boil together and skim. Then put in the cucumbers. Let them cook until tender. Then take them out and let the liquor cook fifteen minutes. Pour this over the cucumbers and cover tight.

Citron Preserves.—Select sound fruit, pare it, divide into quarters, carefully take out the seeds, and cut in very small pieces any shape you desire, and weigh it; to every pound of fruit allow one half pound of loaf-sugar; put the citron on to cook until it is quite clear, then remove it from the kettle where it can drain, and pour out the water it was cooked in; then put on the weighed sugar with water enough to wet it through; let it boil until very clear, and before putting in the citron again, add to the sirup two large lemons, sliced, and a small piece of ginger-root, to give it a fine flavor; then add the citron and let all cook together about fifteen minutes; fill the jars with citron and pour over the hot sirup, then seal up.

Tomato Preserves.—Scald and peel carefully small, pear-shaped tomatoes, not too ripe; prick with a needle to prevent bursting, and put their weight in sugar over them; let them lie over night, then pour off all the juice into a preserve-kettle, and boil until it is a thick sirup, clarifying it with the white of an egg; add the tomatoes and boil until they look

transparent. A piece or two of ginger-root, or one lemon to a pound of fruit, sliced thin and cooked with the fruit, will improve it.

Citron and Quince Preserves.—Pare and cut the citron in inch pieces; boil hard in middling strong alum water thirty minutes; drain, and boil in fresh water till the color is changed and they are tender; wash carefully the quinces; pare, quarter, core and halve the quarters; boil the cores and parings in water to cover them, one and one half hours; remove them and add the prepared quince to the liquid; boil, and when they begin to be tender, add the citron and three fourths of a pound of white sugar to every pound of the fruits.

A NICE PUDDING.

When one has unexpected company at the eleventh hour before dinner, the worry, in nine cases out of ten, is over the dessert. Here is a pudding that can be made in fifteen minutes, if there is a good fire, as is usually the case so near dinner time:

Butter a basin and pour in a quart of milk, or half milk and half water, if you are short of milk. While you are waiting for it to boil, break three eggs, keeping the whites and yelks separate; with the latter, put in three full tablespoonfuls of flour, and enough water so that it may beat up smooth and free from flour lumps.

Fig. 4.

If the milk does not yet boil, beat the whites of eggs ready for use. To the boiling milk add half a teacupful of sugar, one small teaspoonful of salt and the beaten yelks and flour. When thick, spread on the beaten whites and set in the oven until a light brown, which should be in about five minutes. A tablespoonful of sugar added to the whites of the eggs improves the taste if not the looks. Use lemon or vanilla flavoring as preferred. This pudding may be served warm, or it is a dainty dessert for tea with the cake—almost as good as ice cream. This recipe makes enough for six or seven people. Gypsy.

DAHLIA ROOTS.

Do not be in too much haste about lifting the dahlia roots. One of the causes of failure in keeping, of which so many complain, arises from the lack of maturity, which too early lifting retards, or rather, checks altogether. Just as soon as you discover that your plants have been frost bitten, cut the stalk off at the ground, and for several weeks afterward let the roots remain in the ground. Indeed, we have been most successful in keeping the roots that were left in the ground until just before the earth froze up.

Florists seem to differ widely in their opinion of the best method of storing dahlia roots. Probably, because all are not equally successful with the same method. Some of them strongly advise shaking the soil from the roots and drying them for several days in the sunshine; then burying them in sand in a warm cellar. Others advise shaking the soil from the roots and drying them thoroughly; then storing them away as you would potatoes. Some advise wintering them in the same pit with potatoes. With none of these methods have we been successful. So we gradually came to prefer our own way of storing them, which is as follows: We select a morning in the late fall when the ground is wet enough to adhere firmly; then we lift the roots with a large spade, taking up all the dirt we can, carefully handling them so that none falls off. We then lay them where they will receive the full benefit of the drying sunlight. They will be ready for storage in three or four days. We then set these great "bunches" of earth in a large box in a dry cellar. They neither rot nor shrivel up for us, a thing they always did when we practiced the other methods.

When March comes, we have only to wet the soil around our tubers and they soon start into a vigorous growth. A sharp knife easily separates the plants in May, and the sterile (?) tubers are thrown away. Elza Renan.

CAKES.

Mrs. Wm. B., Sand Lake, Mich., asks for the following recipes, which are good and thoroughly tested, and may be of use to many of our sisters:

Angel's Food.—
11 eggs, the whites,
1½ cups of sifted powdered sugar,
1 cup of flour,
1 teaspoonful of cream of tartar,
1 teaspoonful of vanilla,
A pinch of salt.

Sift the flour, cream of tartar, sugar and salt together four or five times. Beat up the eggs in a large platter to a stiff froth, then add the sifted flour, gradually, on the platter with the eggs. Don't let it stand a minute after it is thoroughly mixed. Bake forty minutes in a moderate oven. Try it with a straw, and if not done, let it bake a few minutes longer. *Do not open the oven door* until the cake has been in the oven fifteen minutes.

Sunshine Cake.—
7 eggs, the yelks,
1 whole egg,
2 cups of sugar, powdered,
⅔ cup of butter,
½ cup of milk,
2 teaspoonfuls of baking-powder,
3 cups of flour,
½ teaspoonful of vanilla essence, or
4 drops of almond essence.

In baking a loaf cake, start with a very moderate oven, and increase the fire as the cake rises. Some ladies, when baking a large loaf cake, put the cake in a cold oven and then make the fire. A hot fire forms a crust on top too soon for the cake to rise properly, and the consequence is the cake is sad, or falls before it is thoroughly done.

Blackberry Jam Cake.—
1 cup of sugar,
¾ cup of butter,
3 tablespoonfuls of sour cream,
3 eggs,
1 cup of jam,
1¾ cups of flour,
1 teaspoonful of soda in the flour,
2 teaspoonfuls of cinnamon,
½ nutmeg.

Stir all together. Use the three yelks and one white in the cake, and use the other two whites in the icing. If you use sour cream, use only one half cup of butter. Bake in three layers. Use boiled icing.

Red raspberry jam makes a delicious cake. You can use any kind of jam.

Mrs. S.

White Cake.—
10 ounces sugar,
6 ounces butter,
10 ounces of flour,
8 eggs, whites only,
1 small teaspoonful baking-powder.

Cream, butter and sugar; add flour and beaten whites alternately, reserving four spoonfuls of flour to mix with baking-powder, adding this last, after the mixture has been thoroughly beaten.

Half-Pound Cake.—
8 ounces sugar,
6 ounces butter,
5 eggs, yelks of,
2 teaspoonfuls sweet milk,
Beaten whites of 5 eggs,
8 ounces flour,
1 small teaspoonful baking-powder,
Adding with a small quantity of flour, *last.*

Cooked Icing for One Cake.—One cup sugar dissolved in water and boiled until it strings when dropped from a spoon. Mix with beaten white of one egg until it thickens. Then dry in the sun or warm oven, after putting on the cake. M. D.

DIRECTIONS FOR ICING CAKES.

The country housewife, being remote from city confectioneries, must depend upon herself to ornament cakes for parties, teas or lunches, and as the work is not at all difficult, every one who will take the necessary trouble can soon learn to ice cakes so as to make them very ornamental. There are various opinions as to the length of time frosting should be beaten, but that it should be thoroughly beaten is very important; also, that the eggs should be fresh and the sugar of the best quality.

Boiled icing is more economical than cold icing, and when properly made, is equally as good. As eggs vary in size, it is difficult to always decide the quantity of sugar required, and practice alone will teach how stiff icing should be made. The following recipes are all good, and may be selected from to suit the taste:

Soft Icing.—Take one egg, beat stiff, add ten tablespoonfuls of powdered sugar, flavor and beat twenty minutes; spread on cake and let dry.

Lemon Icing.—Beat the whites of three eggs to a froth, add one pound of crushed sugar and the juice of a lemon. Beat until light and smooth.

Pink Icing.—Beat four eggs, whip in a pound and a half of powdered sugar, beat smooth, add a teaspoonful of extract of rose and thirty drops of fruit coloring. Beat fifteen minutes, and put on cake with a knife dipped in cold water.

Cold Icing.—Beat the whites of five eggs, a tablespoonful of dissolved gelatine and a pound of sugar together. Flavor and beat light. Eliza R. Parker.

LADY'S PLAIN STOCKING.

Knitted on two needles. Use Starlight Spanish yarn, or three-threaded Saxony, or Florence knitting silk; four steel needles, No. 16 or 17.

Cast on one needle, 104 stitches, and knit in ribbing 2 stitches plain and 2 stitches seam, every row alike until 36 rows are done. Throughout the stocking slip the first stitch in every row.

Thirty-seventh row—Plain knitting.

Thirty-eighth row—Seamed.

Continue these two rows alternately till about ten inches are knitted, measuring from the top of the stocking.

Then for the first row of decrease slip 1, 2 plain, slip 1, 1 plain, pass slip stitch over, knit plain to within 5 stitches of the end of the needle, narrow, knit 3 plain.

Second row—Seamed.

Third row—Plain.

Fourth row—Seamed.

Fifth row—Plain.

Sixth row—Seamed.

Seventh row—Plain.

Eighth row—Seamed.

Repeat these eight rows six times, then repeat only six rows six times.

Now, the stocking leg will be reduced to 80 stitches. On these 80 stitches knit a plain row and a seam row alternately for about 50 rows for the ankle; for the heel, knit 21 stitches, turn, and seam back and continue on these 21 stitches for 20 rows.

Twenty-first row—*Slip 1, narrow, knit rest plain, turn and seam back, knit a row, seam a row and repeat from *.

Twenty-ninth row—*Slip 1, narrow, knit the rest plain, turn and seam back; repeat from * 3 times, when there will be 15 stitches on the needle; bind off. Resume where you divided for the heel, knit plain across the instep and to the end of the needle, turn, seam 21, and continue on these 21 stitches for 20 rows.

Twenty-first row—*Slip 1, knit to within 3 stitches of the end of the needle, narrow, 1 plain, turn and seam a row, knit a row plain, seam a row, and repeat from *.

Twenty-ninth row—*Slip 1, knit to within 3 stitches of the end of the needle, narrow, 1 plain, turn and seam a row; repeat from * three times, and bind off. Recommence where you divided for the last portion of the heel, and seam across the instep 38 stitches. Continue a plain row and a seam row alternately until the instep measures 5½ or 6 inches.

For the Toe.

First row—Slip 1, 2 plain, slip 1, 1 plain, pass slip stitch over, knit to within 5

Lady's Plain Stocking.

stitches of the end of the needle, narrow, 3 plain.

Second row—Seam. Repeat these two rows till the toe is reduced to 14 stitches, when bind off.

For the Sole.

Cast on 56 stitches, knit a plain row, seam a row.

Third row—Slip 1, 1 plain, slip 1, 1 plain, pass slip stitch over, knit plain to within 4 stitches of end of the needle, narrow, 2 plain.

Fourth row—Seam.

Fifth row—Plain.

Sixth row—Seam.

Repeat these last four rows till the stitches are reduced to 38 on the needle, then knit in rows alternately plain and seam till a sufficient length is done to reach down the instep. Shape the toe in the manner directed above, and bind off. Sew up the leg and the bound-off stitches at the bottom of the heel, then sew the sole neatly in its place.

LEMON BUTTER.

One cup of white sugar, three eggs, butter the size of half an egg, the juice and yellow part of the rind of one large lemon. Put this, after beating it well, into a bright basin and set into a pan of boiling water. Stir it constantly until it is thick. Small cakes are nice if split and put together with this jelly. It is also very nice as a filling for a layer cake, or to fill tarts with.

Our Sunday Afternoon.

AS YE SOW, SO SHALL YE REAP.

Scatter we must, and scatter we will,
Strewing at broadcast all the day long,
Down through the valley, or over the hill,
The seeds of right, or the seeds of wrong.

Beware! beware! lest the seeds ye sow
Be mixed with malice, and pride and strife,
For the wheat and the tares must together grow,
Till the reapers bind in the field of life.

Cull the good seed for the coming hours,
That all thy days may be calm and free,
Evermore plucking the planted flowers,
Binding rich sheaves for eternity.

—*Home Guardian.*

POLITENESS IN THE HOME CIRCLE.

TRUE politeness is founded on consideration for others, yet it is so much a matter of form or habit, that politeness is sometimes shown where there is no consideration; it is sometimes neglected where there is affection and every reason for kindly consideration. Thus, in the intercourse of near relatives made familiar with each other by daily meetings, there is naturally less formality than between people who are only thrown together by chance for a few hours or days at long intervals. But along with the laying aside of formality, some necessary features of politeness are sometimes sacrificed by relatives and very close friends. The youth who is careful to salute his lady friends and acquaintances according to the usages of good society, sometimes forgets to pay the same respect to his sister, not because he is wanting in affectionate regard, but because he has grown so familiar with her that it seems awkward to him to treat her in any formal way. Yet, when he meets her in company, he should, out of his consideration for her, be markedly polite and attentive. Although politeness necessarily follows, to a great extent, set forms, it should have its origin in affection for the individual, or, in a more general way, in consideration for others. When the young man begins to behave at home with less politeness than he exhibits abroad, there is much danger that gradually he will lose that consideration for his immediate relatives, which he should have and exhibit. He may begin by entering the family room without formal greeting; absorbed in his own thoughts or pursuits, he will soon begin to leave his sister and his mother to look out for themselves in the smaller affairs of life, and gradually, but surely, he will cultivate a selfish disposition in home affairs that will make him a had or indifferent son or brother. It is a small matter in itself whether a young man finds a chair for his sister or mother when they would be seated, anticipates their desire for a glass of water, cheerfully helps them to their wraps, and offers them the thousand little attentions without which, and in his absence, they could get along very well by their own exertions, but it is not a small matter when neglect of such attention lessens his consideration for them, develops his selfishness, and gradually undermiues the affection that should unite the family. Politeness in society hetween acquaintances or friends is demanded by custom. There is no need to remind readers that it should he exhibited. Politeness at home, and between near relatives, even hetween husband and wife, though of much more importance in every way, is not so obviously necessary, and is too often neglected. Gentlemen of what is known as the "old school" were and are scrupulous in the observance of the forms of polite society toward their wives and other female relatives, and in the home circle, but the later generation seems disposed to treat relatives with less formality and respect than is habitually shown to strangers and acquaintances. The teudency should be resisted, however, and every encouragement given in the home circle, to an observance of the rules of polite society, modified only hy a spontaneous exhibition of that greater affection, which exists between the members of a family group.—*Baltimore Sun.*

AN ATHEIST'S TESTIMONY.

Mhegard, professor of philosophy in the university of Copenhageu, has, until recently, been the apostle of atheism in his country. He has, says the *Semeur Vaudois*, just published a second edition of one of his works, and this is what he says in the introduction:

"The experience of life, its sufferings and griefs, have shakeu my soul, and have broken the foundation upon which I formerly thought I could build. Full of faith in the sufficiency of science, I thought to have found in it a sure refuge from all the contingencies of life. This illusion is vanished; when the the tempest came which plunged me in sorrow, the moorings, the cable of science, broke like thread. Then I seized upon that help which many before me have laid hold of. I sought and found peace in God. Since then I have certainly not ahandoned science, hut I have assigned to it another place in my life."

Happy are they who learn to huild upon a sure foundation hefore the final storm descends, when the hail shall sweep away the refuge of lies, and the waters shall overflow the hiding places of infidelity and unhelief.—*The Armory.*

OUT OF WORK.

There are many persous who profess to he Christian workers, but they do not seem to find just such work as they like; it is too difficult, it is too obscure, it is uot sufficieutly remnnerative, and they are not willing to do it. Yet all this time there is plenty of work which needs to be done, and real workers are overburdened with lahor.

The great Master goes to the marketplace day by day, and says to the idlers standing there, "Go work in my vineyard *to-day*, and whatsoever is right I will pay you." Let those who fear the Lord hearken to his call, and whatsoever their hand findeth to do, let them do it with their might. It may not seem to be easy work, or profitable work, but if it is work which he appoints, it shall not fail of a hlessing at his hand.

PURGE OUT.

The children of Israel ("church in the wilderness") started out all right; they started out circumcised, hut afterwards neglected it, and God commanded Joshua to "make sharp knives and circumcise again the children of Israel the second time." The church of God started out all right on the day of Pentecost—sanctified—"they were all filled with the Holy Ghost;" hut did they keep that way? Read Revelation, second and third chapters, and see. What is the state of the existing denominations to-day? "Yes," says one, "I see; hut what is to he done about it?" One of two things should he done: either "purge out the old leaven," or else if you can't do that "come out from among them and be ye separate."—*Pentecost.*

ARE YOU AFRAID?

Some people are greatly frightened when the second coming of the Lord is mentioned, or when it is deduced from prophecy that the great event is soon to occur. What sort of a loyal suhject is he who dreads the coming of the King? What sort of a bride is she who dreads the coming of her husbaud? With that sublime joy and hope, Joh exclaims, "I know that my Redeemer liveth, and that he shall stand in the latter day upon the earth." A Christian should be suspicious of himself if he feels afraid of that glorious day. He should rather join with the apostle in that last prayer of the Bible: "Even so, come, Lord Jesus."—*Dr. Robinson.*

Prayer of a little girl, four years old: "Oh, Lord, hless papa and mamma. Mamma is the one that parts her hair in the middle."

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Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

BUY STOCK IN THE FALL.

THE fall is the time in which to purchase breeding fowls, for then the yards are full, and the number of good fowls on hand are more numerous. Although we have repeatedly mentioned this caution, yet there are those who wait till spring to purchase, at which time the prices are higher and the best fowls gone. A breeder will not keep a large stock of fowls over winter, if he can avoid it. It entails too much care and labor, for they must be kept in good condition. In order to thin out his stock, he will sell better fowls, at lower prices, in the fall than he will in the spring, and those who always buy in the fall are usually better satisfied. When he keeps his stock till spring, he will be lucky if some of the cockerels are not frosted on the comb, or met with some other accident, and when they leave his place the customer who receives them does not for a moment think that if he had bought his trio in the fall, he would have avoided many little difficulties that come in the way in the spring. During the fall, the breeders have large numbers of young stock on hand. They sell at reasonable rates, and the buyer stands a chance of getting the best, as fowls cannot always be judged until fully grown. Another advantage of fall buying is that the purchaser has the opportunity of pushing the fowls forward by liberal feeding and good care. This is very desirable, if they are intended to lay well. No matter what the breed may be, if they are not properly managed, they will not give satisfaction. And we may safely say, that the money spent for a trio of good breeding fowls will be found, at the close of the season, to have been a good investment.

IGNORANCE OF POULTRY RAISING.

We lately purchased a lot of young chicks from an "old farmer," and he delivered them the same day. When they arrived, we informed him that they were eight weeks old, and he was surprised at our accuracy. On weighing them, they did not average a pound each, but he thought them very good. We then informed him that we would show him some that weighed nearly two pounds each, of the same age. When we showed them to him, he at once exclaimed: "Oh, yours are fancy fowls, and that makes a difference." We stated that they were "fancy," but only "fancy" in being of good breeds; that he could keep fancy fowls, too, or, at least, better stock than the miserable scrubs he had. He asked what we charged for a rooster of the Plymouth Rock variety. We showed him a nice one for $3, but he refused, saying he had one at home which he bought for seventy-five cents. We firmly denied that he had a Plymouth Rock, and went to his farm to look at his stock. He pointed out to us a feather-legged, Dominique-looking specimen, which was not worth the room he occupied, and when we explained to him that his rooster was a scrub, he replied: "I don't know what he is, but I bought him for a Plymouth Rock."

Now, this man would have been insulted if any one had said he was no farmer, and could not raise poultry properly; yet, he did not know as much about the breeds of poultry as a carpenter or blacksmith. Still, when one refers to the fact that he procured fowls of "an old farmer," it is generally accepted as conclusive, but "old farmers" are usually as green on such matters as a dude is of running a steam-engine. Can our farmers expect poultry raising to be profitable as long as they do not understand their calling? Is it any surprise that so many of them say that there is no profit in poultry when they send chicks to market weighing one pound, that should weigh two at the same period of growth, and that, too, when the cost of the one pound of scrub meat was just as much as the two pounds of choice meat? A pound difference in two pounds is 100 per cent, and, while one kind of chicks may thus give a large profit, the other may entail a loss.

THIN OUT FOR WINTER.

Now is the time to cull out the flocks. Nearly every farmer and breeder has more young stock than will be kept over, and while the flocks are full is the best time for selecting those intended for next season. The pullets that will be the best layers are those that have been hatched early. They should be well feathered in appearance, bright, active and full of life. Such pullets should be kept growing from now to the approach of frost, in order to advance them on the path to maturity as rapidly as possible. They should receive no check, and should be well housed and fed. The reason why it is so important to push them is because if they begin to lay during the latter part of the fall, before the winter sets in, they will keep on laying and begin to set early in the spring, in time for hatching out the early broods. Should they not begin to lay, however, before the winter begins, they will not lay at all until spring, but will begin early. The cold weather seems to have a curious effect in that respect, for young chicks stop growing, hens will not begin to lay, and even the cocks are indolent and selfish.

Nor is it any less important to push the cockerel. If the eggs are intended for hatching, a forward, well-matured cockerel will be much more valuable and serviceable than one that has been slow in growth and not fully developed. When the small breeds have been used, they will be found approaching maturity much sooner than the large breeds, but do not make as good winter layers as do those breeds that possess heavy, fluff feathers, nor is the tall comb of any advantage to them when the frost is keen and the winds sharp. Liberal feeding, however, will assist maturity to bridge over some of the difficulties, and it pays at that, as the eggs collected in winter are always worth much more than those of a later period. Thin out all the inferior stock, select the strongest, earliest and most active pullets, and pick out a cockerel full of vigor and strength.

WHITEWASH FOR POULTRY-HOUSES.

A capital whitewash is made by mixing common, water-lime cement with sweet, skimmed milk to the proper consistency. The following is the government whitewash, and a fine whitewash it is: Put two pailfuls of boiling water in a barrel; add one half of a bushel of well-burned, fresh quicklime; put in quickly one peck of common salt, dissolved in hot water, and cover the barrel tightly to keep in the steam while the lime is slacking; when the violent ebullition is over, stir till well mixed together, and, if necessary, add more boiling water, so as to have the mass like thick cream, strain through a sieve or coarse cloth. Make a thin starch of three pounds of rice flour and one pound of strong glue, having first soaked the glue in cold water, and to the latter mixture add two pounds of whiting. Add this to the lime-wash, and also sufficient hot water to dilute to the proper consistency; keep hot while applying. It will require about six quarts of the mixture to 100 square feet of surface, and it will last remarkably well. It goes without saying, that it may be made any color desired.

TONICS FOR POULTRY.

The best tonic is exercise. There is no more necessity for tonics to healthy hens than to pigs, horses or cows. All tonics are more or less injurious if they are not urgently required, and to continually compel the hens to partake of substances that they would voluntarily reject is to compel them to do that which is of no benefit to the owner, and which, to a certain extent, is expensive.

STORAGE OF THE DROPPINGS.

Make a bin large enough to hold all the droppings that may accumulate during the fall and winter, as the larger the bin the more conveniently the droppings may be handled. Mix ten bushels of dry, sifted dirt and one bushel of plaster. Use the mixture on the floor of the brooder-house and under the roost, and, when the house is cleaned, mix the dirt and droppings, and shovel the whole into the bin. Keep the contents of the bin moist (not wet) with soapsuds, and in the spring you will have a better article than you can prepare in any other way.

DRIED GRASS AND CROP BOUND.

When the hen eats dried grass, which she will do after frost, it will, in a majority of cases, become closely packed at the orifice leading from the crop to the gizzard, and prevent the passage of the food into the crop. In such a case, the hen dies of hunger, although her crop may be full. No remedy exists but to open the crop and remove the contents, but the safer plan is to burn over the yards when the grass dies down, thus removing the cause of difficulty.

HENS AS SCAVENGERS.

The hens save much loss on the farm by finding and appropriating material that might go to waste. It is a large annual loss of grain at times of harvesting, threshing and bagging, and this is all saved by the poultry. Small potatoes and turnips, seeds of grass, and many other articles, are thus converted into poultry and eggs, and sold, that could not be disposed of in any other manner.

INCUBATORS FOR WINTER.

The time to begin hatching with an incubator is in October. Beginners should not expect to secure good results the first hatch, as a little experience is required to fulfill all the necessary duties. It is better to begin with a small incubator than to use them of extra size.

CORRESPONDENCE.

INFORMATION WANTED.—I want information, and do not know where to apply for it better than to the many thousand readers of the FARM AND FIRESIDE. Some of them will have had experience in similar undertakings, no doubt, and, I hope, will volunteer the desired information. I am carrying on the poultry business extensively. My location is near two large hotels, where I can get the leavings from the table for the carrying of them away. For two and a half or three months, there are from two to six barrels per day of these scraps—enough to feed 3,000 fowls—and, being such a variety, it is the best possible food. I want, in some way, to evaporate the surplus dry enough to grind and barrel for future use, or ship, and I would be very glad if some one will tell me how it is to be done in the most economical way. An answer through the columns of the FARM AND FIRESIDE may be a hint to others in similar circumstances, all of which will be duly appreciated by a former "Buckeye."

Florida. E. W. AMSDEN.

INQUIRIES ANSWERED.

Probably the Large Lice.—Mrs. L. P. H., Monroeville, Ohio. "I had twenty-five young turkeys die last spring, and now my chickens are going. They mope around for hours, no cough or bowel disease, and not enough lice on them to hurt."

REPLY:—If there are any lice at all on them, it will be but a few days before they will be covered. They are probably attacked by the large lice on the heads and necks. Grease their heads with sweet oil.

To Break up Sitters.—J. R. G., Brownsville, Tenn. "How can I prevent hens from setting."

REPLY:—Place them in a coop made of lath—sides, bottom and top—raised off the ground, placed outside during the day and under shelter at night.

Turkeys with Weak Legs.—Mrs. D. P., Centralia, Ill. "My turkeys get lame, and now they seem to have some disease of the head."

REPLY:—Probably due to exposure during damp weather, and jumping from high roosting places.

The Pip.—A. B. C., Holtsville, N. Y. "Will a hen having the pip impart it to the other fowls; or, in other words, is it not a local disease, and not infectious? What is the best remedy in such a case, and how should the fowl be fed and managed?"

REPLY:—There is no such disease as "pip." The sound of "pip" is simply a cough on the part of the fowl, and indicates a stoppage of the nasal passages, and is the forerunner of roup, which is a very contagious disease. The best remedy is ten drops of *spongia* (a homœopathic remedy) in a quart of drinking water, allowing no other water to drink.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of Farm and Fireside, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate repties, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Book on Cider Making.—H. E. D., Peoria, Ill. Send $1 to Orange Judd Company, New York City, for "The Cider Maker's Hand Book."

Flax.—S. J. M., Spring Hill, W. Va. There is profit in raising flax for the seed if your soil is suitable. Seed is now worth $1.44 per bushel in Chicago.

Clover for Texas.—J. S., Fairmount, Tex., wishes to know what kind of clover is best to sow for permanent pasture in his latitude.

Reply:—Try both alfalfa and Japan clover, and take the one that does best.

To Polish Horns.—S. S. B., Horace, Kan. File off the roughness with a coarse file; then use sandpaper, finishing with the finest grade. When smooth, rub with pumice stone and oil on a woolen rag. Finish with a clean, flannel cloth and tissue paper.

Tanbark Ashes.—J. L., Bird in Hand, Pa., inquires about the manurial value of ashes of spent tanbark, compared with hard-wood ashes. We believe that its value approaches that of soft-wood ashes, hence is not as great as hard-wood ashes. Still, we have never seen an analysis of the tanbark ashes and are not quite certain on this point.

Preserving Posts.—G. H., Paulding, Ohio, writes: "Which is the best method of preventing oak posts set three feet in the ground to keep from rotting soon; namely, to coal tar them, or to burn them so that they are charred—that is, as much as goes into the ground?"

Reply:—Applying hot coal tar is a good way, and we believe that it gives better satisfaction than charring.

Keeping Ice.—J. P. J., Tipton, Kansas, writes: "What is the best way to keep ice? I have put it in the ground packed in straw and chaff. It kept all right until the straw commenced heating. Is there a way to keep the straw from heating?"

Reply:—The trouble was that it was not well drained. The best way to keep ice is in a properly-constructed ice-house, built above ground.

To Get Rid of Myrtle.—J. F. W., Hammondsport, N. Y., writes: "Twenty years ago myrtle was set out in our yard for ornament. The yard presents a very unsightly appearance now, and I would like to know how to get rid of the nuisance."

Reply:—If you cannot get rid of it by close mowing, and it is too much trouble to dig it out, plow or spade up your yard and reseed it to Blue grass and white and red clover. In a few years the red clover will disappear, and you will have a fine, clean lawn.

Dandelion Culture.—G. M. A., Boulan, Col., asks: "When is the proper time to plant dandelion seed for spring salad? Can the roots be killed by plowing under?"

Reply by Joseph:—Seed is to be sown in spring, at the proper time of sowing the other common garden seeds, in rows twelve or fourteen inches apart. Plants should be trimmed to eight inches apart, and properly hoed and kept clean of weeds. The crop is ready to be gathered late in fall or in the spring following. There will be no trouble in killing the roots after the crop is gathered.

Lightning-proof Roofs.—G. C. R., Lower Newport, Ohio, writes: "Several of the manufacturers of metal roofing are advertising in the farm papers that their roofing is lightning proof. Now, if this is so, every farmer should know it, and few, I take it, would cover their buildings with any other material. But as we only have their word for it, and no proof, would like to have the matter ventilated through your columns. Will the readers give their experiences? Has any one known of a building with metal roof struck by lightning? What was the result? Is the claim of manufacturers true and does it protect?"

To Keep Sheep from Barking Young Trees.—I. S., Willowsdale, W. Va., writes: "What will prevent sheep from peeling young fruit trees? I have some seedling fruit trees on land that I wish to pasture, and also some grafted trees which I don't want to have killed, and which are too large too transplant and very inconvenient to fence."

Reply:—We do not know whether an application of grease to the trees will prevent the sheep from eating the bark or not. Drive down three stakes around each tree, and wrap plain fence wire around the stakes. Or fence them in with short lengths of the woven slat wire fence.

Fertilizers for Corn and Sweet Potatoes.—A. S. H., writes: "Please tell me a good compost of commercial fertilizers for corn, and how much to use per acre in the hill; also the best compost of some kind for sweet potatoes, and how much per acre in drills. Is not muriate of potash a fine fertilizer for sweet potatoes, and if so, what is the required quantity per acre and what is the cost per pound?"

Reply by Joseph:—The best fertilizer for any crop is the one that supplies whatever element of plant food needed by that crop may be in insufficient quantity in the soil. If the land has been cropped with grain for many years, but given now and then a coat of barnyard manure, the deficient element most likely will be phosphoric acid, and this should be supplied in the form of some good phosphate or superphosphate, selecting the best and cheapest to be had in your market. If the ground is poor in potash also, this must be furnished; if in the form of kainit or muriate of potash, it should be applied in the autumn or winter previous to planting; if in the form of ashes or sulphate of potash, the application may be made at any time. If there is not much nitrogenous matter in the soil, this may be supplied in the form of nitrate of soda, blood, cotton-seed meal, etc., whatever is most available. On soil utterly run down it will, probably, not pay to raise common field corn by means of artificial feeding; but if phosphoric acid alone is lacking, its application must pay. For sweet corn, at a cent or over an ear, even the highest-grade special fertilizer—such as Mapes at $42 to $45 per ton—may pay. A small handful of the latter may be scattered around each hill. Simple phosphates may be used at the rate of $3 or $4 per acre; potash at the rate of $1 to $2 per acre. In some cases, larger quantities can be used with benefit. For sweet potatoes, some sort of potash will most likely give good results. Apply one hundred pounds of sulphate in early spring, or as much of muriate, or two hundred and fifty pounds of kainit the fall before, and perhaps one hundred pounds of bone black or other form of phosphate. All this, of course, is done in a somewhat experimental way. There is no need of composting or even mixing these ingredients. Muriate of potash can be bought at the sea shore for about $40 a ton.

VETERINARY.

Conducted by Dr. H. J. Detmers.

Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of Farm and Fireside, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 35 King Avenue, Columbus, Ohio

Warts.—N. H. M., Melvern, Kan. Nearly every issue of this paper contains something about removing warts. The treatment is the same, no matter whether the warts are on a Holstein bull or on any other bull, or on a steer, or on a cow. If the warts have a neck, they are best removed by a ligature, and if sessile, or flat, by acids or by caustics.

Sore Neck.—L. E. S., Armstrong, Pa., writes: "I have a three-year-old horse that got a sore neck while being used in the mowing machine. The neck got sore where the collar rests on the top of the neck. As soon as noticed I clipped the mane close and bathed with cool water often, not working him much. But it healed and matter came out at five or six different places. It is spreading over the neck. It swells to the size of a hulled walnut, then bursts."

Answer:—There may be fistulous canals. The best you can do will be to employ a competent veterinarian and entrust the treatment to him, and then follow his directions.

A Callous Teat.—W. H. R., El Dorado, Kan., writes: "One of my cows has something ailing one of her teats at the upper end. It seems that the opening is too small, and I have to strip the milk from the bag into the teat, then milk it out of the teat, then repeat again until I get it all. If I let it stand a minute the teat will fill up and then milk it out. About one inch from the bottom of same teat is a hard substance like a kernel. It does not get any better."

Answer:—Persistent and vigorous milking will effect improvement. Operations usually make the evil worse, and applications of medicines are worse than useless.

Swelling of the Thyroid Glands.—A. B. S., Conroe, Ind., writes: "What is the trouble with a young mare I have? She has a semi-hard swelling of the glands at the side of her neck. I have blistered the swelling since I first noticed it, which was about eight weeks ago. Her general health is good. She has not had any discharge from the nasal organs. Since I left off blistering I have oiled it daily with turpentine and lard."

Answer:—Stop blistering and leave the swelling alone. According to your description, the swelling is in the thyroid glands, and is so-called goitre. It does no essential harm. For further information I have to refer you to recent answers on the same subject.

Diseased Molars.—A. S., Van Wert, Ohio, writes: "I have a horse that can't chew his food good. He chews it into wads and then drops it out of his mouth. I have been advised to have his front teeth cut off, and that will let his jaw teeth come together. Do you think it will do any good to have his teeth cut off?"

Answer:—If your horse chews out his food in wads, it is pretty sure he has one or more diseased or decayed molars. Have his mouth examined by a competent veterinarian, and the diseased molar or molars extracted. If your "veterinary surgeon (?)" tells you that the front teeth (the incisors) must be cut off, tell him that he is an ignorant quack, and that I said so.

Worms in Sheep.—L. E. P., Preston Hollow, N. Y. There are several remedies. I have found tartar emetic, dissolved either in distilled or in fresh rain water, about as good as any. It should be dissolved in a proportion of ten grains of tartar emetic to one ounce of water, and be given in the morning after the sheep have been prepared by a night's fasting. To a good-sized lamb or a small sheep one ounce of the solution will be sufficient, and to large and old sheep, one ounce and a half (containing fifteen grains of tartar emetic) may be given. After the medicine has been given in the morning, the sheep should be kept up without food until noon. As it is desired to get the medicine directly into the fourth stomach and into the intestines, the medicine should be given slowly, in very small swallows.

Probably Arthritis.—J. L. S., Farina, Ill., writes: "I have a colt seven months old. When foaled there was a swelling on the stifle, which is getting larger all the time. The colt is very stiff in the back and hind legs. When it walks it only touches its toe to the ground. It can hardly get up when down. The patella in right leg is loose. I opened the places on both legs. The right leg run thick, oily-looking stuff. The left one never run any. The patella is only loose in the right leg. When it steps over anything it just drags its right leg."

Answer:—What you complain of seems to be a case of chronic arthritis. It seems to me to be exceedingly doubtful whether it pays to raise such a sickly colt that will be crippled for life. Hence, to prescribe treatment will not benefit you at all, nor the colt either. If the latter were mine, I would put an end to its misery.

Paralysis.—P. J., Ashley, Ill., writes: "I have a fine brood sow which had pigs about the middle of April. When her pigs were about four weeks old the sow got down with her back so bad that she was not able to stand for about a week. Then she began to stand on her fore feet again and drag her body around, and some of my friends thought she would soon be able to walk again as before, but she still drags her rear along."

Answer:—The paralysis of the hind quarters of your sow may have various causes. For instance, it will be caused by a fracture of the spinal column, by inflammation and other morbid affections of the spinal cord and its membranes, by an obliteration of some of the principal branches of the posterior aorta, by a degeneration of the locomotory muscles, etc. As a rule, there is but little prospect of recovery, and it may safely be said, there is none if the paralysis is perfect, no matter what may constitute the cause.

Possibly Rabies.—A. E. J., Cluster, W. Va., writes: "A peculiar disease or malady exists here among our dogs. When first noticed the animal becomes somewhat mopy and surly; that stage will pass away and the dog will seem well, but right in the midst of his work or play he will seem to be terribly frightened, will dash away yelping and appear fearful of every one and everything, and continue to run and yelp until entirely exhausted, when he will seek some dark place to hide. In other cases, the animal becomes pugnacious, fighting with and biting every dog he meets, and in some instances, attacks hogs and cattle. Some think it hydrophobia, and many dogs have been killed. A few cattle have died that seemed very similarly affected."

Answer:—Your description reads somewhat as if the disease described might be rabies. Still, you omit one most essential point; hence, I cannot decide whether it is rabies, or simply dog distemper. You do not say what became of the diseased dogs, except those that were killed; you do not state whether they died or recovered. Rabies in dogs (hydrophobia is a misnomer, because a dog affected with rabies does not shun water) is a disease which invariably becomes fatal within six days after the first symptoms have made their appearance. A recovery has never yet been observed. Therefore, if a sick dog recovers, or if his sickness lasts longer than six days, that fact is to be regarded as prima facie evidence that the disease is not rabies. If a dog supposed to be affected with rabies is killed, all evidence pro and con is, as a rule, destroyed, because even a post mortem examination does not always—I may say, not often—furnish unmistakable proof of the absence or presence of that disease. One thing, however, is sure, and that is, that perhaps not more than one per cent of all the cases reported as hydrophobia by American newspapers is genuine rabies.

Our Miscellany.

FROST TIME.

When the frost is on the punkin and the fodder's in the shock,
And you hear the kyouck and gobble of the strutin' turkey-cock,
And the clackin' of the gulueys, and the cluckin' of the hens,
And the rooster's hallylooyer as he tiptoes on the fence;
Oh, it's then's the times a feller is a-feelin' at his best,
With the risin' sun to greet him from a night of peaceful rest,
As he leaves the house bareheaded and goes out to feed the stock,
When the frost is on the punkin and the fodder's in the shock.

They's something kind o' hearty-like about the atmosphere
When the best of summer's over and the coolin' fall is here—
Of course, we miss the flowers, and the hiossoms on the trees,
And the mumble of the hummin'-birds and buzzin' of the bees;
But the air's so appetizziu', and the landscape through the haze
Of a crisp and sunny morning of the airly autumn days
Is a pictur' that no painter has the colorlu' to mock—
When the frost is on the punkin and the fodder's in the shock.

The husky, rusty rustle of the tossels of the corn,
And the raspin' of the tangled leaves, as golden as the morn;
The stubble in the furries—kind o' lonesome like, but still
A preachiu' sermons to us of the barns they growed to fill;
The strawstack in the medder and the reaper in the shed;
The hosses in their stall below—the clover overhead—
Oh, it sets my heart a-clickin' like the tickin' of a clock,
When the frost is on the punkin and the fodder's in the shock!

—*James Whitcomb Riley.*

IN India cakes of tea pass as currency, and in China pieces of silk.

ONE of the secrets of life consists in knowing what to do and in doing it at the right time; an opportunity once lost may never come again.

MR. ROUNDS—"How nicely that Miss Instyle carries her head."

Miss Dukatts—"She ought to carry it easily—it's so light."—*Puck.*

TWO GIANT evils stand face to face in Africa. The one is slavery, carried on by the heartless Arab slave-hunters; the other is the rum traffic, supplied by the Christian nations of Europe.

THE light-colored kinds of artificial hair come from Germany, except the drab and ash shades, which are furnished by Sweden. Nearly all the various shades of dark hair are imported from France.

IT was the little girl's first visit to a dairy farm.

"Uncle Zeb," she asked, "which one of all your cows gives the most milk?"

Uncle Zeb was a truthful man. He laid one hand on "Old Crumpleborn," carelessly placed the other on the pump, and said:

"This one, child."

PAPA (who used a bad word when he tore his trousers)—"I forgot myself then, Sammy. It was wrong of me to say such a word."

Sammy (age five)—"Oh, you need not apologize, papa, I often use that myself."—*New York Life.*

AMATEUR farmers do not know a great deal, perhaps, but when they do know they are sure.

Old farmer—"What do you feed your pigs?"

Amateur farmer—"Corn."

Old farmer—"In the ear?"

Amateur farmer, in disgust—"No; in the mouth."

A BLESSED thing it is for any man or woman to have a friend, one human soul, whom we can trust utterly; who knows the best and worst of us, and who loves us in spite of all our faults; who will speak the honest truth to us while the world flatters us to our faces and laughs at us behind our backs; who will give us counsel and reproof in the day of prosperity and self-conceit, but who again will comfort and encourage us in the days of difficulty and sorrow, when the world leaves us alone to fight our own battle as we can. If we have had the good fortune to win such a friend, let us do anything rather than lose him. We must give and forgive, live and let live. If our friends have faults, we must bear with them. We must hope all things, believe all things, endure all things, rather than lose that most precious of all earthly possessions, a trusty friend. And a friend once won need never be lost, if we will only be trusty and true ourselves.—*Family Herald and Weekly Star.*

SEWING ON BUTTONS.

"When I get a bright idea, I always want to pass it along," said a lady, as she sat watching a young girl sewing. "Do your buttons ever come off, Lena?"

"Ever? They're always doing it. They are ironed off, washed off, and pulled off until I despair. I seem to shed buttons at every step."

"Make use of these two hints when you are sewing them on, then, and see if they make any difference: When you begin, before you lay the button on the cloth, put the thread through so that the knot will be on the right side. That leaves it under the button, and prevents it from being worn or ironed away, and thus beginning the loosening process.

"Then, before you begin sewing, lay a large pin across the button, so that all your threads will go over the pin. After you have finished filling the holes with thread, draw out the pin and wind your thread round and round beneath the button. That makes a compact stem to sustain the possible pulling and wear of the button-hole.

"It is no exaggeration to say that my buttons never come off, and I'm sure yours won't if you use my method of sewing."

PLUCK AND SUCCESS.

One of the principal secrets of success is pluck. Where that is lacking, other qualifications are of indifferent service. The habit of giving up spoils many a career that tenacity and perseverance would render fruitful and creditable. A resolute adherence to the idea that victory is a matter of surmounting one obstacle after another, of rectifying mistakes and learning by experience, will do more for a man than any of those fine theories of avoidance and non-resistance to which so much value is often attributed. Our system of civilization is not favorable to schemes of endeavor that include the possibility of despair or surrender in any emergency. Its prizes are for the aggressive and determined spirits that quickly recover from strokes of misfortune, and go onward again, undismayed and uncomplainingly. In the life of every man there are seasons of special tribulation that demand special courage and fortitude, and it is his duty to be prepared for them. They constitute an appointed part of the struggle, in which he is engaged, and upon his fidelity in dealing with them depends that struggle. To act a brave and steadfast part is to lighten the burden and to gain strength instead of losing it. The most useless of all practices is that of quarrelling with fate; the man of success accepts the situation, whatever it may be, and tightens his armor for further conflict.

Smiles.

RETRIBUTION.

THE boy is by the farmer seen
To seize upon the apple green.
The farmer laughs, "Ha, ha, ho, ho!
That theft, my boy, will bring you woe!"
Too true; alas, at midnight's hour
The boy is in the apple's power.
—*Boston Courier.*

HIS CREDIT WAS GOOD.

'Twas a winter night, and the hour was late,
And the snow lay cold and white.
But she saw him as far as the garden gate
To say to him there, "Good-night."

The moon looked down with a smiling eye,
And the bright stars winked in glee;
They saw her blush, and they heard her sigh,
(For timid and shy was she.)

But they never heeded the stars or moon—
The youth and the maiden fair;
They reached the gate and a trifling boon
The lover requested there.

"What is the boon?" asked the charming miss
In a musical voice and low;
"It is that you'll give me a sweetheart's kiss,
My darling, before I go."

"Oh, no," she said, as the lashes fell
O'er the eyes of fathomless blue;
"You've wooed me long and I love you well,
But I can't give a kiss to you."

"Then loan me a kiss, my sweet one, pray,
And you never will know regrets."
"Yes, I will," she said, "for my parents say
You are prompt in paying your debts."
—*Boston Courier.*

NOT A KICKER.

BEASTLY weather, isn't it?" observed a man who was hanging to a strap in a crowded North Side car, the other day.

"Weather suits me well enough," replied the man spoken to, who was clinging to another strap.

"You're not particular about your weather, I suppose," rejoined the other, slightly nettled.

"Not at all. One kind is as good as another to me."

"Easily suited, generally. Just as lief stand up in a car as to sit down, I reckon?"

"Yes. Just as lief."

"Ain't particular about getting your full share of everything that's going, perhaps, if you have to kick to get it?"

"I'm not a kicker."

"Don't worry over things when they don't happen to come your way, I calculate?"

"Ain't worrying about anything."

"Haven't made any fuss about the census in your town, either, of course?"

"Nary fuss."

"And don't intend to, hey?"

"That's correct. Don't intend to. Don't care a darn about the census."

"Just so—just so," mused the discontented passenger. "Many other men in your town like you?"

"Hundreds of 'em."

"Do you mind telling me where you live?"

"Just as soon tell you. I'm from Hannibal, Mo."

"Are there any other men from Hannibal aboard this car?"

"Don't see any."

"Thank heaven!"

And the man who sometimes kicked at things crowded to the other end of the car and put his head out to get some fresh air.—*Chicago Tribune.*

HIS OCCUPATION.

At one of the depots in St. Louis, there used to be a one-legged man, about forty years old, who asked people for alms by saying:

"Please help a poor man who has lost his right leg and can no longer follow his occupation."

I encountered him three times a week for a year and more, and generally had something to give him, but one day it occurred to me to question him, and I asked:

"Lose your leg by accident?"

"Yes, sir."

"What sort?"

"Fellow shot me in the knee."

"So? And you lost your occupation?"

"Yes, sir."

"What did you used to follow?"

"I used to kick dead-beat niggers for an eating house on the levee!"

AT FIRST HANDS.

"I have had a delightful evening," he said, as he took his hat and rose to go. "May I call again?"

"I shall be glad to see you," she replied, with a blush.

As he walked out into the hall, he saw in the mirror of the hat-rack a reflection of the roguish girl slyly throwing a kiss at him, and he turned back.

"I must have that in the original package," he whispered.

He was a Kansas young man, and he got it.

MORE CHANCE FOR EXPERIMENT.

Doctor—"He insulted me! He said he wouldn't have me attend a cat for him."

Maud—"Well, now, I think that was unkind of him. I don't see why he should fear to intrust a cat to your treatment. (The doctor looks surprised.) Indeed, I don't. A cat has nine lives, you know."—*Life.*

SHE'D SAY THE REST.

Bobbie (who has been taking a forbidden bath along with Johnny)—"Now, Johnny, what will you say to your mother when you get home?"

Johnny—"Oh, I'll say, 'It's a warm day, ma,' and I guess she'll say the rest."—*Harper's Bazar.*

SAFE FROM HARM.

Benevolent individual—"Need help again, do you, Uncle Ebony? Well, here's a dollar. I presume you find it difficult to keep the wolf from the door."

Uncle Ebony—"I ain't 'fraid no wolves, sah. I keep fo' dogs."—*Good News.*

ECONOMY.

Ferguson—"Why did Richard III. offer to give his kingdom for a horse?"

McCusick—"I don't know, unless he had once paid cab hire in New York, and thought it would be cheaper to own a horse, no matter what he paid for it."

SHE KNEW HIM.

She had sent off a telegram and was waiting for an answer. Suddenly the peculiar halting click of the receiving machine sounded in the office and she said to her companion: "That's from George, I know. I can tell his stutter."—*Philadelphia Times.*

ALL RELATIVES.

"Englishmen and Germans in this country are all related to each other."

"How's that?"

"The former came from the mother country and the latter from the fatherland."

EVERYTHING MUST HARMONIZE.

Mrs. Cumso—"Why did you discharge all your white servants and employ Negroes, Mrs. Fangle?"

Mrs. Fangle—"My husband's sister died last week, and I'm in mourning now."

SOMETHING HE HADN'T THOUGHT OF.

Jack Lateboy—"Doctor, I suffer terribly with insomnia. I don't sleep at night. What do you recommend?"

Doctor—"Why don't you try going to bed?"

IT SELDOM FAILS.

"Don't you smell fire?"

"No; I don't think I do."

"I don't, either; but most people do, if you ask them."

MORE THAN LIBEL.

"Poor child, he is cutting his teeth."

"Oh, is he? I judged from his yells that his teeth were cutting him."

LITTLE BITS.

A law in Boston compels dogs to wear collars in the street. In other cities, dogs get cuffs.—*New York News.*

"I've time but for a line," wrote the Arizona horse-thief to his parents. And in five minutes, the line was stretched.

There are a good many complaints against the late census takers; but it is pretty rough on the poor, old boys to expect omniscence at two cents a head.

Census taker—"And—er—are you an idiot, madam?" Madam—"Dear me! There it is again. So many people get that idea from seeing the husband I married."

Polonius—"What do you read, my lord?"

Hamlet—"Words, words, words."

Polonius—"Ah, let me see the *Congressional Record* when you are through with it."—*Washington Post.*

Assistant editor—"Here's an account of a minister assaulted by a disappointed lover, while in the act of performing the marriage ceremony."

Chief—"Put it in the railway news."

Assistant (astonished)—"Why?"

Chief—"He was hurt while making a coupling."

We had been looking at the statue of Edward Everett in the Boston public garden, and I had tried to tell the children something of his great power as an orator, says a contributor to *Wide Awake.* Sidney, aged eight, listened appreciatively, then he said, "And now he just stands up there and says, 'Keep off the grass.'"

He—"Is there anything in the paper this morning, my dear?"

She—"Dear me, yes. Here's four columns devoted to the terrible sacrifice of dress goods at Fearn's, and a sensational account of a man with cerebral meningitis who was cured by Wood's Farceparilla. Then there's a portrait of the man who invented the $3 shoe, and an editorial on the value of advertising."—*Dry Goods Chronicle.*

Selections.

LITTLE BOY BLUE.

Under the haystack little Boy Blue
Sleeps with his head on his arm,
While voices of men and voices of maids
Are calling him over the farm.

Sheep in the meadows are running wild
Where poisonous herbage grows,
Leaving white tufts of downy fleece
On the thorns of the sweet wild rose.

Out in the fields where the silken corn
Its plumed head nods and bows,
Where golden pumpkins ripen below,
Trample the white-faced cows.

But no loud blast on the shining horn
Calls back the straying sheep,
And the cows may wander in hay and corn
While the keeper lies asleep.

His roguish eyes are tightly shut,
His dimples are at rest;
The chubby hand, tucked under the head,
By one rosy cheek is pressed.

Waken him? No! Let down the bars
And gather the truant sheep;
Open the barn-yard and drive in the cows,
But let the little boy sleep.

For year after year we can shear the fleece,
And corn can always be sown;
But the sleep that visits little Boy Blue
Will not come when the years have flown.

THINGS NOT TO BE DISLIKED.

It isn't wise, you know, to have strong likes and dislikes, especially when they are only directed against weaknesses. Life is too short, my friend, for you to hate so emphatically so many things. If you are a woman, it will affect your skin and make wrinkles come about your mouth. If you are a man, it will affect your digestion.

Don't dislike the woman who is prettily gowned; she is not of necessity a fool.

Don't dislike the book that is interesting; it is not bound to be trash.

Don't dislike the music that is catching; it has a much greater mission than any of Wagner's operas.

Don't dislike the woman who changes her mind; be thankful that she knows when she has made a mistake.

Don't dislike men who dress well and are good-mannered; it is just possible they are gentlemen.

Don't dislike children; remember somebody had to bear with you once.

Don't dislike women who have to earn their own living; there's not a single one of them who wouldn't rather have a man doing it for her.

Don't dislike this world and find it uninteresting and tiresome; you may have to go to one where things will be more intense and more distracting, perhaps, but even less to be liked.

Don't dislike anything except that which is mean, low, vulgar and wicked.—*St. Louis Republic.*

GIVING SHAPE TO FEET.

Every one, but especially children, should wear properly fitting shoes, no matter how common their material. They should be neither too large nor too small, and should have low, flat heels that must be promptly "righted" as soon as they begin to wear to one side. If the toes of the foot show a tendency to overlap, they should be rubbed with the hands once or twice each day; and if this care be given when the curving commences, it will, as a rule, prove sufficient to correct any irregularities of this nature. If a nail is wayward in its growth, trim it only lightly at the ailing corner, but fully at the opposite corner. If both corners grow too deeply into the flesh, clip them carefully and lightly, and then scrape the center of the nail from the tip to near the root until it is thin and flexible. This process seldom fails to correct refractory nails, provided, of course, they are not neglected too long.

NERVE IN LOCOMOTIVE ENGINEERS.

A Pennsylvania railroad man says young men are selected as the drivers of locomotives on fast trains because old men do not have the nerve to stand the strain of the terrible speed of these trains, and even the nerviest young man gets afraid of them after awhile. Then they get to letting up in speed, the trains run behind time, the engineers are given other runs, and new men are put on in their places.

Recent Publications.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

Canada.—(Agricultural College, Guelph, Ont.) Bulletin No. 52, June 16, 1890. Black knot on plums. Bulletin No. 53, August 26, 1890. Winter wheat experiments.

Canada.—(Bureau of Industries, Toronto, Ont.) Bulletin No. 33, July 15, 1890. Foul brood among bees. Bulletin No. 34, August 12, 1890. Crops and live-stock in Ontario.

Colorado.—(Fort Collius) Bulletin No. 12, July, 1890. Some Colorado grasses and their chemical analysis; illustrated.

Connecticut.—(Storrs School Station, Storrs) Bulletin No. 6, August, 1890. Grass and forage garden. Grasses and legumes.

Florida.—(Lake City) Bulletin No. 10, July, 1890. Annual report for 1889-90.

Georgia.—(Experiment) Bulletin No. 8, July, 1890. Irish potato culture.

Illinois.—(Champaign) Bulletin No. 10, August, 1890. Investigations of "milk tests." Bulletin No. 11, August, 1890. Experiments with wheat.

Indiana.—(Lafayette) Bulletin No. 32, Vol. 2, July, 1890. 1. Treatment of smut in wheat. 2. Field experiments with wheat. 3. A note on two inferior fertilizers.

Kansas.—(Manhattan) Bulletin No. 11, July, 1890. Experiments with wheat.

Kentucky.—(Lexington) Bulletin No. 29, July, 1890. Analyses of commercial fertilizers.

Michigan.—(Agricultural College P. O.) Bulletin No. 63, July, 1890. Greenhouse building and heating. Illustrated. Bulletin No. 64, July, 1890. Fertilizer analyses.

Missouri.—(Columbia) Bulletin No. 12, June, 1890. Black-leg.

Minnesota.—(St. Anthony Park) Bulletin No. 12, July, 1890. Meadows and pastures in Minnesota. American-grown cauliflower seed. Preserving vegetables in carbolic acid gas. Protection from frost.

Nevada.—(Reno) Bulletin No. 10. The pear and cherry slug. Illustrated.

New Jersey.—(New Brunswick) Bulletin No. 69, July 15, 1890. Analyses and valuations of complete fertilizers. Bulletin No. 70, July 26, 1890. Some fungous diseases of the spinach. Bulletin No. 71, August 14, 1890. Analyses of incomplete fertilizers, and the valuation of home mixtures.

New York.—(Coruell station, Ithaca) Bulletin No. 18, July, 1890. Experiments in spraying plants: 1. The effect of London purple and Paris green upon peach foliage. 2. Trials of nozzles. Bulletin No. 19, August, 1890. Report upon the condition of fruit growing in western New York.

New York.—(State station, Geneva) Bulletin No. 21, July, 1890. Testing of dairy breeds. Bulletin No. 22, August, 1890. Pig-feeding experiments without milk.

Ohio.—(Columbus) Bulletin No. 5, Vol. 3, June, 1890. Corn silage versus sugar beets as food for milk production. Bulletin No. 6, Vol. 3, July, 1890. Experiments with wheat.

Tennessee.—(Knoxville) Bulletin No. 3, Vol. 3, July, 1890. Points about country roads. Special bulletin E, July 20, 1890. The cotton worm. The Hessian fly.

Virginia.—(Blacksburg) Bulletin No. 7, July, 1890. Variety tests with strawberries.

Wisconsin.—(Madison) Bulletin No. 24, July, 1890. A new method for the estimation of fat in milk, especially adapted to creameries and cheese factories.

The Markets.

	Chicago.	New York	N. Orle'ns
Butter.—			
Fancy Cream'ry...	21½@ 23	24 @ 25	25 @ 26
" Dairy.....	17 @ 18	16 @ 25	15 @ 16
Common.....	6 @ 9	9 @ 12	.....
Grain.—			
Wheat No.2w'nt'r	99½@ 99½	1 00@ 1 02	.....
Corn, "	45¾@ 47⅜	53¼@ 54	60 @ 63
Oats, "	36 @ 38	40 @ 41½	47 @ 49
Live Stock.—			
Cattle, Extra.....	5 00@ 5 35	.....	.....
" Shippers...	2 85@ 4 95	4 00@ 4 70	2 25@ 2 75
" Stockers...	2 00@ 3 20	3 30@ 3 85	.....
Hogs.....	3 95@ 4 80	.....	3 25@ 4 00
Sheep,com.togood	3 60@ 5 00	4 00@ 5 75	2 25@ 3 25
" Lambs.....	4 75@ 6 00	5 00@ 7 00	.....
Provisions.—			
Lard.....	6 25	6 50	5 75
Mess Pork.....	9 90	11 50@12 25	12 00
Seeds.—			
Flax, No. 1.....	1 44	.....	.....
Timotby.....	1 22	.....	.....
Clover.....	3 75@ 4 30	.....	.....
Wool.—	Chicago.	Boston.	
Fine, Oblo & Pa...	.....	.....	
" Western.....	.....	.....	
" Unwashed.	17 @ 21	.....	
Medium,Ohio&Pa	.....	.....	
" Western.....	30 @ 33	.....	
" Unwashed..	25 @ 26	.....	
Combing&Delaine	.....	.....	
Coarse & Black....	18 @ 19	.....	

FARM AND FIRESIDE.

18 PAGES, WITH SUPPLEMENT. EASTERN EDITION.

VOL. XIV. NO. 2. PHILADELPHIA, PA., and SPRINGFIELD, OHIO, OCTOBER 15, 1890. TERMS {50 CENTS A YEAR. 24 NUMBERS.

Current Comment.

How to succeed in life is briefly told by P. T. Barnum in the following advice to young men:

Be honest; do not spend as much as you make; don't smoke or drink. Depend upon your own personal exertions, and do not leave important affairs to a third person. Don't have too many irons in the fire; do not get above your own business, and, above all, be systematic. Advertise your business on all possible occasions, but attend to it, too, and see that your claims and promises made to the public are fulfilled. It does not pay to have a single customer go away dissatisfied. Nor does it pay to take money for services for which you do not render an equivalent.

The best working years of a man's life are usually between twenty-six and sixty, but much good work is possible long after the three-score year mark has been passed. I can say for myself that every moment of my time is put to some definite purpose; and, though I have numberless calls and demands, I enjoy a reasonable recreation each day. Both work and rest, and joy, also, should make up the sum of a busy life.

Andrew Carnegie, who has climbed up the ladder of wealth from the bottom rung, gives this advice to young men:

There are three great rocks ahead of the practical young man who has his feet upon the ladder and is beginning to rise. First, drunkenness, which, of course, is fatal. There is no use in wasting time upon any young man who drinks liquor, no matter how exceptional his talent. Indeed, the greater his talents are, the greater the disappointment must be. I do not mean, by drinking liquor, the taking of a glass of beer or wine at meals. It is not necessary for a man to be a total abstainer in order to be temperate. The rule should be: Never enter a bar-room, and never drink liquor except at meals.

The second rock ahead is speculation. The business of a speculator and that of a manufacturer or man of affairs are not only distinct, but incompatible. To be successful in the business world, the manufacturer's and the merchant's profits only should be sought. The manufacturer should go forward steadily, meeting the market price. When there are goods to sell, sell them; when supplies are needed, purchase them, without regard to market price in either case. I have never known a speculative manufacturer or business man who scored a permanent success; he is rich one day, bankrupt the next. Besides this, the manufacturer aims to produce articles, and in so doing to employ labor. This furnishes a laudable career. A man in his avocation is useful to his kind. The merchant is usefully occupied distributing commodities; the banker in providing capital.

The third rock is akin to speculation—endorsing. Business men require irregular supplies of money; at some times little, at others, enormous sums. Others being in the same condition, there is strong temptation to endorse mutually. This rock should be avoided. There are emergencies, no doubt, in which men should help their friends, but there is a rule that will keep one safe. No man should place his name upon the obligation of another if he has not sufficient to pay it without detriment to his own business. It is dishonest to do so. Men are trustees for those who have trusted them, and the creditor is entitled to all his capital and credit. For one's own firm, your name, your fortune, your sacred honor; but for others, no matter under what circumstances, only such aid as you can render without danger to your trust. It is a safe rule, therefore, to give the cash direct, that you have to spare for others, and never your endorsement or guarantee.

It goes without saying that a young man with industry, patience, perseverance, a strong will and good, common sense, who determines to succeed, can succeed by following the advice of those who have traveled the road of success. But with the majority, to win success is simply to gain riches. Real success in life is far different from the acquisition of wealth. The amount of money a man makes is not the true measure of his happiness or success. Some may eagerly read the advice given above, hoping to find some royal road to wealth; but after all, though given by those who acquired great riches, it points the way to true success in life rather than to great or sudden riches. For out of a thousand who follow it closely, not one may become a millionaire. The opportunity to become one comes to but few, and only a few of those to whom it does come make use of it.

In a speech in congress, Senator Wilson, of Iowa, gave some instructive statistics, showing the reduction that had taken place in the prices of farm implements and supplies between 1880 and 1890. From the tables given, which are Iowa retail prices, we select the following articles:

	Price in 1880.	Price in 1890
Self-binder	$315.00	$130.00
Corn-planter and check-rower	80	40
14-in. steel-beam walking plow	28	14
Walking cultivator	35	20
Mowing machine	85	50
Wood pumps	15	6
Farm wagon	85	50
Barbed wire, per pound	.10	.04
Iron nails, per keg	6	
Steel nails "		2.80
Horse-shoes "	8	4.50
Cook stove	33	24
Chains, per pound	.22	.12
Sugar, granulated, per pound	.12¼	.07
Kerosene, 150 test	.25	.13
Salt, per barrel	2.25	1.25
Flour, per cwt	4.50	2.50
Muslin	.08	.06
Calico	.07	.05

Carpets, 25 to 33⅓ per cent reduction.
Dry goods, general reduction 23 to 33⅓ per cent.
Boots and shoes, average reduction 33⅓ "
Furniture, 25 to 50 per cent reduction.

The main factor in reduction has been invention. In that period of time thousands of inventions have been made and applied. Machine labor has taken the place of hand labor. New processes have succeeded old. The more invention increases the productive power of man, the lower prices fall. There is hardly an article made that has not been cheapened in the last ten years by invention. In spite of combines and trusts, the people have received many of the benefits of American inventive genius. Taking everything into consideration, comparing the change in the prices of articles he buys with that in the price of the produce he sells, the farmer is better off to-day than in 1880.

Only a few years ago we heard much of the great "cattle kings" of the West. The business of raising range cattle was conducted on a magnificent scale; the profits were large; then there was a rush of capital into the business. As a natural consequence, there followed a period of overproduction and a decline in prices. The decline was felt severely by the cattle growers on the high-priced farm lands of the eastern and central states. But production being checked, it was obvious that this condition was a temporary one.

Three years ago we called attention to the indications that cattle raising would soon change from large herds on the range to small herds on the farm. Those who prepared themselves to take advantage of the return of the cattle from the range to the farm, have before them now pleasant prospects of good prices in the near future. Regarding the changes taking place on the western ranges, the census bureau says:

"The census returns show that, like the Indian and the buffalo, range cattle are becoming a thing of the past. With the constant encroachments of the homesteader and the farm, the mining towns and cities that are springing up all over what was once the almost boundless range, the days of the vast herds, and, to a great extent, of the cow-boy, are numbered. Thus the evolution goes on; first the savage and the native buffalo, then the half-wild cattle with their half-civilized attendants; and then the farm, the city and civilization. Where the vast territory in its wild condition supported the few, millions under civilization will lead peaceful and happy lives. 'Ring out the old, ring in the new.'"

All friends of our beautiful wild flowers that are so rapidly disappearing, will be pleased to learn of the organization of clubs for the purpose of preserving them. On receipt of a stamp, the secretary of the American Wild Flower Club, Wilmington, Del., will send a pamphlet that gives much interesting information about the organization of the national and local clubs, their objects and purposes, etc.

There is nothing mercenary in these wild flower clubs. The work of saving the wild flowers is a work of love and sentiment. There is no money in it, but all who love the beautiful native flowers will be delighted to assist in the work. And they will be pleased to have fellow-laborers, as so much more can be accomplished by organization and methodical work than by random individual efforts. "We want no national flower," says the secretary, "until our beautiful natives are saved to us."

Fruit growers will find something of special interest to them in "Causes of Fruit Failure," on another page of this issue. Owing to the present scarcity of green, dried and canned fruits, it is reasonably certain that good prices for fruit will be the rule for two or three years to come, even if the crops are large. There will be no surplus of dried or canned fruits to be carried over to next year, and the coming crop will go on to a cleared market. If there is a surplus next year, it will be held at good prices for the year following. The provident fruit grower will begin now to make his preparations for securing, as far as it is within his power to do so, a large crop of sound fruit next season. There are enemies and diseases that he can successfully fight, and he wants to study the best methods now. A rich reward awaits those who heed the timely advice given in the article named.

The fruit districts favored this year with good crops of fruit are now having a boom. The good prices realized have materially advanced the value of the orchards. There is likely to be a rush into the fruit business, and nurserymen may expect a harvest of orders. But those who planted and cared for their fruit trees through the dull times will be the ones to realize the most from a period of high prices.

In "Notes from my Home Garden" in this issue, Joseph has something very interesting to say about the method of growing onions from transplanted seedlings. Under very unfavorable conditions, part of his patch came close to the 2,000-bushel rate that he was trying to reach, and he is able to give good reasons for the faith that is in him. He refers to the experiments made by Professor Green, of the Ohio Experiment Station, last year. Professor Green repeated his experiments this year with very satisfactory results. His exhibition, at the Ohio state fair, of onions grown from transplanted seedlings, and from seed was a striking object lesson to all who saw it, in favor of the new method.

Some may hold up their hands in awe at the amount of labor required to set out an acre of onions with the plants three or four inches apart, in rows twelve inches apart. But those who have tried it say that the labor of transplanting is offset by that of weeding when onions are grown from seed, and that it will cost no more to grow them than by the old way. Growers will find it well worth making trial of the method fully described in the article referred to.

In the independent political movements made by farmers, we notice a general demand that the salaries of county officials be cut down. Some of the farmer candidates have gone so far as to pledge themselves to turn over the surplus salary to the county treasury.

There is no doubt that the lowering of these salaries would do something toward reform in political methods. Under the prevailing methods, the successful candidate must often take a large portion of his salary to pay his campaign expenses, legitimate or otherwise. The salary is divided up among the official and the political workers who secured—or claimed to secure—his nomination and election. Let the salaries then be cut down to the actual amount retained by the official. Let the ward strikers earn their living. The county offices should be in the hands of good business men, and they should be well paid for their services, but the salaries should not be expected to furnish their campaign fund besides.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY

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FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

Our Farm.

LANDSCAPE GARDENING FOR SMALL PLACES.

As a basis for the working design, a ground plan of a house has been utilized, in order to lay out the walks and drives intelligently as regards the doors, views from the windows, etc. In presenting the accompanying plan we have selected a city lot 32 feet in width and 112 feet in depth; the depth, however, being an arbitrary limit, selected with regard to space in the paper. Should a lot to which it is desired to apply this plan be forty or fifty feet deeper, it would still be advisable to have the building and front arrangements remain as they are, and the extra space made use of in the rear by extending the fruit plantation, or else starting a vegetable garden.

For nearly every house the main features of the walks thus designed will be adaptable, or can be made so with but little difficulty, but where any great changes might be advisable, it would be the best course to consult some practical landscape gardener. This design can only be made use of in a general way, as few places are exactly alike. Where possible, one ought to have a plan of his grounds and the intended improvements made, even if only a little is done each season; all work will then be carried on along the same lines, and none will have to be done the second time, as when the work is completed, every part will harmonize.

There is present in the popular mind a half-defined notion that everything in this line is so expensive that they hesitate to commence. This really is not the case, as a rule. For instance, a complete working plan similar to the accompanying design could be gotten up for about $25, while for plans of a more extended area the cost would advance in proportion.

As to the planting, this is a feature largely governed by individual desires, both as regards the extent and the outlay. On nearly every place some ornamental planting will increase its value and attractiveness; yet the planting must be cautiously carried on, for on a small place, nothing is easier than to plant too much, in which case an appearance of overcrowding is the result. This is as much to be avoided as is the other extreme of barrenness.

The planting of a few trees, flowering shrubs, roses and other plants will increase the money value of homes. It is readily conceded by careful observers of the value of real estate, that an expenditure of only five per cent of the value of a property in its unimproved state will, if employed in making walks and drives, planting shade and other trees, flowering plants of various kinds, and judiciously arranged, add forty per cent to the value of the same property. In a word, if a home in the bare state characteristic of so many were worth $1,000, the expenditure of $50, as above indicated, would, after several years, advance the selling price to $1,400 or $1,500. This, while true of a small place, is equally applicable to one of any size.

In our plan we will begin at the rear with our explanation and planting. The first being a row of five apple trees along the division line. As the width of the lot (32 feet) would only allow a space of 8 feet between the trees, we must, for the planting of so small a fruit garden, rely upon the dwarf forms of the various fruits whenever practicable, as is the case with everything except sweet cherries, peaches and plums, the two latter, however, making rather small trees in any ordinary situation.

As for apples (11), we would select two winter sorts, Greenings and Spitzenburg, one Sweet Bough, one Red Astrachan for early and one Oldenburg for later autumn use.

At 12 we would have three peaches, one Alexander (the earliest), one Early and one Late Crawford. In the latitude of Buffalo it is generally unsafe to plant any later sort. Southern readers, for still later fruit, will find either Salway, Ward's Late or Stump the World very fine.

Five pear trees (13) will be none too many, using all dwarf trees excepting one Bartlett, which is hardly reliable on other than its own roots. One Tyson for early, followed by one Seckel, one Duchess d'Angouleme for late fall, and one Anjou for winter use.

Two plum trees (14), one Green Gage and one Lombard, do very well for an ordinary family. Wherever curculio (the insect that causes the fruit to drop) abounds, a very efficient and simple method of guarding the fruit is to jar the tree, in the early morning, sufficiently to shake every branch, having a sheet lying on the ground, into which the curculio will fall, and the insects can then be destroyed by burning. This should be done daily while the trees are in bloom, and for about one week after the petals fall.

A small plat of strawberries (15) should be found with every home, whether anything else is grown or not. The plat indicated is 8 by 12 feet in size, and will hold about fifty plants. It is difficult to select any one variety that would satisfy every one, and which, also, would do well in a great variety of soils. So far as present knowledge extends, however, I believe that in the Haverland will be found an all-around family berry that will be satisfactory to the majority of users. A dozen or so of Wilsons should be planted for fertilizing the Haverland, which is pistillate.

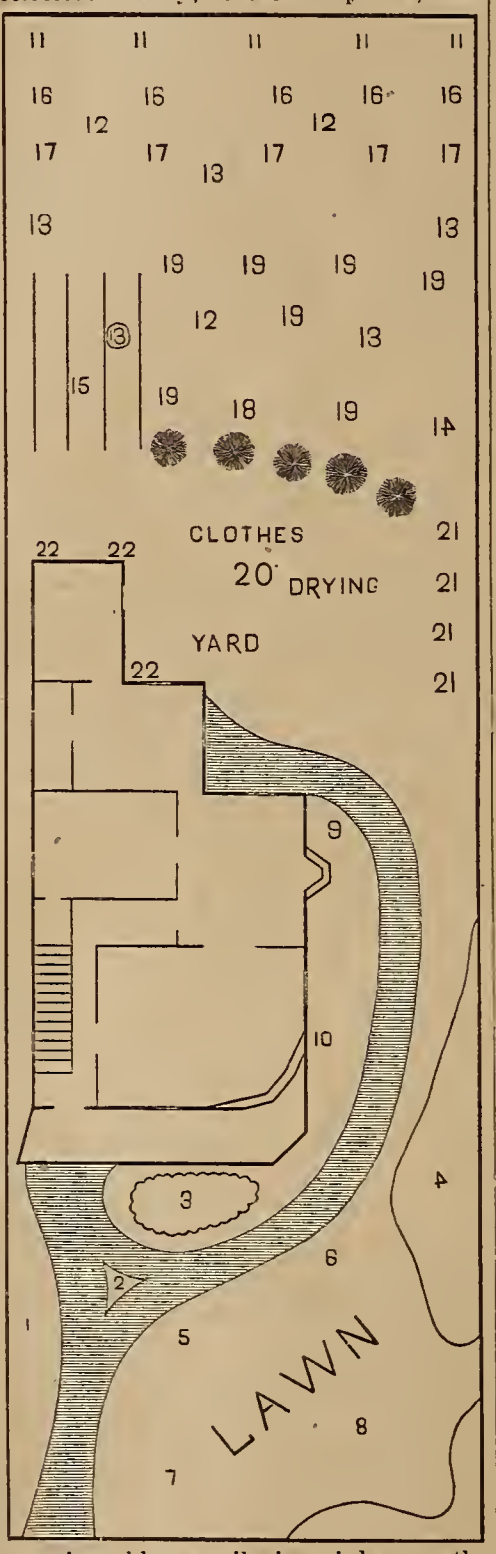
Among the trees are planted red (16) and black (17) raspberries. Of the former, Early Prolific, Cuthbert and Shaffer are very good, while of the black cap family none will excel Souhegan and Gregg, with one Golden Queen, an excellent yellow sort.

Room is found for one quince (18), the best sort being Rea's Mammoth. Four currants and three gooseberries are planted, as indicated by 19, using of the former two Fay's Prolific (red), one White Dutch and one Crandall (black). Of the gooseberries, one Mountain and two Houghton.

Within the clothes-drying yard are planted two sweet cherry trees (20), which are thus given space to make fine trees that will yield much fruit, while at the same time shading the back yard and part of the house. The best kinds are Black Tartarian and Yellow Spanish. Sour cherries, as they form but low trees, are placed as a hedge at 21, the best sorts being Early Richmond and Late Duke. Three grapes (22) are planted about the woodshed and allowed to grow on a trellis, as well as on the roof. Use one Delaware, one Worden and one Brighton.

An evergreen hedge of Norway spruce divides the front garden from the clothes-yard, which is to be kept well covered with sod. From the door of the kitchen a three-foot walk goes around the house; it joins the front walk, which is four feet in width, and runs from the front entrance to the street. At the junction of the walks (2) a vase of flowering plants or a flower bed can be placed. For a bed at this point, annuals, like Phlox drummondi, petunias, verbenas and similar sorts, would be good, using only one kind at a time, which would give a chance to have it different each year. Where foliage plants are preferred, colcus are excellent, one color only being used. The green and white variegated geranium, Md. Saleroi, is also a splendid subject for a bed in this situation.

To the left of the walk, at 1, is a border of hardy shrubs like wiegelia, lilac (*syringa*), forsythia, mock orange (*Philadelphus*), snowball (*viburnum*) and others. At 3 is a bed of hardy roses, such kinds as Gen. Jacqueminot, Mabel Morrison, Capt. Christy, Mrs. John Laing, Baroness Rothchild, Abel Carriere and others being selected. Hardy, herbaceous plants, like



pæonies, phlox, aquilegias, pinks, pyrethrums, yuccas, etc., are put in the foreground at 4, interspersed with evergreens, including Norway spruce, hemlock, firs and pines, especially at the rear point. This forms a screen to the back yard during the winter.

A single specimen of River's purple beech is planted at 5, while at 6 is a Wier's cut-leaved maple; at 7, Kilmarnock willow (*Salix cap. pendula*), and at 8, a cut-leaved birch (*Betula alba pendula laciniata*); at 9 is an Irish juniper (*Juniperus Hibernica*), while at 10 is planted a magnolia speciosa.

The bed in the front, right-hand corner is filled with hardy hydrangeas, purple herberry and variegated dogwood (cornus), thus providing beautiful foliage and flowers from early spring till late fall.

In the majority of places, whether in the city or country, the soil will require more or less preparation before it would be wise to plant as valuable trees as are indicated above, and the proper time for doing this work is before any planting whatever is done.

The first thing is to procure a working plan of the improvements contemplated, then, with a strong team, get the soil in shape by using both the ordinary and the subsoil plows. When necessary, give a heavy dressing of stable manure or commercial fertilizers.

La Salle, N. Y. Elmer E. Summey.

COMMENTS ON CURRENT STATION LITERATURE.

BY JOSEPH.

Causes of Fruit Failure.—Prof. L. H. Bailey, of Cornell University, gives the results of his researches concerning this year's failure of tree fruits in western New York, in Bulletin XIX. of the station (Ithaca, N. Y.). I think he is perfectly justified in opposing the popular belief that wet and cool weather during blooming time is the only, or even the chief, cause of the calamity. If this were so, some of the blossoms on almost every tree would have had a chance to "set" during the few days of clear and warm weather occurring at intervals during blooming time. If the cool and wet weather had been the only cause, why was it that the fruit on some of the early trees (Astrachans, for instance), after having set, remained small, gnarly and worthless?

Prof. Bailey, I think, hits the nail squarely on the head when he names disease as the cause of the trouble. The apple scab fungus, for the past two seasons, has appeared earlier and much more severe and generally than in former years, and undoubtedly attacked the trees at such an early stage of development that the flowers were affected and the fruit killed in embryo. The trees that are barren this year all showed the trouble in their foliage, in spring and summer. Pears were similarly affected. Our Bartletts in this county, which gave such a fine crop, had remained free from scab, and the leaves were perfectly healthy all through the season.

In short, I think we have here the true cause of the fruit failures of the apple crop in the past two seasons. This is all we want. If we know the cause we can find remedies, and the latter we have in solutions of salts of copper. Spraying with Paris green solutions for the codling moth and curculio was coming more and more in use with orchardists, but now the spraying with fungicides will be still more, if not absolutely, necessary. It seems very likely, too, that codling moth and curculio will be somewhat scarce for a few years, as they must have been nearly starved out in many parts of the country.

We will have to spray. The best solution for the purpose is probably carbonate of copper, and the following formulas are recommended: (1) Dissolve one ounce of carbonate of copper (known in paint-shops as mineral green) in one quart of aqua ammonia; dilute with 100 quarts of water when ready to apply. (2) Place two pounds of copper sulphate (blue vitriol) in sufficient hot water to dissolve it, and in another vessel dissolve two and one half pounds of carbonate of soda. Mix, and before using add one and one half pints of ammonia, and then dilute with water to about thirty gallons. This is the modified *eau celeste* mixture. The former is probably the better.

It is not yet fully demonstrated just what are the best times to make the application, but it is necessary to begin before the flowers open, and to make from four to six applications between that time and the first of August. Now, it is just possible that the atmospheric conditions next year will be unfavorable to the development of the scab fungus. If so, the crop will undoubtedly be an enormous one; for, as a rule, says Prof. Bailey, "the effect of the leaf-blight in western New York, this year, will probably be to develop a large crop of fruit buds. This often follows a checking of growth. But if next spring should be wet and cool, the fungus would in all probability spread again as it has this year."

"To spray or not to spray?" that is the question before every fruit grower. Good prices may reasonably be anticipated if the crop of next year be large, and excessive prices should another disaster overtake the crop. The fruit grower can-

not afford to take any risk. He must insure a full crop for another year by spraying, and the sooner he studies up the matter, acquaints himself with the various methods and the various implements of applying the spray, and makes his preparations so as to have everything in readiness for the work, the better for him. The majority will neglect these precautions; the few that take advantage of these modern means of insuring their crops against injury by insects and diseases, will find themselves highly rewarded. We should all thank Prof. Bailey for his information and timely warning.

Friendly and Injurious Insects.—The periodical bulletin issued by the Division of Entomology, Department of Agriculture, under the name, "Insect Life," is far too scientific to be of much practical use to average farmers. I have hunted through every issue since the publication was begun, but only in rare instances did I come across anything of interest or value to the ordinary tiller of the soil. The department and station officers often forget the character of the people they are supposed to write for, and the needs of the ordinary man. Many of the bulletin writers shoot high above the heads of the masses. We are not all college-bred, gentlemen, and when you talk to us you should use a more popular style of English.

In Nos. 11 and 12, Vol. II., of "Insect Life," mention is made of the fact that several species of bee-flies (a fly of the size of an ordinary bee, and somewhat resembling a drone bee) have been bred from the pupæ of cut-worm moths. In other words, these bees are now known to use cut-worm or its pupa as its breeding place, thus destroying a dreadful enemy to our crops. This knowledge may not be of great practical usefulness to us, yet it is well we should know our friends among insects, and from the fact related it appears that these bee-flies (anthrax) belong to our friends, and should not be killed.

Loss in the Manure Heap.—The New York Agricultural Experiment Station, at Geneva, gives, in Bulletin 23, an interesting account of some experiments made to determine the loss of fertilizing elements from fresh cow manure and from old compost piled up in a conical heap outdoors. The heap of fresh manure, when first put up on January 4, 1889, weighed 3,298 pounds, and contained, by analysis:

10.06	pounds	nitrogen, at 17 cents	$1.71
20.94	"	potash " 4 "	.838
.67	"	phosphoric acid, at 0.7 cents	.047
(One half cord)		Total value	$2.595

On January 21, 1890, at one year old, this heap weighed 1,148 pounds, and contained:

5.884	pounds	nitrogen, at 17 cents	$1.00
8.227	"	potash, at 4 "	.329
.80	"	phosphoric acid, at 7 cents	.056
(Reduced to one quarter cord)		Value	$1.385

Thus, the loss of fertilizing materials in one year on one half cord is $1.21, or a fraction over 73 cents per ton. The percentage of the loss is 46.6, and as the lost portion, of course, is the easiest soluble, it is also the most available and most valuable portion of the manure.

The other heap consisted of half a cord of old compost, of which muck was the leading ingredient. On January 4th, when first put up, it weighed 2,376 pounds, and contained

16.096 pounds nitrogen, at 17 cents.....$2.736

with mere traces of potash and phosphoric acid. A year later, on January 21, 1890, the same heap weighed 1,810 pounds, and contained only

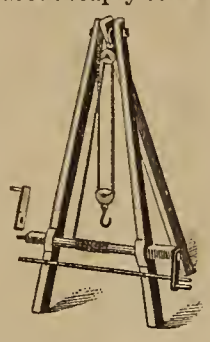
12.64 pounds nitrogen, at 17 cents.....$2.149

Here the loss of fertilizing materials from the heap, in a little over a year, was 59 cents, equal to 21.45 per cent.

The station also reminds us that the season (1889) was exceptionally cloudy and wet, and as great losses of nitrogen from manure are generally associated with drying and burning out, the results may be considered under rather than over what may be expected in average years. At any rate, the experience again shows us that loss by weathering manure, especially when freshly made, is very considerable, and stable manure should not be piled up uncared for for any length of time. A loss amounting to $2.42 per cord of fresh manure, per year, is by far too great, and we cannot afford to suffer it without making every effort to prevent it. The remedy is to apply it to the land as fast as made; or, if we are bound to compost it, to put it under shelter. The lesson is one which every good farmer ought to heed, and if he does not, it will be money out of his pocket.

HANDY DERRICK.

We are indebted to the *Farm Journal* for the following description and cut of a handy derrick for farmers' use: It is designed to facilitate the tedious work of butchering, by completely doing away with the heavy, straining work of lifting. It is cheaply constructed of three basswood sticks 13 feet long. The roller for windlass is 4 feet between bearings, and 3 inches in diameter, and can be either constructed at home, or, what is better, turned from good, sound maple or other strong material at some shop. Any blacksmith can make the hooks, bolts, etc. Two pulleys and about 20 feet of ¾-inch rope will be all that need be purchased. Any carpenter can construct this derrick by referring to the cut. The heaviest beeves as well as the lightest lambs can be easily raised for skinning or dressing.



NOTES FROM THE OHIO STATE FAIR.

During the past ten years the Ohio state fair has become one of the most important industrial and educational institutions of the state, and to-day it ranks among the first of the great autumnal expositions of our country. Few states in the Union can exhibit such a variety of the products of agricultural and manufacturing industry. Probably no state has more conveniently located or beautifully embellished exhibition grounds. The buildings are substantial and commodious, well arranged for the intelligent classification and display of all kinds of exhibits. Live-stock, farm, orchard and garden products, fine art, manufactures, machinery and implements, etc., are all amply provided for, and each of these departments are equally well patronized.

An interesting feature which added much to the completeness and value of the farm, orchard, vineyard and garden products was the collective county displays, these being among the most attractive features of "Agricultural Hall."

The exhibit of all classes of animals, and of agricultural implements, is very extensive, as a whole, largely exceeding any previous year.

One noticeable feature was the display of grapes. It would be difficult to find in any part of the United States, excepting California, grapes in larger variety or of better quality. Other fruits, with the exception of peaches, were not far behind, and, for what is termed an "off year," the display bespeaks the great horticultural wealth of the "Buckeye" state.

Besides the exposition itself, there were other features of equal, if not greater, educational value. The horticulturists held a large and enthusiastic meeting, on Wednesday night, at the state experiment station. New varieties were discussed, the fruit prospects considered, and valuable suggestions were made for promoting the horticultural interests of the state. It is safe to say that no practical horticulturist in the state could have spent his time more profitably than did those attending the state fair and the meeting of the state horticultural society, which was held at the same time.

Another interesting meeting was that of the "Ohio Wool Growers." This was well attended by all the more important flock-masters of the state. To show the importance of organized effort on the part of various agricultural industries, the following resolution, adopted by this state association, well illustrates:

Resolved, That for the purpose of maintaining and of securing the just rights and interests of the wool growers of the United States, and in view of threatened dangers thereto, it is earnestly recommended that all national, state, county and other organizations of wool growers be maintained, and others added, and all made as active and effective as may be practicable.

On the third day, Governor Campbell, Ex-President Hayes and Secretary Rusk each delivered an excellent address. Secretary Rusk reviewed briefly the changes of the last thirty years, tracing the development of our agriculture to the present time. He then forecast its probable condition fifty years hence, when the population would have become more than three times what it is at present. He said that in those days every acre would be called upon to produce double what it does now, and this meant a marvelous change in our methods of farming. The greatest factor in enabling agriculture to meet these demands was education, such technical education as is provided by the agricultural colleges and experiment stations now so generously endowed by the national government. Reviewing the present extent and distribution of our staple agricultural products, the secretary concluded that the figures taught three things: First, the great relative importance of the home market and the wisdom of cultivating it; second, the necessity for such diversification in our agriculture as will enable the farmers to supply it with a large portion of the products now imported; third, that the surplus export, though small, is an important factor in regulating home prices, and, consequently, this government must put forth the greatest energy and alertness in extending our foreign markets.

One of the chief factors in this work must be a guarantee of the purity of our food products. Their manufacture should be surrounded by such stringent regulations as will make the word "American," or the brand "U. S.," synonymous with the words "pure and wholesome" the world over.

At the close of the address, the following resolutions were unanimously adopted:

Whereas, The agricultural and horticultural interests of the United States are the foundations of our material wealth and greatness; and,

Whereas, Much of our prosperity depends on having a secretary who is wise, discreet and fearless. Therefore, be it

Resolved, by the farmers and stockmen assembled, That we heartily indorse the decisions and administration of Hon. Secretary Rusk, and that we hereby congratulate and extend to him our sincere thanks.

W. R. Lazenby.

PINEAPPLE CHEESE.

The preparation of the curd does not differ materially from that for best factory and other styles of long-keeping cheese. But greater care and skill are needed, for a slight defect which would not much affect the value of factory cheese is fatal to the pineapple. The rind must be perfect, else invisible cracks will open during curing, and the least admission of air is followed by internal moulding. In the mold the cheese stands with the point downward. A neck three and one half inches in diameter extends upward from the bottom of the cheese and receives the pressure. These necks are cut off, broken up and mixed with the next day's curd. To perfect the rind, the bottom is seared with a hot iron.

The mold is constructed from four blocks of four-inch scantling. The carving, which can be done by any pattern maker or skillful carpenter, is done mainly upon these quarters. They are then attached to one another in pairs by iron bolts. Two halves are then fitted to one another by dowels, and held together by a strong framework or gripe with its wedges. The mold when complete is a block fifteen inches high and eight by eight inches in size. A bag of strong drilling is thrust downward through the neck and the mold is then ready to receive the curd. The pressure is applied either by screw or lever, the latter being preferable. This is the simplest method and crudest for pressing.

But there is a great saving of time and labor by the crouders and gang presses now used in factories. These gang presses are somewhat ingenious and elaborate, and press fifty cheeses each. The cheese comes from the press with a smooth surface, and the impression upon them is made by the net and the process of netting. Nets are made of the best linen twine, are made by hand, and with great care. After being drawn over the cheese and accurately secured, the cheese are hung in a bath of hot water, the temperature of which is regulated by the conditions of the curd and of the weather. They are then withdrawn one by one and subjected to a machine, which at the same time stretches and twists so as to give an even impression of the net over the entire surface of the cheese. It is very easy to net cheese if there is no attempt to make them handsome But the whole question of profit turns upon their beauty, and only a skilled hand can do the work with success. After netting, they pass to the curing rooms and are hung in the nets for several weeks, or until the nets are required for use upon fresh cheese. After the nets are pulled from them they are placed on trencher shelves till the market calls for them. The nets can be used many times, and yet the wear and tear of them is a large item of expense. The curing of the cheese is difficult, because of the danger of swelling from heat, and as yet it has been impossible to prevent this entirely, though the losses from this source have been greatly reduced.—*Exchange.*

A SWEET-APPLE TREE.

In the yard of a farm-house stands an immense apple tree. It mingles its branches with those of an elm, and the two shade the yard and the entrance to the house. The apple tree is an extraordinary bearer of sweet apples—the most luscious sweet apples the world has ever seen—large, pippin-shaped, and yellow as gold. The variety is unknown. It is an early one, for the tree is at least thirty-five years old. The fruit is called "butter apples" by some, and "golden pippin" by others, but these names were given in recognition of its quality. There is no clue to its distinctive name, if it ever had any. The flesh is crisp and juicy, and melts in the mouth like that of watermelon.

The farmer in whose yard the tree stands was a member of a large family, and with his brothers and sisters played under this tree, as his many children do to-day. Long before the fruit is ripe the children watch eagerly for the "golden bloom" that denotes the approach to maturity, and there is great rejoicing when the time of ripening comes. And when it does come, the children ask for little of other kinds of food—apples raw, apples baked, and apples and milk day after day. The apples are both food and medicine, and the doctor, it may be imagined, says to himself, as he hurries by, "Nothing for me while those apples last; when they return to the pork-barrel I may have a chance." He is right. Not only is the craving for food satisfied, but, also, the best life results. Refreshing sleep comes, ill humors of body and mind are put to flight, the windows of the soul are made clear and the world appears in its true, cheerful light, and the good in it is seen more quickly than the bad.

What good this sweet-apple tree has done! It has sweetened two generations of the world's workers, and the world is better by their influence. Therefore, plant trees, sweet-apple trees, and fail not, for fruit we must have, and the more we have the better shall we be armed for the battle of life, and the easier shall we conquer.

George Appleton.

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

The Onion Crop.—As announced in early spring, I set out to grow a quarter of an acre or so of onions at the rate of 2,000 bushels per acre. I am bound to say now I have failed in this. People here say I got a fine crop, and, indeed, I can show some fine specimens, and upwards of a pound in weight and perfect in shape. But the acre rate is not over 500 bushels, a quarter of what it should have been. Still, in consideration of the incessant rains in the spring, and of a seven weeks' drouth in July and August, which came very near killing the whole plantation outright and checked the growth of the bulbs for at least four weeks, right when they should have done their best, my neighbors and I wonder that the crop is as good as it is. I have no trouble in finding buyers willing to pay $1 a bushel.

Of course, I have again learned a few things in onion growing. One is, that the "Prizetaker" yet stands at the head of the list. I had asked a number of our most progressive seedsmen for something with which to beat the Prizetaker onion; but among all the sorts recommended by them, none could stand comparison with that variety. Spanish King comes next, and is also a good onion; I do not mean to say, however, that the Prizetaker is faultless. It is rather late; it is not as good a keeper as some of our old standards, and several per cent of the crop, under high culture, make large necks, failing to "cap" nicely. In California it is reported to grow so large that it splits in several bulbs, which are not regular and far from handsome. But the great majority of bulbs with me are beauties, and they sell well. I do not attempt to winter them, and see no need of doing so.

The great question now is, by what method can I hope to grow 2,000 bushels per acre? I start the plants in cold-frame in March (shall try February next year), and set them in the open ground, in well-prepared and highly enriched soil when soil and season are suitable for the work. I like to have the plants as thick as a pencil, and prefer to set them just as early as circumstances will allow. The rows may be as close as twelve inches apart, and the plants in the rows four inches. Perhaps three inches would do as well, and if each bulb, in the average, grows to weigh one pound, we will get a crop of over 2,000 bushels per acre.

Some of my friends will probably tell me that it is a very easy thing to figure out such crops on paper, but Joseph is hardly ever guilty of indulging in fancies of this kind without some good foundation. The best part of my patch came very close to the 2,000 bushel rate, even under the exceedingly unfavorable conditions of the past season. I will not undertake to relate all the drawbacks, hardships and setbacks of soil and season I met with here; but they were such as to baffle the skill of the expert, and discourage everybody. What the best part of the field has done this year would be within easy reach for the whole patch in any average season.

This matter of growing onions from transplanted seedlings is one of great importance to every grower for market. Professor Green, of the Ohio Experiment Station, made some experiments in this direction last year, and he comes out very much in favor of the practice. In every instance the yields obtained by it were considerably above those obtained by sowing seed in the usual way. But in a letter now before me, S. W. Judge, one of the members of the Farm and Fireside family, writes me: "I have raised onions from transplanted seedlings (started in cold-frames) as long as 20 years ago, but have failed to see any advantage over the ordinary way. I have often grown the largest and best bulbs where a dozen of them grew inside of a foot in length of row, crowded so that the ones on top were lifted several inches out of the ground. My father also raised onions that way, to my knowledge, 45 years ago, but saw no benefit. We always have been in the habit of transplanting to fill out vacant spots in the bed."

No doubt many growers have tried my method long before my days, but they did not have the Prizetaker, nor the Spanish King, nor any other of our later improvements. Wethersfield Red and Danvers Yellow, and a number of other older sorts, which I tried by the side of the Prizetaker, under the same treatment, gave so indifferent results, this season, that I concluded it would not pay to grow them from transplanted seedlings, and I would not even advise anybody to make the attempt. With the Prizetaker and the Spanish King, and perhaps other sorts of the same character, the new method is just *the* thing, and it will usually give grand results. It is really *fun* to raise such onions. On the other hand, I have grown some very fine Prizetakers from seed directly, and it can be done successfully.

I imagine that there are several readers of Farm and Fireside who have tried my method this year; and I shall be glad to have them report their experience. I repeat, this matter is of some importance. To grow an acre of onions, as stated, will require the use of from 12 to 16 ordinary cold-frame sashes, and one pound of good, fresh seed.

Wintering Onions.—The novice never, and the expert seldom, makes much money by holding perishable products for spring sale. Shrinkage and loss by frost and decay is usually much greater than covered by the advance in prices. If prices in the fall are at all acceptable, sell without delay; but market the Prizetaker onions, anyway. Still, there are exceptions to all rules, and in certain localities or under certain circumstances it may pay well to store and hold for spring sales such varieties as Danvers Yellow and perhaps Wethersfield Red and White Globe, etc. There is a party over in Canada, not very far from here, who grows quite a number of acres of onions every year, and he invariably holds them until spring, and makes money by so doing. Of course, I was anxious to learn how he winters such big crops, and made inquiry. He writes me as follows: "For the purpose of keeping onions during winter, we have erected two large rooms in the end of our barn, above ground. These rooms are almost frost-proof in the coldest weather; are provided with double windows at each end, and double doors at entrance from driveway on barn floor. All the walls have a dead air space. Building paper is tacked on in the inside of each boarding that forms the hollow space. Onions are not put into these rooms in *bulk*, but in thousands of slatted bushel boxes. The windows are kept constantly open, except in very cold weather. The idea is to put in dry, well-cured stock, and place it in such a way that it may always be airing at suitable times, and yet be secure against low degrees of temperature.

Fall Work.—Among the things that should not be neglected at this time, is the storing of some good soil for use in cold-frames and hot-beds next spring. Neglect herein may seriously cripple us for another season. It is almost always difficult to get good, dry soil for the purpose named in February or early March, when we wish to start our first hot-beds or frames for onions, etc. Be sure to put a few wagon-loads of good loam, well mixed with fine manure, into the cellar, or under a shed, to be covered with litter sufficiently to keep it from freezing.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Worms on Trees.—C. M. F., Attalla, Ala. You had better syringe the foliage of infested trees with Paris green and water, using one pound of Paris green to 100 gallons of water. Apply several times, if necessary. This is a sure remedy for the ravages of all foliage-eating insects.

Fertilizing Strawberries.—J. C. O., Florence, Ala. Probably the best way for you to fertilize matted row strawberries is to have some stable manure, well rotted and fine, and to spread it among the plants and alongside of the row. This should be done at once, so as to allow the manure to be washed into the soil before and during winter. Put on very thick, but do not cover up the plants.

June Berry and Barberry.—W. J. W., Jr., New Mexico. The June berry is a low-growing, shrubby plant, very widely distributed over the whole country. It bears a berry in form and size resembling the dark-colored blueberries. It varies very much. Its fruit is used for the same purposes as the blueberry. The barberry is a shrubby plant with thorns and acid fruit, and is quite different from the blueberry. It is esteemed for sauces where known.

Apple-root Plant-louse.—K. L. K., Jefferson City, Mo., writes: "I would like to know if there is any remedy for apple trees when they begin dying at the roots? I have lost several young trees, which were just coming into bearing, from this cause. The bark on one side will turn a dark brown color, and within three or four months it extends over the entire trunk, the roots being entirely dead while the top is green. They were planted in newly-cleared land, which has been cultivated in corn and potatoes, and the trees have grown thriftily."

Reply:—I think that probably your apple trees are infested with the apple-root plant-louse. Please examine the roots, and see if there are not bluish-white lice on them, and also bunches on the young roots. This pest is very abundant in your state, and is the cause of the mysterious death of many apple trees. After examiuing them, please write us again.

Quince Blight.—H. M. S., North Monroeville, Ohio, writes: "(1) I have one large Rea's Mammoth quince tree, ten or twelve years old. It blossoms full each year, yet does not have more than four or five quinces on it. Why does it not bear? (2) I have the Orange and Champion quince trees. In the spring, they are just covered with blossoms, but for the last two years, when the quinces were as large as a hickory-nut, the leaves turned brown and black, and the limbs became dead. I have just been over them, and cut out the dead limbs, and it has made a large brush-pile."

Reply:—(1) Do not know. (2) The disease attacking your quince trees is the wide-spread quince blight. It can be controlled by the use of fungicides, such as Bordeaux mixture, applied as a preventive quite early in the season. All the diseased portions should be burned at once, after trimming off, to prevent the spreading of the spores.

Time to Plant Apple Seed—Earhart and Nemaha Raspberries—Planting Black Caps in the Fall.—W. L. W., Clarksville, Ind., writes: "Should apple and pear seed be planted in the fall or spring? If planted in the spring, should they be kept dry all winter?——Is the Earhart (everbearing) raspberry a success, and is it as productive as the Souhegan or others?——Is the Nemaha raspberry as large and productive and hardier than the Gregg?——Most nurserymen say that black caps cannot be successfully planted in the fall. What is your opinion?"

Reply:—Yes, they should; however, they may be dried and wintered over in such a condition, but are not then very reliable. They may be wintered over most successfully when mixed with rather dry sand in some cold place. ——So far as my experience goes, and from what I can learn of others, the Earhart raspberry is not a success.——I think it is.——I prefer to plant black caps in the spring. They can be successfully planted in the fall if only strong plants are used. But care must be taken to firm the soil and to cover with a mound of earth at least three inches over the crowns of the plants.

Book on Forestry.—H. N. P., Thurman, Col., writes: "Where can I get a book that will explain how to plant forest trees in a dry country, so as to make them live?"

Reply:—There is no book published, so far as I know, that is devoted especially to the features of tree planting in dry soils. In fact, it is an accepted rule among forest-tree planters that trees must have water until established, after which the deep-rooting, very hardy kinds, such as white willow, box elder, yellow cottonwood and a few others, will, perhaps, take care of themselves; but even when well established, there may be times when they will suffer severely from drouth. I recommend you to get all the publications on forestry in your state, which you can probably obtain through your representative; also, you had better send to C. L. Smith, Secretary of the Minnesota Forestry Association, at Minneapolis, Minn., for the state manual of forestry, which contains much of great value to tree planters in dry or dry and cold climates. This publication is not published for gratuitous distribution, but it can be obtained at a trifling cost.

Diseased Grapes.—B. F. B., Excelsior, Minn. The grapes received from you have suffered from two diseases: (1) Mildew (*Peronospora viticola*). This disease takes off or so injures the foliage that it cannot perform its proper functions in nourishing the vine, and the fruit prevented from ripening is left in the green state it was in when the foliage was attacked. It is very prevalent some seasons, and in some localities more than others. It may be prevented by the application of eau celeste to the foliage several times, commencing quite early in the season. One of your near neighbors has recently told me that he had saved his grapes in magnificent condition by using it twice this year, while his nearest neighbor's vineyard was badly affected. It is not a cure, but a preventive. The Delaware grapes received were not themselves affected by any disease, but by the vine losing its foliage the berries did not ripen. The wood, also, of your vines is not ripened, and will probably kill back badly this winter. (2) The Concords were affected with black grape rot. This is a common disease throughout the middle, southern and western states, but not found much heretofore in Minnesota. There are several methods of preventing it. The most common is spraying the foliage and fruit with Bordeaux mixture early in the spring. Bagging the bunches is also much and successfully practiced as a preventive, but it must be done early to be effective. It is the practice of some successful growers to bag the grapes when in blossom. Other mixtures than Bordeaux are also recommended by the Department of Agriculture at Washington. This fall, all the rotten berries, and all the trimmings and leaves of your vines, should be gathered and burned.

Time to Plant Cuttings.—T. G. D., Stanton, Tenn. Cuttings of Kieffer pear, grapes and of gooseberries require about the same treatment. The cuttings should be made in the autumn, after the foliage has fallen and the wood is well ripened. They should be buried in very well-drained soil, bottom up, and the rain and snow should be kept off of them. The butts should be covered at least six inches. They should remain in this position in the spring until calloused a little, when they should be planted out. The land to which they are planted should be well drained, but rather moist; it should be plowed several times in the spring before planting, in order to warm it up, and if a light coating of fine manure is plowed in, so much the better. Sometimes, all but three inches of the soil is removed from over the butts of the cuttings while they are in their winter quarters in the spring, and about a foot of hot stable manure is added to warm them up and hasten calousing. Also, sometimes a sash is put over the butts, and so heats them and accomplishes the same purpose as the manure. Gooseberries, however, grow very easily when layered, and some of the coarse-wooded kinds are very difficult to root. On this account, I generally root them by covering the new wood as soon as quite firm, generally in July. The Paradise stock is a dwarf-growing, European apple, used to dwarf apple trees. It can be obtained from any of the large nurserymen. The Mahaleb is a fast-growing, European cherry stock, which grows abundantly there, but not in this country. Our wild cherries are of two kinds. One of them, which has a lot of fruit on one stem (*raceme*), is the black cherry (*Prunus serotina*), and the other, having a stem for each fruit, with all the stems of several cherries united as the wires of an umbrella, is the bird cherry (*Prunus Pennsylvanicum*). Our cultivated cherry will graft on the latter, but not on the former.

Trimming Raspberries.—M. N. B., Cossayuna, N. Y. Probably you had better not trim your raspberries much, if any, until you are sure of the kind and proper treatment. There are several species of raspberries under cultivation. The red American raspberry (*Rubus strigosis*), of which the Cuthbert, Marlboro and Turner are examples, send up many suckers and need considerable pruning. The black cap raspberry (*Rubus occidentalis*), of which the Souhegan, Gregg, Tyler, etc., are examples, which root from the top of the new growth and rarely sucker, also need much pruning. And we have a few varieties of the European raspberry (*Rubus Idœus*). These send up suckers, are mostly red in color, but do not generally need much, though they are benefited by a little pruning; an example of this species is found in the Hudson River Antwerp, Red Antwerp, Brinkle's Orange and others of foreign origin. It has been quite thoroughly demonstrated that raspberries bear most prolificly on the branches which push out by reason of the tips of the canes being pinched back while quite young. Such treatment makes the canes very stocky, so that they easily stand up without any stakes or wires. This is an advantage where the canes are not covered, but where covering is practiced it is very difficult, if not quite impossible, to manage them if they are large and bushy, and then they should be allowed to grow without pinching at all, but in the spring a part of the growth should be cut off. I think the best method to follow in pruning raspberries is to pinch off the tips of the shoots when they get to the length of three feet, and then pinch off the ends of the side shoots when they have run out about two feet from the main stem, but the amount of pruning must vary according to the variety grown. The *Rubus strigosis* class requires the most pinching. Of course, you know that all the old canes should be cut out as soon as done fruiting, and that only so many plants should be left in each hill as can grow and fruit without crowding one another.

A SONG OF SHASTA COUNTY, CALIFORNIA.

Across the plains we fought our way,
Nor reached old Shasta in a day,
We suffered much and traveled long,
But Shasta Land was all our song.

CHORUS:—
Oh, Shasta Land, sweet Shasta Land,
As on the river's bank I stand,
I look away, across the hills,
And see the rain run down the rills,
And when I turn and view my home,
I think I never more shall roam.

In '49 we dug for gold,
Like hardy men in days of old,
And every mine was rich with ore,
And still to come are millious more.—CHO.

Our clover fields and flowery dells,
Our crystal lakes and mineral wells,
All speak to us of joys unseen
And tend to make our lives serene.—CHO.

Our orchards bloom on every side,
Our vineyards, too, are far and wide,
And health and wealth go hand in hand,
Through all this grand old Shasta Land.
CHO.

MARION GRIFFIN.

EXTRACTS FROM CORRESPONDENCE.

FROM WASHINGTON.—Skagit county is a very fine country, and is fast improving. Land is going up rapidly. There was a heavy crop of hay, oats, hops and fruits of all kinds, and all command good prices. D. M.
Fir, Wash.

FROM KANSAS.—Our cotton crop was good. The tomato crop was nearly a failure. Apples are worth from fifteen to thirty-five cents a bushel. A large area of wheat is being sown. Wheat is worth from 80 to 95 cents a bushel; old corn, 43 cents; new corn, 35 cents; potatoes, $1; hay, $4.50 per ton. T. F. K.
Independence, Kan.

FROM OREGON.—W. W. A., writing from The Dalles, Oregon, says it is not uncommon for the mercury to fall 16° below zero for a few days. He is in eastern Oregon. I have lived in the Willamette valley forty-two years, and never knew the mercury to fall as low as zero but once. From 16° to 20° above zero is as low as it usually falls. Plowing may be done any time in the winter season. W. P.
Aumsville, Oregon.

FROM ILLINOIS.—Lebanon is situated on the Ohio and Mississippi railroad, twenty-five miles distant from St. Louis, and has a population of about 2,500. We have one college, McKendree. The majority of the citizens are Germans. Land is worth from $50 to $100 per acre, according to location. All kinds of vegetables do well here. At present we are very much in need of a canning factory to use up our vegetable crops that generally go to waste.
Lebanon, Illinois. T. J. D.

FROM TENNESSEE.—Crockett county is fast taking the lead in fruit growing. Gadsden alone ships from seventy-five to one hundred carloads of strawberries, peaches, apples and tomatoes. Land is cheap, from ten to twenty-five dollars per acre, the latter price for land with good buildings and set to fruit. If these improved farms were north of the Ohio river they would sell for from fifty to seventy-five dollars per acre. We came here from Illinois just after the war, and find it a pleasant place to live. A. T. H.
Gadsden, Tennessee.

FROM KANSAS.—We have black, heavy and sandy soil. The sandy soil holds moisture best. The black soil yields the most when there is plenty of rain. We cannot brag on this country for fruit, it is too dry; although I have seen as fine fruit as I ever saw raised anywhere. All we want is plenty of rain to raise anything that could be grown in this latitude. The wheat and oats were not very heavy around here; corn is very much spotted. In the local shower strips, corn was good; outside of them the dry weather and chinch bugs hurt it and there is no corn to speak of. Most of the farmers have plenty of old corn on hand. Corn is thirty-eight cents a bushel, and wheat eighty-five cents. There is plenty of land to rent for one third of the crop. The water here, as a general thing, is good, and there is pleuty of it. Hutchinson, the county-seat, is a nice, thrifty place. A great many salt plants are now at work there and doing well. We have a healthy country but have our high winds. Any one seeking a home could not do better than to come to Reno county.
Arlington, Kansas. J. S. A.

FROM MISSOURI.—Cape Girardeau county is in south-east Missouri, on the Mississippi river. The land is bottom and upland, and very productive. Corn, wheat, rye, barley, oats, grass and clover, potatoes (sweet and Irish), and apples, pears, peaches, plums, cherries and grapes of fine quality, and vegetables of all kinds, are grown in abundance. The best quality of wheat is raised in this county. The yield is from ten to thirty bushels per acre, with good market at cash price. Considerable stock is raised here. We have some fine herds of Holstein, Jersey and Shorthorn cattle; also, flocks of sheep—Southdown and Cotswold—and Chester White and Berkshire hogs, and fine horses and jacks. Land sells from $10 to $50 per acre, well timbered and water plentiful. Society is good. Good public schools from six to eight months per year. At Cape Girardeau is the South-East Normal School; also, the old Catholic St. Vincent College, a school of very high character and long standing. Good churches are numerous, and well attended. Societies are numerous among the farmers and laborers. The grange is the oldest. United Workmen, Wheel, Alliance, Farmers' Mutual Benefit Association, Union Labor Society, all working for the benefit of the farming and laboring classes. Cape Girardeau is the largest city in south-east Missouri. It is beautifully situated on the bank of the Mississippi river, with railroad connections east and west, and a fine farming country surrounding it. H. B.
Oak Ridge, Mo.

FROM LOUISIANA.—It may interest your readers to learn how the Iowa colony are succeeding in their southern home. In 1883, six Iowans visited Calcasieu county, La., and they were so well pleased with the country and climate that each one entered a homestead and tree claim. This was the advance guard of our colony, which now numbers some 1,500 persons. When we settled on this beautiful prairie, the natives would not have given twenty-five cents per acre for the land, and it was the opinion of the old citizens here that these Yankees would starve, and that they would never make a success of growing rice and sugar cane; these crops could only be raised profitably on the alluvial lands. In 1885, two or three carloads of rice were shipped to New Orleans. This season, 1890, it will require 4,000 cars to market our crop. The yield is from ten to twenty-three barrels per acre. Perhaps twenty or thirty carloads have been recently shipped of this year's crop. The returns have been $4.50 per barrel. In regard to sugar cane, our present crop will yield from sixteen to twenty-five tons per acre, selling, where there are central factories, for $5 per ton. Our imperative needs are three: A bank, a rice mill and a central sugar plant. A rice mill will yield a good income. A sugar plant will net the inventor from twenty-five to thirty-five per cent. Cotton, oats, corn, white and sweet potatoes are a full average crop. Fall gardens for winter vegetables are being planted. The weather is very favorable. We lost by death eighteen members of our colony, and several of these were from old chronic troubles. This small number would indicate that ours is a healthy country. The climate is delightful and the water excellent. E. R. S.
Jennings, La.

FROM FLORIDA.—Levy county is on the gulf coast at the north end of the peninsula. Cedar Keys is its principal seaport. This county contains a great deal of rich land. We can successfully grow tobacco, corn, sea island cotton, rice, sugar cane, vines and the entire line of vegetables. This is a good fruit country for peaches, grapes, plums, Japan persimmous, Kelsey plums, loquat, figs, Le Conte pears, blackberries, strawberries and some other small fruits. Many fruits and crops that have not been tried here yet will probably do well. Oranges are successfully grown all over our county. We cordially invite strangers to come and settle, and cultivate our wild lands and enjoy our nice, healthful climate. I recently returned from an extensive trip through southern Florida, and was much pleased with its prospects and possibilities. I visited Fort Myers, and called upon L. C. W., who sometimes writes for your paper. I found him to be an intelligent, enterprising man from Illinois, superintendent of the government experiment station there, and standing high among the citizens. Fort Myers is situated on the south bank of the Caloosahatchee bay, and by the United States census contains nine hundred and forty people. Five years ago it contained but two hundred and fifty people. It has docks, warehouses, hotels, a good $6,500 jail and $10,000 court-house going up. A new hotel and several cottages are being built, and the place is taking on city airs. It is eighteen miles from the gulf by water and ten miles by a direct line. Lee county is one of the largest counties on the gulf coast. I am told that the citizens of Fort Myers annually ship cattle, hogs, alligator skins, bird plumes, fruits and vegetables to the amount of $400,000. There I saw all kinds of tropical fruits growing to perfection, such as cocoanuts, mangoes, guavas, melon papaw, sapodillas, tamarinds, bananas, pineapples, etc. It has a lovely summer climate, mercury seldom reaching 90° in the shade. It is much cooler than where I live, two hundred and fifty miles farther north, and their winters must be delightful or their tropical productions could not flourish out of doors. The people look healthy and I never saw in all my travels nicer people. I did not visit the extensive rice, pastoral and sugar lands of Lee county, but am told that they cannot be surpassed. C. W.
Bronson, Florida.

A PROFITABLE BUSINESS.

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Our Fireside.

[Original.]

The Fisher Maid OF OLD CAPE ANN.

BY EVA M. NILES.

"Well, wife," said old Ben Slocum, "this is a terrible night. I should not be surprised if there were wrecks on Bemo's ledges before the morning. I think I will go down to the shore and see if my boat is hauled up all right, and you had better have on a good fire with plenty of water boiling in the kettle."

Ben Slocum tied on his old sou'-wester which had been out in many a storm before, and started on his errand. The wind blew, and the rain fell in torrents.

"Ha! What is that?" says Ben, as a sound of distress breaks upon the inky blackness. He turned his lantern around and saw a scull boat with a man and little girl in it. A flash of lightning showed him a lovely vision indeed. A girl of five or six years of age, with large, solemn eyes, and hair that flashed in that strange radiance like the glory of a saint; she was clothed in white from head to foot. Ben stood watching her, holding his breath. No man in the world was less prone to superstition than he; no man had more fiercely flung from him all belief in such things as were beyond the domain of nature. Yet, there he stood as if that radiant presence had stricken him into stone.

"By heaven," says Ben, "their scull is gone!"

Soon a tremenduous wave rises mountain high, covers the boat, and when again it comes in sight, the girl is alone. Her eyes are raised to heaven and her hands clasped as if in prayer. She sees her danger!

Quite a crowd had gathered on the beach. With a speechless horror that curdled the very blood in their veins, they watched as the little craft drifted on—on, helplessly, and the girl sat with white, set face, going calmly to the awful death before her, in face of scores of agonized men, powerless to save her.

If for a brave moment there had been one wild hope, simply because the reality seemed too appalling to be real, it vanished the next, as Ben Slocum, in a tone they never forgot, said:

"By the heaven above, I mean to make one desperate attempt for that little girl's life!"

He had flung off hat and coat, and was swiftly lashing the end of a long coil of cable-laid sennit round his waist, before the people realized at all the almost monstrous desperation of his intention; and, then, there was a kind of smothered cry, and women sobbed and men surged forward with a strangely-moved outburst.

"It's just madness, Ben," they cried. "It's two deaths 'stead of one. You won't go."

"Boys," he said, through his teeth, "there isn't a second to be lost. I'm going to swim out and stop that boat, I tell you, and, by heaven, I'll shoot the man that interferes! You'll pay out the rope swiftly, and when I've got the girl, haul us in, dead or alive. Come on, I'll do my best."

His cool daring, his absolute self-sacrifice and faith, bore down all before their moral force, and the very inspiration that surely possessed him, and a deep murmur swelled forth through the crowd, as the able figure strove to the brink of the fierce, rushing waters, and six powerful fellows eagerly obeyed the order to uncoil and hold the rope.

"And if that breaks," they cried.

He had answered:

"Then pray for our souls, for it is all we shall need."

And now, there was a great hush in that crowd, in the very air, it seemed, save for that ceaseless roaring of the mighty sea, thirsting for the prey. What agony of soul, what fearful mental tension both he and the child in the doomed boat went through in those few moments, only heaven knew.

"Now, boys, pay out," said Ben's thrilling voice, and with the word the man leaped into the rushing ocean, and struck out for life against death. The crowd gave one great gasp and then stood still and breathless in that awful excitement of suspense.

On, on swept the fated boat, with the solitary figure steadfast and calm, with unwavering eye and hand, keeping her head straight with the roaring current, knowing that the least falter must send her broadside to the current, to be instantly swamped.

Ever and anon just above the glittering waters they can see the dark head of Ben, the more than daring swimmer, who, with such skill and power and keen eye that had measured his distance and chances, strikes out athwart and up diagonally, to allow for the force of the current that will carry him down a little with it, fight as he will to reach the boat's course before it sweeps past his line of crossing it, and is lost beyond even the slender hope of intercepting it.

Heaven, will he reach it, can he hold out such struggles with every inch of water? Ah, where is he? Gone from sight. Is he caught with the cramps, sank—or—— No! Upheave the breath. There he is, nearer, nearer to his goal, and the boat is close, but the swimmer is still visible. Father of mercy, it is too awful to see the boat sweep past, as it surely must. The women fall on their knees, and the men stand, hands clenched and dry-eyed, not breathing. The boat comes rushing on—it is passing—past. No—yes—— Not quite yet. There is one maddening second of agony. The swimmer makes one effort that is simply superhuman in its desperation and strength; one bound forward, his right hand flashes out of the tide towards the boat, grips the gunwale, and for a second checks the craft.

"Fling yourself—to—me," he says, through his teeth, and as the girl instantly jumps overboard, let's go her hold of the doomed, empty boat, and flings that right arm around the girl in a vicelike grasp, just able to keep afloat as the noisy water, no longer battled with, sweeps both its intended victims before it, till the rope tautens quickly from the shore, as hand over fist the six men haul it in coil upon coil. Then at sight of that matchless rescue the agonized tension of the crowd gives way at once, and such a wild cheer of frantic excitement and relief burst forth that the very roar of the angry ocean seemed deadened and lost in the ringing volume of sound.

"Don't crowd around, friends," a doctor said, with kindly authority, as the two human beings were at length drawn to shore and lifted—ah, how tenderly—from the water by a score of eager ones, whilst the crowd obediently fell back, giving vent to their joy by cheer upon cheer.

They were tenderly moved to Ben's home, where his faithful wife had a roaring, good fire, and the doctor administered brandy. The girl rallied somewhat the first, for terrible though the strain on her had been, it was mental strain and exhaustion almost entirely, little of physical drain on strength; but the other, both physical and mental powers had been given out to the utmost, strained to the last point of a singularly vivid and highly strung temperament.

Gradually, strength and life returned to Ben, and he found out from the child that she had left England on a large steamer with her mamma and papa, and that the steamer had struck on Bemo's ledge, going instantly to pieces. The cook and she had gotten into the boat, but she was all there was left.

"Oh, what shall I do?" said the child. Ben's wife put her hand caressingly on the little girl's head and said:

"You can stay and be our own little girl," and drawing her down closer she said, "I had a darling child once, but God took her away, and I think he has sent you to us to take her place."

And so Elsie Raynor, for this the child gave as her name, lived with the fisherman and his wife to help brighten their lives. Every day she trudged off with the girls and boys to school, and every one spoke of her as the little fisher maiden. Ben gave her a good education, as he always told his wife, "that, perhaps, sometime relatives might come to claim her," although he trembled at the thought. Elsie had become as dear to them as if she was their own child.

* * * * * * *

Twelve years passed away, and Elsie was eighteen years old. She always called Ben and his wife father and mother, and the fact of her having been saved from a watery grave had almost drifted from her memory.

One day Ben came home, and with him were two strange gentlemen. They had come to find out about the steamer wrecked so many years before. Lord Thomas Raynor had died in England, leaving no children, and his one brother and wife had many years before gone to America. Detectives had found that the steamer they sailed in had been wrecked, but that a child was saved. The child proved to be Elsie Raynor. When she was told that she was heiress to one of the largest estates in England, she did not seem very much elated, for she said:

"I shall have to leave the only father and mother I have ever known."

Elsie returned with the gentlemen to England, having prevailed upon Ben and his wife to spend the remainder of their lives with her.

Elsie was presented at court, and after a season in London was married to a rich count, and Ben's wife lived to dance Elsie's little son on her knee, and say:

"God bless Elsie's little boy."

He Danced at Her Wedding.

I danced at her wedding last night,
And none could have guessed my emotion
As I saw her a bride—her on whom
I had lavished a lifetime's devotion.
I danced at her wedding. Why not!
Having lived through the scene at the altar,
When the knot was tied fast for all time,
Do you think that my courage would falter?

I danced with as lightsome a step,
With a face as unmoved as the next one.
He must be a fatuous fool
Who in crisis like this could expect one,
Though a tumult were raging within,
To betray to onlookers his passion;
I don't wear my heart on my sleeve—
That sort of thing isn't my fashion.

I danced—so did she. Though I'll swear
For a fact that I hardly know whether
I stood on my heels or my head
When we went wildly whirling together.
When her breath was as sweet on my cheek
As the blossom of orange she carried,
We danced till folks said 'twas bad taste,
Since I was the fellow she married!

ONIONS.

One of the healthiest vegetables, if not the healthiest one grown, is the onion, yet, strange to say, but few people use it as liberally as they should. Boiled onions used frequently in a family of children will ward off many of the diseases to which the little ones are subject. The principal objection to the promiscuous use of this vegetable is that the odor exhaled after eating is so offensive. A cup of strong coffee taken immediately after eating is claimed to be excellent in counteracting this effect. Although for a day or so after eating onions the breath may have a disagreeable odor, yet after this time it will be much sweeter than before.

For croup, onion poultices are used with success, providing the child is kept out of drafts, and a sudden chill avoided. The poultices are made by warming the onions in goose oil until soft, then putting them on the child's feet and chest as hot as they can be borne. Unless in very obstinate cases, when taken in time, the croup readily yields to the onions. This, although an old-fashioned remedy, is a good one, as any mother who has brought up a family of children can attest.

Onions are excellent blood purifiers, and for eradicating boils or any of the blood humors are very efficacious. They are good for the complexion, and a friend who has a wonderfully clear, fine complexion attributes it to the liberal use of onions as a food.

People suffering from nervous troubles are much benefited by using these vegetables frequently, either cooked or raw. When troubled with a hard cough, if a raw onion is eaten, the phlegm will loosen almost immediately, and can be removed with very little effort. A raw onion is made much more palatable, if, when eating, a little salt or pepper is used as a seasoning. Those troubled with wakefulness may insure a good night's rest, often, if just before retiring they eat a raw onion.

There are few aches to which children are subject as hard to bear and as painful as earache. One of the best remedies we know is to take out the heart of an onion (a red onion is the best if it can be had, although lacking this kind any other can be used) and roast it. When soft, so it can be handled without mushing, put it into the affected ear as hot as can be borne. Unless the cause is deeper than ordinarily, the pain will cease in a very short time and will not return.

A cough syrup in which onions form an important part is made by taking one cup of vinegar, one cup of molasses and one half cup of cut-up onions. Put on the stove and simmer about half an hour, or until the onions are soft. Then remove and strain. Take a teaspoonful of this frequently, when troubled with a cough, and unless very deep seated, the cough will not last long.

ARBORICULTURE IN NEW MEXICO.

Lawlessness in New Mexico seems to be on the increase. Various reasons and explanations have been given for the prevailing bad condition of society, but none of them are satisfactory.

In our humble opinion, the true cause is to be found in the fact that there are very few trees in that country, and what trees there are are not of proper size on which to suspend outlaws, hence many of them escape who otherwise would dangle.

A good tree for the frontier is the live oak, with its tough, wide-spreading branches and suggestively overhanging limbs. Trees of this type have a much greater moral effect in a frontier country than those who dwell in the busy haunts of men can possibly imagine.

It is perhaps a rough way of disposing of criminals, but desperate diseases demand similar remedies. It has been noticed in frontier countries where the live oak flourishes lawlessness is banished almost as effectually as malaria is by the eucalyptus. The lower limbs of the live oak should be trimmed off so as to give the fruit plenty of room to swing free.

It is with frontier settlements pretty much as it is with raising children. In the families where the mothers wear slippers, one of which she can easily remove and promptly apply to the slippery boys, they, the boys, cannot help growing up to be useful citizens.

On the other hand, in families where slippers are unknown and where buttoned or laced shoes are worn instead, it being a great deal of trouble to remove such shoes, discipline is lax and the boys grow up to fill legislative halls or penitentiaries.

The unslippered boy, in the absence of timely correction, grows reckless, finally runs for office or becomes a desperado, in either event bringing a disgrace upon his family.

What New Mexico needs is trees. Arboriculture will change New Mexico from a wild frontier country into a comparative paradise. —*Texas Siftings.*

PRACTICAL MIND-HEALING.

A Christian scientist, whose time was fully occupied in thinking about the unreality of disease, at two dollars per think, once treated a highly unappreciative man for a chronic nervous affection of a very painful character. After this man had depleted his purse by spending forty dollars without any improvement, he desired to know when he should begin to get better. Then the Christian scientist waxed wroth and said: "O you of little faith! Know that you would already have been cured, if you had believed me when I told you that your pain was not real. Pain and suffering do not exist; they are merely phantasms of the brain. There is no such thing as matter," continued he with such emphasis that it rattled some silver dollars in his pocket: "the only real thing is thought. All this is too subtle for your commonplace mind, and hence I can do nothing for you; you had better go and fill your coarse, unappreciative system with drugs."

Then a vision of forty dollars that had vanished, and of the pain that had vanished not, came before the mind of that long-suffering man, and he arose, and he took that Christian scientist, and he mopped the floor with him, smiting him sore upon the head and back, so that when he was through, congestion, abrasions, contusions, incipient echymoses epistaxis were among the phenomena presented by his Christian countenance. "There is no real suffering," said the unappreciative, with withering scorn. "The bruises on your alleged head are entirely hypothetical; the choking I gave you was simply an idea of mine; the pain which you feel is merely an intellectual phantasy; and your nose-bleed is only one of the ideal conceptions of the cerebral mass. Believe these things not to exist, and they vanish. Good-day, sir." And the patient departed.—*The Medical Visitor.*

FILIAL PIETY.

A remarkable manifestation of filial piety is displayed in the most recent issue of the *Imperial Pekin Gazette*, which contains a letter from the governor of Chinese Turkestan, in which he tenders his resignation of his office not on the ground of any disagreement with headquarters, or failure in administration, but solely because he is anxious to stay at home and to devote his entire time to nursing his aged grandmother. This, however, is more than matched by the emperor of Japan, who has just caused six of the leading journalists of his capital to be sentenced to terms of imprisonment ranging from two to four years for having maligned his ancestor, the Emperor Ilimmu, who reigned some 600 years before the birth of Christ.

GOLD IN AMERICAN TEETH.

A French scientist, Victor Mennier, has calculated after careful inquiries that American dentists insert about $450,000 worth of gold annually into the teeth of their customers. The *Scientific American* says, that making allowances for the increase of population, in less than 100 years American cemeteries will contain a larger amount of gold than now exists in France.

THE AIR WE BREATHE.

"Whom fire spares, sea doth drown,
Whom sea, pestilent air doth send to clay,
Whom war escapes, sickness takes away."

Modern science, if it has not greatly mitigated the horrors of war, has, at least, shortened its duration. The sea has lost some of its terrors, and many diseases, formerly considered incurable, now yield to medical treatment. But the "pestilent air" (Malaria), seems to hold its own. Read the testimony of patients who have been cured of malarial diseases.

Ironton, Mo., Dec. 26th, 1883.—Drs. Starkey & Palen:—"I will write for another of your Compound Oxygen Treatments. The last treatment was of great benefit, not only to me and my son, but to my daughter, fourteen years of age. She lay dangerously ill with typhoid malaria. I got so disgusted with the strong medicines, that I quit all before she was able to sit up, and gave her the Compound Oxygen, and she improved slowly at first, but in a short time was the picture of health, looking better than before."

Send for our brochure of 200 pages. It will give you scores of testimonials, a history of Compound Oxygen, its nature, discovery and results. Besides, it is an interesting work, thoughtfully, carefully and conscientiously written. Address the sole manufacturers of genuine Compound Oxygen, Drs. Starkey & Palen, 1529 Arch St., Philadelphia, Pa., or 120 Sutter St., San Francisco, Cal.

PERFORMING CATS.

Those persons who believe cats to be incapable of profiting by education would change their opinion if they could see the exhibition of performing cats in Paris, France. The skill and docility of the little animals are truly wonderful, and would, even in dogs, be considered a proof of great intelligence. The cats are concealed in two small wooden houses or kennels, which stand opposite each other, with a row of fifty chairs between them. The performance begins by the trainer tapping on the roof of one of the houses. Immediately a cat comes out of the door, and, after being stroked and patted by its master, leaps to the top of the first chair and then goes lightly and gracefully from one chair to the next, stepping only on the backs, until it reaches the other house, into which it retires. Each cat does this in turn, and then two cats cross the chair-bridge in opposite directions, one going over the tops as before and the other passing along the horizontal bar just below.

Long, wooden planks are then laid over the chair-backs, and a number of wine-bottles placed in a row at short intervals, and the cats wind swiftly in and out between the bottles without missing one or knocking one over. A still greater difficulty is presented by a small, wooden disk being put on the top of each bottle and a cat stepping from one to another, while other cats follow the serpentine walk among the bottles below. Chairs and planks are then removed and a number of trestles set up between the two houses. The cats leap from one trestle to another with the precision and agility of a circus-rider. A large, wire hoop, wrapped in tow which had been soaked in alcohol, is held up and set on fire, but the procession of pussies, nothing daunted, leap through the flames obediently. Tight-rope dancing is the next performance, and a number of live, white rats placed on the rope receive no attention whatever from the cats.

A GOOD SUBSTITUTE.

If one has no cedar chest to store woolens in, a very good substitute is a trunk or flour-barrel. The barrel should be well washed, dried and lined with newspapers. These are pasted in, using thick, flour paste, with a large spoonful of alum added to a quart of paste. Cover every place on the inside of the barrel. Cleat the cover together and paste paper on the inside. The woolens should be thoroughly brushed and sunned, carefully folded and laid in. When the barrel is full, the cover should be pressed down, a stout manilla paper put over the top, coming down well around the barrel, tied down with twine, and pasted so as to fit close. Woolens may be kept securely in this way. The great thing is to sun and thoroughly brush the garments, so that if moths are already there to get them out, and then pack securely.

The long fur or plush garment may be put into a calico bag the length of the garment, a patent garment holder put in at the neck, the bag slipped on from the bottom part, drawn closely at the top and tied, then sewed around the wire loop of the holder. Have a row of hooks put up in the closet very near the ceiling, so that the garments hang full length, and come out in the fall with never a wrinkle. This leaves room below them for another row of hooks for shorter garments.—*Good Housekeeping.*

OUR LOST.

There's a tender spot in the heart of almost every living person sacred to the memory of some loved one who has gone on before. It may have been father or mother, sister or brother, husband, wife or child, but the spot is there, and in the first bitter hours of our bereavement how very, very tender and sore it is. The slightest touch upon that spot, by word or thought, will cause inexpressible pain, and we think as we feel the gnawing anguish at our hearts, the bitter, burning pain will never cease, and perhaps long and pray for death ourselves to end our sorrow and misery and reunite us with the loved one. But time passes on. The necessities of living occupy our thoughts, and gradually, at each recurring time the thought of our loss strikes us, the blow is less severe, the pain less sharp. We never cease to mourn, we never forget our dead, but we can think of them in a tender, loving, even hopeful light. We remember every good and lovable quality, and if they possessed others, we never think of them, and gradually we bring ourselves to think and believe they were perfect, and we cease mourning so bitterly, and only a sad, loving, tender recollection remains.

REAL NAMES OF INDIANS.

The Indians have a neat way of fixing it. This Rain-in-the-face, Spotted Tail, Man-afraid-of-his-horses, is good enough to palm off on the whites, but each Indian has another name the whites never hear. First, he is named after his mother's gens or family. There are only half a dozen each. Snake, Wolf, Turtle, Bear, Eagle and so on. You remember how, in "The Last of the Mohicans," the young Delaware chief was found to have a tortoise tattooed on his breast; that gave his family. He was a Turtle, just as the bulk of the Scotch are divided into a few clans, the Stewarts, Campbells, Camerons, McGregors and others. To the Indian's family name is attached another, but it would be bad medicine to have it spoken outside the family circle, and give some of his enemies a chance to work spells and hoodoo him. The Spotted Tail business is a nom de chasse, de guerre, or de toot, which gets hitched on in later life.—*Washington Post.*

ANCIENT FEET.

A noticeable thing about the statues found in our museums of art, and supposed to represent the perfect figures of ancient men and women, is the apparently disproportionate size of their feet. We moderns are apt to pronounce them too large, particularly those of the women. It will be found, however, that for symmetrical perfection these feet could not be better. A Greek sculptor would not think of such a thing as putting a 9-inch foot on a 5½-foot woman. Their types for these classical marble figures were taken from the best forms of living persons. Unquestionably, the human foot, as represented by these old sculptors, was larger than the modern one, and, in fact, the primitive foot of all people of whom we have record, either in painting or statuary, is larger than the restricted foot of modern times. The masculine foot, forming an approximate average of four different countries, was about 12 inches long. This would require at least a No. 12 or 12½ shoe to cover it comfortably. The average masculine foot to-day is easily fitted with a No. 8½ shoe, and is, therefore, not above 10.7-16 inches. Now, by the old Scriptural rule of proportion, a man 5 feet 9 inches in height should have a foot 11½ inches long, or one sixth his height. It was of no great consequence what size sandals he wore, but he would be required to have a modern shoe of at least 10½ for a minimum fit, or a No. 11 for real comfort. For women, allowing for the difference in the relative size of the two sexes, which was about the same then as now, a woman of 5 feet 3 inches in height would have had a foot 10 inches long, requiring a modern shoe—it ought to be spoken only in a whisper—No. 6 as the most comfortable for that foot, or a No. 5½ as the limit of the torture. The reason for the difference between the old classical foot and the modern one is obvious. Restriction is what has done it.—*London Shoe and Leather Reporter.*

LET US TRUST.

Every day and every hour there appears in the lives of most of us mysteries which we cannot fathom, problems which we cannot solve. Let us trust where we do not understand; let us not look backward too much to our losses, and question why we were so bereft; nor earthward to our crosses, and ask why we are so tried; but rather onward to the future, which is in God's hands; onward and upward to the blessed time when those that are faithful and endure unto the end shall be saved from all perplexity and death forevermore; shall see no longer through a glass darkly, but in the sunshine of God's presence shall see face to face, shall know as they are known.

REMEDY FOR ROACHES.

Take three pounds of oatmeal or meal of Indian corn, and mix it with a pound of white lead, moisten with treacle so as to form a good paste, and put a portion down at night in the infested building. Repeat for a few nights alternately, and in the morning remove the paste and the corpses to a convenient place.

SUGAR CANE IN FLORIDA.

In Florida sugar cane grows luxuriantly without fertilizing, and the average cost of preparing and planting a sugar crop there is $10 per acre, as compared with $18 in Cuba and $24 in Louisiana.

Our Household.

GRANDMA'S WEDDING DAY.

When we were merry children, eyes of blue and hair of gold,
We listened to a story by a sweet-faced lady told;
Yes, in the twilight of her life, when she was old and gray,
We loved to hear the story of grandma's wedding day.

There was a lack of bridal gifts—no gold and silver fine,
No jewels from across the sea, upon her brow to shine;
A man in homespun clothes stood up and gave the bride away—
For all was sweet simplicity on grandma's wedding day.

There was no surpliced minister, no bell above them hung,
They stood upon the forest sward—this couple, fair and young;
And when the parson called them one and wished them years of bliss,
The groom received his only gift—a soft and holy kiss.

A cabin in the forest stood to welcome home the pair,
And happy birds among the trees made music on the air;
She was the reigning backwoods belle—the bride so fair and gay—
And this is why the birds were glad upon her wedding day.

Thus life began for grandma, in the forest dim and old,
And where she lived a city stands, with stateliness untold;
She told us how the Indian came the settler brave to fight,
And how she rocked the cradle to the wolf's long howl at night.

The cradle was an oaken trough, untrimmed with costly lace,
But in it nestled, now and then, a bright, cherubic face;
And grandma was as happy then as though a mansion grand
Above her rose like some we see throughout our lovely land.

I cherish now a lock of hair—'tis not of silver gray—
She clipped it in the sunlight fair, though years have passed away;
It is a tress of grandma's hair, as bright as when she stood
And blushing took her bridal vows within the pathless wood.

On yonder hill, this golden morn, she takes her dreamless rest;
The wrinkled hands, so often kissed, lie crossed upon her breast;
And gently on her finger, ere we laid her form away,
We placed the simple ring she wore upon her wedding day. —*T. C. Harbaugh.*

HOME TOPICS.

Care of the Eyes.—When we think how careless most people are of their eyesight, it is a wonder that it is not oftener lost or impaired. Children are sent to school, as a rule, when they are six years old. School-rooms are often poorly lighted, having windows on two sides, sometimes only on one. Much of their first work is slate work, and where, as is often the case, the teacher is young and thoughtless in regard to the physical well-being of her pupils, the eyes are strained and irreparably injured.

The general health affects the eyes, and one should be very careful about using them much when recovering from illness which has left them weak. Many people injure their eyes by reading in the twilight. The moment the eyes are tired, and one feels a disposition to rub them, they should be rested. Bathing the eyes with water as hot as can be borne is the best home treatment that can be given them, but this ought not to be done just before going out into cold air.

When the eyesight begins to fail, it is wrong to put off the wearing of glasses. I knew one lady who was troubled with severe headaches; at last, some one suggested that she try wearing glasses. She did so, and her headaches were cured.

Cold Cream.—If you are troubled with chapped hands or lips, you will find cold cream an excellent remedy. Take one ounce of white wax, seven ounces of fresh cocoa butter, fifteen grains each of balsam of Peru and benzoic acid; put these in a bowl and set it in a pan of hot water until melted, then strain and add any perfume that is liked. When cool, stir in two drachms of glycerine and put it into little glasses or china pots for use.

Home Economies.—With the average housekeeper, it is far easier to save a dollar than to earn it, and it is the little things that in the end count up to an amount which few can afford to waste. To some people, this close watching and saving has an appearance of stinginess, but economy can never be that. It is by wasting nothing that we may be generous. In a letter from a friend, she told me what she had been doing, and among other things was "turning sheets and pillow-slips." I had often turned sheets, but had never thought of turning pillow-slips, so it may be a new idea to some one else. Rip the seam at the bottom of the pillow-slip, fold it the other way, sew up the bottom again, and it is done. Napkins are apt to break first at the corners, where they are pinned to the clothes-line; by trimming them off and hemming again, they will last for some time, and only be a little smaller. Stair carpets should be taken up as soon as they show the least sign of wearing on the edge of the step, and slipped so that the worn place will come at the back of the step. In the kitchen, there is even more chance for economy. A little rice left from dinner will, by the addition of an egg and bread crumbs, make croquettes for breakfast; bits of steak or roast beef, lamb or veal, or all together, can be put over the fire, cooked until very tender, the bones picked out and the meat chopped fine, seasoned well and packed in a bowl. If kept in a cool place, it will keep several days, and be ready for sandwiches, pates or croquettes. All the bits of bread can be dried in the oven thoroughly, rolled fine and put away in a tight, tin box. These crumbs will keep indefinitely, and be ready for use. Pieces of stale cake can be put in a dish with a little jam spread over them, and a soft custard poured over them, and make a nice dessert. These are but a few of the many ways in which savory dishes may be made and economy practiced at the same time.

The Grange.—As longer evenings come, and the heavy work of the farm, indoors and out, begins to slacken, there is more time for recreation, for social enjoyment and education. In the effort to embrace the comforts and attractions of our farm homes, and to develop a higher and better manhood and womanhood among ourselves, I am sure the grange is doing a noble work. It was a wise provision of the order that no grange can be organized or exist without women. With the establishment of the grange began the emancipation of woman from the unceasing, monotonous round of household duties. A more social life has been inaugurated. It has been well said that "the work of the subordinate grange is the connecting link between the home duties at the fireside and the more public duties of our country."

The grange has not only proved an instructive place, but one well fitted for awakening thought and promoting intellectual and social progress. More than this, it has paved the way for more real rest, that rest which always comes from change. Social gatherings are especially restful to those whose every-day duties are monotonous. In the grange, we are led out of ourselves and our wonted channels of thought, led to think of others, to give as well as receive helpful words. Let us then help to build up the grange, and to make it the enabling, uplifting agency that its founders intended it should be, that not only we, but our children and our children's children may reap its benefits.

"The smallest wave of influence set in motion,
Extends and widens to the eternal shore."

Maida McL.

AFTERNOON DRESS.

The simplicity of our illustration will commend itself to every woman. Every neat housewife desires a dress for afternoon wear, sufficiently dressy in appearance to look well among her other home surroundings. The material of this need not be expensive, though often better service can be got out of a soft material costing fifty cents and over, than the cheaper materials that are apt to be stiff or wiry and contain cotton, which will give a cockled look to the material upon contact with damp air.

The back is simply plaited full toward the back from the sides, and the front draped just a little at the sides to do away with a stiff, straight look.

The waist, made over a tight-fitting lining, is given a draped effect also, finished from the side seams to the front with ribbon and bows, which can be either silk or velvet ribbon. A bow also trims the well-shaped, mutton-leg sleeve, which is also buttoned down the inside seam of the sleeve, or the sleeve can be made to pass the hand through and the buttons put on for ornament. Fancy bone buttons sewed through and through are very much used on the fall dresses, as ornamental and for closing the waist.

It is to be hoped the days of that diabolical hook and eye that never would stay closed are over, and relegated to the box of antiquities, where it should have remained.

The neck is finished with softly-plaited

wide footing, lace or crepe lisse, the latter, though, being so fleeting and not capable of being laundered is not recommended.

Very few of our present-day women realize the softening, beautifying effect of soft, falling laces at the neck, and that it should be white goes without saying.

In the high, straight collar of the dress material, finished with a tie of some colored ribbon around the neck, there was little, if any, beauty to commend itself to a dainty woman, for one day's wear would soil it, and no matter how carefully done, a ribbon shows when it has been washed and its first beauty is over.

I look with loving admiration over a box of exquisitely made lace collars, which were the pride of my girlhood days, and wish they would come back again. But with it would have to come the dainty hand sewing I was taught to do, and which it seems impossible to teach the present-day girls; they seeming to think that in the present day of cheap machine lace at fifteen cents a yard, which occasions little loss if burned when soiled, that it is really time lost to make any kind of neckwear of real lace, and then, with care, wear it for years. I hope my box of laces will not fall into such vandal hands. Christie Irving.

A DAUGHTER'S EARNINGS.

In our active, ambitious state of society, every young woman feels a wish to be financially independent. Perhaps there is no class of articles more eagerly read than those about "How Women Can Make Money." All a young girl's accomplishments are cultivated or neglected in exact relation to the idea that "there is money in it."

In restless quest for money, we often lose sight of things which have a more precious value, and for which no cash could compensate. No one can more rejoice than I do when I see a girl aspiring and energetic, improving her gifts, and claiming for herself a high social position, but no one can more heartily regret the vague discontent which haunts so many young women, blighting their beauty, spoiling their dispositions and making them sore plagues to their parents, instead of the blessings they should be.

However, the question is not one-sided. The parent owes a great deal to the child for whose existence he is responsible, and, although I have often heard young mothers rejoice that a new baby is a girl, "because girls are so much easier trained than boys," I have often thought, "But it is harder to provide for the happiness of girls."

The reason for the difference is easily seen. Boys like an outside life, and it is easily found for them, and nearly every business they undertake brings them in contact with growing influences. It seems natural for a boy or man to start out from home after breakfast. If he has no work to take him out, he will go somewhere to loaf. Just the opposite is true with girls. The activity which best suits them is domestic, and I think most women will admit that it is a great cross to have to go from home on a daily duty.

I know scores of girls who say that really they like housework better than any other kind, "but there is no money in it," so they grow uneasy, they want the money (not *money*, of course, but the freedom it gives). They go from home to be teachers or clerks, and there is waste of precious material on all sides.

The solution of this trouble is proper appreciation of the daughter at home. According to our American ideas, that home is the happiest which can do without the "hired girl," but daughters who fill this place, and more than fill it, complain that they do so *without the wages*. Just here is the trouble. If a daughter gets two dollars a week (a moderate estimate of what would have to be paid to a servant), that is $104 per year. Her board, at $5 a week, is $260 per year. Her leisure, when she can do much of her own sewing, is worth enough to raise her earnings to $400. The home happiness, the calm rest-feeling, the healthful habits of such a life are worth what cannot be counted in dollars, and we believe such a just financial arrangement would be appreciated by any sensible girl and give contentment to many of even superior ability.

It is, after all, that small sum, $104 in cash, which makes the plan satisfactory. A girl can do a great deal with that, and most of them prefer to do their own spending or saving. To have one's personal expenses to manage gives amusement and experience.

The father should not think his daughter well treated because he boards her and gives her occasionally a new dress, but, on the other hand, a girl should not lose sight of the value of her home privileges.

The wife's empty pocket-book is another evil against which we might militate, but, if a wife hasn't grace and sweetness enough to get herself well provided for, it is difficult for a stranger to advise her.

I know a fine woman who has been successfully married twice. Her second husband was well-to-do, and I have heard her say that when he courted her she told him—you know a woman can talk pretty plainly when a man courts her—"I hesitate about marrying again for financial

reasons. This is sure, I will never ask a man for money, and what little bit I have I shall not use for household expenses." Of course, he made her generous promises, and, what is better, he kept them. She said that every Monday morning of their married life, without a word, he laid $25 on a certain corner of a certain mantelpiece. Only once did she go to the accustomed corner to find it empty, but very soon after she received a message that he had forgotten, but he would "make it all right."

Not every man could afford so much, but a few dollars, according to circumstances, will have the same delightful effect. I tell you, a plan like that will make the domestic machinery run like magic! KATE KAUFFMAN.

A BROAD, OPEN LACE.

Cast on 15 stitches. Knit across plain.

First row—Sl 1, k 1, o 4 times, n, o and n five times, k 1.

Second row—Sl 1, k 12, p 1, k 1, p 1, k 2.

Third and fourth rows—Knit plain.

Fifth row—Sl 1, k 1, o 5 times, n, k 1, o and n six times, k 1.

Sixth row—Sl 1, k 15, p 1, k 1, p 1, k 3.

Seventh and eighth rows—Knit plain.

Ninth row—Cast off 7 stitches, begin at first row, k 1, o 4 times, n, etc.

Abbreviations used.—K, knit; o, over; sl, slip; p, purl; n, narrow.

ELLA McC.

CHILD'S FANCY KNITTED SOCK.

OAK-LEAF PATTERN.

Use Starlight three-thread saxony yarn, or Florence knitting silk. Four No. 18 steel needles.

Cast 32 st on the first needle, 24 st on the second needle, 24 st on the third needle, 80 in all.

Knit in ribbing, 3 st seam, 5 st plain, for 30 rounds.

First pattern round—M 1, sl 1, n, pass sl st o, m 1, 5 pl and repeat.

Second round—Pl knitting.

Third round—Same as first round.

Fourth round—Pl.

Fifth round—Like first round.

Sixth round—Pl.

Seventh round—3 pl, m 1, sl 1, 1 pl, pass sl st o, 1 pl, n, m 1 and repeat.

Eighth round—Pl.

Ninth round—M 1, sl 1, n, pass sl st o, m 1, 1 pl, m 1, sl 1, n, pass sl st o, m 1, 1 pl and repeat.

Tenth round—Pl.

Repeat these ten rounds. The first decrease occurs in the forty-fifth round of the sock (in knitting the fifth round of the pattern). With a thread of cotton mark the line of straight stitches in the middle of the first needle, and keep that line for the back of the leg as if it were a seam st; on each side decreasings are to be made as follows, till two patterns are entirely knitted out: In this round (the forty-fifth round), when 9 st before the s st, m 1, sl 1, n, pass sl st o, m 1, 3 pl, n, m 1, sl 1, n, pass sl st o, m 1, sl 1, 1 pl, pass sl st o, 3 pl, m 1, and continue the pattern as before.

Forty-seventh round—When 8 st before the s st, m 1, 3 pl, m 1, sl 1, 1 pl, pass sl st o, n, m 1, 3 pl, m 1, sl 1, 1 pl, pass sl st o, n, m 1, 3 pl and continue in pattern.

Forty-ninth round—When 8 st before the s st, m 1, sl 1, n, pass sl st o, m 1, 1 pl, m 1, sl 1, n, pass sl st o, m 1, sl 1, n, pass sl st o, m 1, k 3 tog, m 1, 1 pl, m 1, sl 1, n, pass sl st o, and continue in pattern.

Fifty-first round—When 7 st before the s st, m 1, sl 1, n, pass sl st o, m 1, 3 pl, m 1, sl 1, n, pass sl st o, m 1, 3 pl, m 1, sl 1, n, pass sl st o and continue in pattern.

Fifty-third—Like fifty-first round.

Fifty-fifth round—The same.

Fifty-seventh round—When 7 st before the s st, m 1, 3 pl, m 1, sl 1, 1 pl, pass sl st o, 1 pl, sl 1, n, pass sl st o, 1 pl, n, m 1, 3 pl and continue in pattern.

Fifty-ninth round—When 6 st before the s st, m 1, sl 1, n, pass sl st o, m 1, 1 pl, m 1, sl 1, 1 pl, pass sl st o, 1 pl, n, m 1, 1 pl, m 1, sl 1, n, pass sl st o and continue in pattern.

Sixty-first round—When 6 st before the s st, m 1, sl 1, n, pass sl st o, m 1, 2 pl, sl 1, n, pass sl st o, 2 pl, m 1, sl 1, n, pass sl st o and continue in pattern.

Sixty-third round—When 5 st before the s st, m 1, sl 1, n, pass sl st o, m 1, 5 pl, m 1, sl 1, n, pass sl st o and continue in pattern.

Sixty-fifth round—The same.

Sixty-seventh round—When 5 st before the s st, m 1, 3 pl, m 1, sl 1, 1 pl, pass sl st o, 1 pl, n, m 1, 3 pl and continue in pattern.

Sixty-ninth round—When 5 st before the s st, m 1, sl 1, n, pass sl st o, m 1, 1 pl, sl 1, n, pass sl st o, 1 pl, m 1, sl 1, n, pass sl st o and continue in pattern.

Seventy-first round—When 4 st before the s st, m 1, sl 1, n, pass sl st o, m 1, sl 1, n, pass sl st o, m 1, sl 1, n, pass sl st o and continue in pattern.

Seventy-third round—When 3 st before the s st, m 1, sl 1, 1 pl, pass sl st o, 3 pl, n, m 1 and continue in pattern.

Seventy-fifth round—The same.

Seventy-seventh round—When 3 st before the s st, m 1, 2 pl, sl 1, n, pass sl st o, 2 pl, m 1 and continue in pattern.

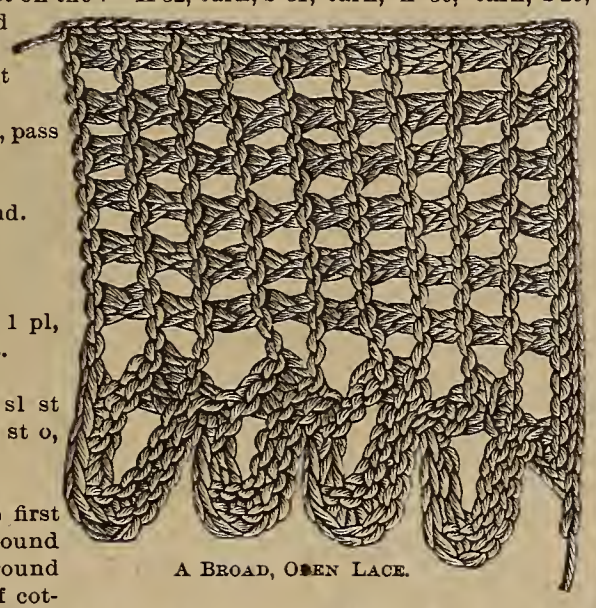
Seventy-ninth round—When 2 st before the s st, m 1, sl 1, n, pass sl st o, and o the 1 st so formed sl the 2 st on the left-hand side (reducing the 5 center st to 1 st), m 1, and continue in pattern. Knit a plain round 64 st in the round. Now the pattern comes in correctly as in the first round. K straight on in pattern on these 64 st for the ankle till you can count 12 leaves down the leg (120 rounds knitted).

FOR THE HEEL.

After knitting the s st, k 16 st pl; turn the work, sl the first st, s 32 and continue a pl row and a s row on these 33 st, slipping the first st in every row till 18 little rows are done; the 31 instep st remain in the meanwhile upon two needles till again wanted.

TO TURN THE HEEL.

K 32, turn, s 31, turn, k 30, turn, s 29,



A BROAD, OPEN LACE.

and so on, 1 st less in each row (still always slipping the first st) till you come to s 11, then in each succeeding row k 1 st more and with it pick up and knit in a thread of the sock to prevent a small hole being formed till the original number, 33 st, appear. This is a Niantic heel.

K pl along the 33 st, and on the same needle pick up, and as you pick up k 10 st along the side of the flap; on another needle k all the instep st in pattern, and on another needle pick up and k 10 st along the opposite side of the flap, and k 16 st off the top of the heel; you now have 26 st on this, which is the first foot needle, 27 on the second foot needle and 31 on the instep needle. K the second foot needle pl. K pattern along instep needle.

FOR THE GUSSETS.

* On the first foot needle, k 1, sl 1, k 1, pass sl st o, k pl to within 3 st of the end of the second foot needle, n, 1 pl; k pattern on instep needle. K one round pl on foot and pattern on instep. Repeat from * till reduced to 62 st in the round; then k straight on till 7 leaves are knitted down the instep.

FOR THE TOE.

You still have 31 st upon the instep needle, and 31 st are divided upon the two foot needles.

* On the first foot needle, k 2, sl 1, 1 pl, pass sl st o, k pl to within four st of the second foot needle, n, 2 pl; on instep needle, k 2, sl 1, 1 pl, pass the sl st o, k pl to within 4 st of the end of the needle, n, 2 pl, k 1 pl round; repeat from * till reduced to 22 st. Sl the 11 foot st on one needle, hold it parallel with the instep needle and bind off by knitting together a st from each needle.

ABBREVIATIONS: O, over; n, narrow; k, knit; s, seam; sl, slip; pl, plain; m, make; st, stitch.

EVA M. NILES.

CAKE ICING.

[*Continued.*]

BOILED ICING.—Dissolve one pint of sugar in three tablespoonfuls of water and boil until brittle. Beat the whites of four eggs, pour over the hot sugar and stir until cool; flavor and beat; spread before the icing gets stiff and cold.

ALMOND ICING.—Take three cups of sugar, one pound of blanched almonds, pounded to a paste, and flavor with extract of rose. Beat the whites of three eggs and stir with the sugar and almonds.

CHOCOLATE ICING.—Melt three ounces of chocolate, dissolve in a little water, boil in two cups of sugar, and stir in the whites of three eggs. Flavor with vanilla.

ECONOMICAL ICING.—Take one teacup of sugar, add milk to mix a stiff paste, set on the stove and stir until it boils, then let boil five minutes, flavor, set in cold water, and beat until thick and smooth.

WATER ICING.—Take two cups of sugar and add water to form a stiff paste, beat well, add a pinch of cream of tartar and a teaspoonful of extract of lemon. Spread on cake and let dry.

GELATINE ICING.—Dissolve two teaspoonfuls of gelatine in a teacup of cold water, strain and thicken with powdered sugar, flavor, mix well and spread over cake.

CORN STARCH ICING.—Dissolve two tablespoons of corn starch in a teacup of warm water, thicken with sugar, flavor and spread on cake. Set aside to dry and harden.

CREAM CHOCOLATE ICING.—Take two tablespoonfuls of cocoa, dissolve in half a teacup of water, mix in powdered sugar until a thick paste is made. Stir in two tablespoonfuls of rich cream, beat until smooth and thick.

ELIZA R. PARKER.

SAVING PUMPKINS.

In laying up the store of winter pumpkins and squashes, care should be taken to select those which are fully ripened, and with no defects or bruises on the rind. If the shell is fully matured and hardened, the meat will be much better protected and keep longer. Also, be careful to pick and put away with the stems on, if possible. Experience has shown that point to be an aid in their keeping qualities.

In storing, select a place which shall be dry and as cool as possible. Dryness of atmosphere is the most essential point of all; and for long keeping, never put a pumpkin or squash in a cellar, unless you have one that is drier than a room above ground. We have a chamber over the kitchen, where there is no danger of frost, that we use as a store-room, and our last pumpkin was cut the last of April as sound as a dollar. Another squash was laid by to see how long it would keep, and was all right in May, but was then forgotten, and in June, when it was remembered, it had begun to decay enough so that it tainted what portion was yet solid, and the whole was thrown out. But if pumpkins and squashes can be kept fresh until April and May, no one ought to complain, for pie-plant and berries soon come then to furnish us with pie timber.

It is a good plan to cook and dry pumpkins that do not look as if they would keep long. A can of dried pumpkin is a very convenient article to have in the house.

Cook the pumpkin in the usual way, and then spread on tins or plates and place in the tin oven to dry, stirring quite often. Care should be taken that it does not become scorched, as that makes it bitter. Dry as quickly as possible without burning, as it is quite apt to sour if the process is too long. If necessary to be left over night in a half-dried state, take away from the fire and set in a cool place until morning. Keep in tight cans or paper sacks, when thoroughly dried, as the flies are very fond of nesting in the pumpkin if they can get the least opportunity. One poor, stray fly can make lots of mischief, sometimes.

When required for use, take a tablespoonful of dried pumpkin and soak in a pint of water over night; then cook until there are no lumps left, adding more water if necessary. Then make the pie in the usual way. It can hardly be told from a fresh pumpkin pie. GYPSY.

KOUMISS.

This is a pleasant drink. To make it, take eight cups of sweet milk, two cups of warm water, two tablespoonfuls of white sugar, one half-inch-square dried yeast cake. Let stand three hours in a warm place and stir often. Put into quart bottles, fill two thirds full, cork with new corks and wire them down. Lay the bottles on the cellar bottom on their sides. Let lay thirty hours or more; before using, shake well.

WE desire to call the attention of our readers to the meat chopper advertisement on our back page. These choppers are now in use in all parts of the world, and undoubtedly excel anything of the kind ever invented. The proprietors of FARM AND FIRESIDE have had these choppers in use at their homes for several years, and can therefore speak knowingly of them. Of their merit and utility there can be no question. They do all that is claimed for them, and no kitchen is complete without one. We advise our readers to send for catalogue, which is furnished free by the manufacturers. See advertisement on last page.

Our Sunday Afternoon.

HEREAFTER.

WHEN we are dead, when you and I are dead,
Have rent and tossed aside each earthly fetter,
And wiped the grave-dust from our wondering eyes,
And stand together, fronting the sunrise,
I think that we shall know each other better.

Puzzle and pain will lie behind us then;
All will be known and all will be forgiven.
We shall be glad of every hardness past,
And not one earthly shadow shall be cast
To dim the brightness of the bright, new heaven.

And I shall know, and you as well as I,
What was the hindering thing our whole lives through,
Which kept me always shy, constrained, distressed;
Why I, to whom you were the first and best,
Could never, never be my best with you.

Why, loving you as dearly as I did,
And prizing you above all earthly good,
I yet was cold and dull when you were by,
And faltered in my speech or shunned your eye,
Unable quite to say the thing I would;

Could never front you with the happy ease
Of those whose perfect trust has cast out fear,
Or take, content, from Love his daily dole;
But longed to grasp and be and have the whole,
As blind men long to see, the deaf to hear.

My dear love, when I forward look and think
Of all these baffling barriers swept away,
Against which I have beat so long and strained,
Of all the puzzles of the past explained,
I almost wish that we could die to-day.

—*Susan Coolidge.*

FINDING FAULT.

DOES it pay to find fault? You who are the wise keepers of houses, and the dear keepers of hearts, does it pay? There are heavy burdens to bear all day—manifold cares from the rising to the setting of the sun—blunders made by those who should have known better, many a thing to annoy; but don't make cold and cheerless the home atmosphere by finding fault. There is no blight more deadly in its tendency, nothing that can more surely disturb the harmony of home, nothing that will recoil more quickly upon yourself than this habit of fault-finding.

Not that errors should go unrebuked, or mistakes uncorrected; but note down in your memory, and when the work and care and tumult of the day are all over, then call the little ones and the larger ones around you and tell them soberly but kindly of the wrong doings, and see if you are not amply repaid for your forbearance by the smile and the tear and the little word of contrition and promise of amendment. You will be a thousand times happier when you lie down to sleep, and a sweet forgetfulness has settled over your little flock, than you would have been had the blue eye now closed been filled with bitter tears that overflowed at unkind censure, or had the little golden head drooped under the shadow of your constant frown.

How fair and sweet and satisfying life might be to us all if we would forget to fret, and find fault, and complain. Don't save your words of praise and appreciation until it is too late. You love the little children—the dear little children! And if they do speak loud, and disturb the order of the house, don't find fault. It won't pay.—*Standard.*

TIME MEASUREMENT.

Why is our hour divided into sixty minutes, each minute into sixty seconds, etc.? Simply and solely because in Babylon there existed, by the side of the decimal system of notation, another system, the sexagesimal, which counted by sixties. Why that number should have been chosen is clear enough, and it speaks well for the practical sense of those ancient Babylonian merchants. There is no number which has so many divisors as 60. The Babylonians divided the sun's daily journey into 24 parasangs, or 720 stadia. Each parasang, or hour, was subdivided into 60 minutes. A parasang is about a German mile, and Babylonian astronomers compared the progress made by the sun during one hour, at the time of the equinox, to the progress made by a good walker during the same time, both accomplishing one parasang. The whole course of the sun during the fourteen equinoxial hours was fixed at 24 parasangs, or 720 stadia, or 360 degrees.

The system was handed on to the Greeks, and Hipparchus, the great Greek philosopher, who lived about 150 B. C., introduced the Babylonian hour into Europe. Ptolemy, who wrote about 150 A. D., and whose name still lives in that of Ptolemaic system of astronomy, gave still wider currency to the Babylonian way of reckoning time.

It was carried along on the quiet stream of traditional knowledge through the Middle Ages, and, strange to say, it sailed down safely over the Niagara of the French Revolution. For the French, when revolutionizing weights, measures, coins and dates, and subjecting all to the decimal system of reckoning, were induced by some unexplained motive to respect our clocks and watches, and allowed our dials to remain sexigesimal—that is, Babylonian—each hour consisting of sixty minutes. Here we see the wonderful coherence of the world, and how what we call knowledge is the result of an unbroken tradition of a teaching descending from father to son.—*American Analyst.*

DON'TS FOR THE SICK-ROOM.

Don't light a sick-room at night by means of a jet of gas burning low; nothing impoverishes the air sooner. Use sperm candles or tapers which burn in sperm oil.

Don't allow offensive matters to remain. In cases of emergency where these cannot be at once removed, wring a heavy cloth, for instance, like Turkish toweling, out of cold water, use it as a cover, placing over this ordinary paper. Such means prevent the escape of odor or infection.

Don't forget to have a few beans of coffee handy, for this serves as a deodorizer if burnt on coals or paper. Bits of charcoal placed around are useful in absorbing gases and other impurities.

Don't have the temperature of a sick-room much over 60°; 70° are allowable, but not advisable.

Don't permit currents of air to blow upon the patient. An open fireplace is an excellent means of ventilation. The current may be tested by burning a piece of paper in front.

Don't give the patient a full glass of water to drink from, unless he is allowed all he desires. If he can drain the glass he will be satisfied, so regulate the quantity before handing it to him.

Don't neglect, during the day, to attend to necessaries for the night, that the rest of the patient and the family may not be disturbed.

Don't ask a convalescent if he would like this or that to eat or drink, but prepare the delicacies, and present them in a tempting way.

Don't throw coal upon the fire; place it in brown paper bags and lay them on the fire, thus avoiding the noise, which is shocking to the sick and sensitive.

Don't jar the bed by leaning or sitting upon it. This is unpleasant to one ill and nervous.

Don't let stale flowers remain in a sick-chamber.

Don't be unmindful of yourself if you are in the responsible position of nurse. To do faithful work you must have proper food and stated hours of rest.

Don't appear anxious, however great your anxiety.

Don't forget that kindness and tenderness are needful to successful nursing. Human nature longs to be soothed and comforted on all occasions when it is out of tune.

THE VESTIBULED PULLMAN CAR LINE.

The Monon Route is the finest equipped line on the continent and affords choice of four daily trains from Chicago to the South via Indianapolis and Cincinnati, or via Louisville. For full information call on any ticket agent of the Monon Route, or address James Barker, Gen'l Pass. Agent, Chicago, Monon Block.

Queries.

☞ READ THIS NOTICE.☜

Questions from regular subscribers of Farm and Fireside, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Silk Culture.—F. E., Del Valie, Tex. You can obtain pamphlets on silk culture from the Department of Agriculture, Washingtou, D. C.

Stock Labels—Grade of Offspring of Grades.—J. R. E., Morristown, Ohio. You can get excellent labels for marking stock from C. H. Dana, West Lebanon, N. H.——The produce of a ⅞ sire and ¾ dam is a 13-16 grade. Take the half of each and add.

Tomato Rot and Tomato Worm.—D. B., of Tauuton, Mass., asks: "What ails my tomatoes? They rot when beginning to ripen. Also, does the green tomato worm change to any other form than a worm?"

Reply by Joseph:—Your tomatoes were afflicted with tomato rot or blight, a fungus disease. Try planting on new ground another season. The green tomato worm changes to a humming bird or hawk moth, a beautiful butterfly-like creature, which, in its flight about the flower beds, has some resemblance to a humming bird.

Okra and Pepper.—J. R. G., Brownsville, Tenn., writes: "What ails my plants? At first, they did well; but when fully developed, the leaves began to wither and die, and, at last, the whole stalks died down."

Reply by Joseph:—I am unable to determiue the cause from description. It may be fungus disease. The season has been a very favorable one for the developmeut of all sorts of fungi. Yet, I am inclined to think it more likely that insects, worms or grubs at the root, or, perhaps, borers in the stalk, are the cause of the troubic. This the inquirer might have ascertained by carefui examination of stalk and root.

Saltpetre for House Plants.—A "Lover of Flowers," of Wauioma, Wis., writes: "How much saltpetre should be put in a gallou of water to water house plants? Is tiils the common saltpetre used in curing meat?"

Reply by Joseph:—Use a heaping teaspoonful to the gallon of water, aud apply to the roots, not as a syringing, once every week or other week, according to the condition of plant, and whether stimulated to vigorous growth or held back. This is the ordinary saltpetre, or nitre, kept on sale at every drug store. Where handy, nitrate of soda, which costs but a fraction as much as the other, will answer equally weii. Sulphate of ammouia is also cheap and good.

Ground Made Bare by Grain Shocks.—J. B. B., Prestou, Ills., writes: "Why is it that the ground in the field, on which shocks of grain have stood for any length of time, remains bare of vegetatiou, and also moist and loose for the remainder of the summer and fall, whiie ali adjoining ground is covered with vegetation aud also hard and dry in dry weather?"

Reply:—Grain shocks smother out vegetation at a time of the year when few plants start to grow. Most of the weeds in wheat fields are aunuals, and start earlier than after wheat harvest. Ground shaded or muiched becomes loose and porous and in a condition to retaiu moisture for a louger period after raiu.

Mending Rubber Boots.—C. B., Opal, Va. In repiy to your query, we republish the following: Get some virgin rubber of your druggist, and aiso some patching. Put au ounce or two of the gum into three or four times its buik of benzine, cork tightly, and allow it to stand three or four days to dissolve. Wet the boot with benzine for an inch or more around the hole and scrape with a knife. Repeat this several times until thoroughly cleaned, and a new surface exposed. Wet the cloth side of the patching with benzine, and give one slight scraping, then apply with a knife a good coating of the dissolved rubber, both to the boot and the patch, and allow it to dry uutil it will not stick to your fingers, then apply the two surfaces and press or slightly hammer into as perfect compact as possible, and set away for a day or two before using.

Celery-Leaf Blight.—C. L. G., of Scottdale, Pa., wants to know the cause of rust on celery, and a remedy for it.

Reply by Joseph:—The cause of the rust is a fungus (Cercospora Apii), which develops in hot and dry weather and places. The first indication of its attacks appears as small, yellowish spots on the leaves. Later, the leaves turn yellow, then brown, and finally they die entirely. Planting in a moist and cool position, and shading, if necessary, is recommended as a preventive. The disease often takes quite a serious turn already in the seed bed. I think it is always advisable to spray the plants in seed bed, once a week, with the ammoniacal carbonate of copper solution, and, perhaps, once or twice after they are set out. Examine the plants you buy. Accept and set none that show the least indicatiou of being affected by rust.

Pond Muck as Manure.—J. E. C., of Buffalo Run, Pa., writes: "What is peat from a pond below my barn worth for cabbage and onions? The pond is now dry. The rains have carried much strength into it from the barn-yard, and the peat is formed from decayed 'sour' grass. Would it be better to mix it with compost or barn-yard manure?"

Reply by Joseph:—For very sandy or very clayey soils, or for soils deficient in vegetable matter, peat alone will make a good addition, correcting extremes and forming a strong loam retentive of moisture and fertilizing elements. Under all circumstances, however, it is better to make use of the muck or peat, after it has been thoroughly weathered and dried, as absorbents in stables and yards, or to compost it with stable manure, before applying it to the soil. It will then be equal, if not superior, to the best stable compost, and an excellent dressing for onions, cabbages, celery and other garden stuff.

VETERINARY.

Conducted by Dr. H. J. Detmers.

Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of Farm and Fireside, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 35 King Avenue, Columbus, Ohio

Grub in the Head.—R. R. G., Carson City, Mich. Your buck, very likely, has grubs (the larvæ of a fly, called Œstrus ovii) in the nasal cavities, the frontal siuusses, and, may be, in the ethmoid boues.

A Swelled Leg.—W. R. W., Roliin, Mich. The symptoms of great pain exhibited by your horse may be an indicatiou of au abscess formation. Let a competent veterinarian (but not a boss doctor) make a thorough examiuation, and then act accordingly.

The Cow Drools.—H. D., Burlingame, Kan. If there is nothing wrong in the cow's mouth, and if the sallvary glauds are normal and not injured or diseased, you will have to change the food, and feed nothiug that is mouldy, dusty, or contains acrid plants or substances.

Caked Bag.—E. W. F., Nevia, Ind. If the bag of your cow begins to cake before calving, you will in future have to feed less during the last four or five weeks your cow is with calf, or else you will have to milk her before she comes in. For further information I have to refer you to the answer given to inquiry headed "Garget," in this issue.

Swelling Under the Tail—A Poor Heifer.—B. I. O., Emmons, Minn. Have the horse examined by a veterinariau, and if he finds that the swelling can with safety be removed in one way or another, let him do it.—— As to your heifer, I have to give you the same advice. I do not see how you can expect me to make any diagnosis, if you do not give any description whatever.

A Roarer.—L. A., Minier, Ill. Uuless the roaring is very bad—in fact, so bad as to make the animal worthless—my advice is to do nothing. It is true, roaring can be cured by an operation, provided the roaring is caused by a paralysis of the recurrent nerve, the operation is well performed in every particular and the operator has good luck. If not all of these conditions are fulfilled, the operation, very likely, will leave the horse worse thau he was before. In all cases, his voice will be destroyed by the operation, because a part of the larynx has to be removed.

Caked Bag.—H. K., Westfield, Mass., writes: "I have a cow that has a caked bag. Please let me know, by return mail, what is best for me to do in her case."

Answer:—if you wish to have your inquiries answered by return mail, you must not forget to enclose a fee of $1; otherwise, your request will uot he complied with. No exceptions are made. For an answer to your question, I refer you to the answers given to inquiries headed, "Garget," "Inflammation of the Mammary Glands," etc., iu this preseut issue.

Wants a Rule for Measuring Horses.—N. H. C., Runnymede, Kan., writes: "I would like to know if there is any rule by which to measure a horse or a colt. Suppose I had a colt and another man had one so uear like it that the eye could distinguish no difference. Is there any ruie to measure them to tell which is the better one?"

Answer:—Such a rule as you desire is, for obvious reasons, an impossibility. Different brauches of service require differeut auatomical proportions, and besides that, breed, constitution, temperament and a good many other things come into consideration iu determining the value of a horse.

Inflammation of the Mammary Glands.—J. B. H., Dallas, Tex. I hardly think that the disease called milk-sickness occurs in Dallas or vicinity. It is more probable that the trembling, heaving, etc., had its source in an absorption of deleterious material from the diseased mammary glands, either through the veins or the lymphatics, and that in that way pyæmia, or, if you prefer, blood poisoning, was produced. If the cow has a good constitution, and receives good care and wholesome food, she probably will overcome it and be restored to health. If she is a great milker, she may require more frequent milking than twice a day. For further information I refer you to answer to query headed "Garget," in the preseut issue.

Is Always Poor—Wants the Mane to Grow.—F. W., Peosta, Iowa, writes: "What is the matter with my mare? She is always poor. She has good pasture and grain and very little work to do. When I drive her she always looks so gaunt. She has good life.——What will make a mane grow on a horse? I have a fine four-year-old horse, but he has no mane. His mane all came out when two years old. It is only two or three inches long now and don't grow."

Answer:—Poverty may have a great many causes; therefore, the best advice I can give you is, to have your mare examined by a good veterinarian, who will ascertain the cause aud tell you what to do.——There is no remedy.

Lampass—Lameness.—J. S. C., Rockford, Ala. Lampass is only an imaginary disease which has no existence in reality, hence, I cannot give you a remedy. Young horses, especially when kept on soft food, or on grass, and when changing their teeth, always have succuleut gums. It is natural and uormal, and don't require any treatment. Cases in which the gums are swelled, either digestive disorders, diseased teeth or injuries to the internal parts of the mouth constitute the cause. If in such a case the latter is removed, no further treatment is required.——As to the case of lameness, you will have to make an examination and find out where the lameness is, and what morbid changes are existing, before I can tell you how to treat it. If it is a partial luxation of the patella, you will find the desired information in recent numbers of this paper.

Lymphangitis.—M. M. F., Montague, Mich., writes: "What is the matter with my cow? We purchased her a year ago, but saw nothing wrong with her till a short time before calving, in May; then we noticed bunches on the inside of fore leg, near the hoof. They were opened, and a thick, yellow matter run out. Later, they gathered and broke, and I saw the same forming on the outside of the other leg, extending its whole length. They (the latter) don't seem to grow any, and the first haven't broken since June. At that time, and until recently, when I turned out the clabbered milk, a thin layer staid in the bottom, which was ropy, as I suppose it to be, with garget. Her appetite is good, she drinks well, and keeps in good condition, considering dry pastures, flies, etc."

Answer:—Lymphangitis in cattle is troublesome, but not a very dangerous disease. The abscesses, when they break, may be treated by dressing them with carbolic acid, and the strands formed by the diseased lymphatics with some iodine preparation—tiucture of iodine or an ointment of iodide of potassium (1:4 or 6)—but it is advisable not to expect too much of this treatmeut. Interual remedies are useless.

A Sore Eye.—W. K. V., Pamelia Four Corners, N. Y., writes: "I have a horse about twelve years old. About two weeks ago his left eye became sore or inflamed and the lids became swollen, so much so that they are nearly shut. I have made an examination and can find nothing in it at all. The eye discharges nothing but clear water and acts as though it was weak. The sight is not impaired."

Answer:—If you had examined a little closer, I am inclined to think you would have found some foreign body lodged somewhere beneath an eyelid. As it is, the best you can do is to employ a veterinarian to examine the eye and to treat it in accordauce with the result of his examination.

Chronic Inflammation of the Uterus.—R. M. H., Hamlin, Ky. Any mare in a condition like yours, for obvious reasons, should not be bred. If the disease is not too inveterate, you may succeed in affecting a cure by first carefully injecting into the uterus quite a large quantity of clean, warm water, of a temperature of 99 or 100 degrees Fah., so as to wash away all the morbid products. This done, you may inject once a day, for several days in succession, a pint or two of a solution of corrosive sublimate in pure, warm water (temperature, 99 or 100 degrees Fah.), but this solution must not be stronger than one part of corrosive sublimate to 1,500 or 2,000 parts of water. If you prefer, you may use instead of the corrosive sublimate solution a one per cent solution of pure carbolic acid. This injection should be made either with a rubber or a glass syringe, aud not with a metallic syringe.

Bloody Milk.—M. E. D., Red Bank, Pa., writes: "Can anything be done for a cow that gives bloody milk? Her milk has been bloody for about six weeks. No cause is known. The milk seems good when milked, but blood settles in the bottom when it stands. Is there any way she can be treated, or is there any cure for her, as she is a valuable cow?——How much milk ought a cow of that kind give at a milking?"

Answer:—Milk the cow gently, but often, so that her bag will never be expanded to the utmost, and see to it that she receives no food that is spoiled, or otherwise unsound.——You ask how much milk a cow like yours ought to give. Now, that question is a stunner. I wish you would ask something easier. It altogether depends upon the individuality of the animal, and upon the quality and quantity of food she receives.

Splint.—A. G. M., Calhoun, Ill. (1) A splint is caused by an unequal distribution of weight upon the metacarpal bones, hence, horses which are bow legged, or in which the *os multangulum* rests entirely upon the head of the inner metacarpal (splint) bone, are apt to get a "splint," because the fibrous ligament which unites the inner metacarpal or splint boue with the large metacarpal bone is in such horses exposed to an extraordinary amount of straining, and when overstrained, the inflammatory process setting in will spread to the periosteum, and thus a deposit of lime salts will take place. Thus the exostosis is produced. (2) A change in the position of the fore leg, sufficient to cause an equal distribution of weight upon the various parts of the carpal joint, if it can be affected, will, of course, reduce the strain, and thus an increase in the size of the splint will be prevented. A cure is an impossibility; still, if an increase is prevented, the exostosis constituting the splint, which at first is porous and spongy, and therefore comparatively large, will gradually undergo a process of eburnation, and thus become considerably smaller. It may even be reduced in size to such an extent that no elevation beneath the skin will be observed. (3) A splint does not cause any lameness, except when it first makes its appearance, or when it is situated so high as to extend into the carpal joint (fore knee). In the above I have endeavored to give you the answers asked for. If you do not understand them you will have to study anatomy. Space will not permit long-winded explanations.

Garget.—F. T., Calcutta, Ohio, writes: "While milking my cow, one evening, I found one quarter of the udder swelled, though not much inflamed. Next morning she gave no milk out of that quarter, but instead something like sweetened water. The quarter swelled, not large, but very hard, and up in the other quarters were small kernels or very hard lumps. The cow runs on pasture, is seven years old, dropped her third calf a few weeks ago, was in good condition aud hearty up to the time of ailment. Now she eats but little; she walks as if she had been foundered, and is sore in all her feet and limbs."

Answer:—In all such cases, in which the accumulated milk in the udder shows a tendency to coagulate (and this causes swelling and inflammation), frequent and thorough milking constitutes the remedy. The clots of coagulated milk act as a foreigu body, and must be removed, and thorough milking is the only thing that will and can remove them. If these clots are not removed, they will continue to cause more and more inflammation, aud all the consequences, such as exudation, suppuration and even gangrene are sure to follow. If the inflammation is already severe, it may be advisable to give to the cow large doses of cooling salts; say a pound of sulphate of soda and an ounce or two of saltpetre. External applications, no matter what they may be composed of, are not only useless, but even injurious, unless it is intended to stop the functions of the mammary gland, and to cause the affected part to become dry. In such a case, an ointment prepared of soft soap and camphor, 6:1, may be applied. Also in cases in which the mammary gland has already undergone irreparable morbid changes, external applications are advisable, and even surgical operations may be necessary, but in such a case it is advisable to call at once a veterinarian. In all cases in which a restoration to a normal condition is not excluded, very frequent (once every two hours) and very thorough milking is indispensable.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

POULTRY-HOUSE WITH WINGS.

An extended description of the illustration is unnecessary, so far as the exterior is concerned, only that we will state that the roof may be of shingles, tin or tarred paper, as preferred. In the ground plan, A A show the wings, there being no partitions, the object being to secure as much space on the floor as possible. B shows the nests, which may be as many as preferred; C the feed-box, D the roost, which may be a frame, made square, and placed in the center; E the dust-box, H a window (of any style), and K the door. The openings in the wings, near the top, have little platforms, upon which the hens may fly and enter, if they wish, as they will often attempt to fly out in that manner rather than walk out in the usual manner. The real object of the openings (which are at both ends) being to ventilate in the summer. The platforms are also of a size to fit the openings, should it be desired to close them at any time.

FEEDING FOR WINTER LAYING.

It will not conduce to winter laying if the hens are closely confined during the winter, and fed on grain principally. Now that the season when eggs will be high is approaching, the hens should be given a variety, and nothing will serve the poultryman better than clover hay as a portion of the winter diet. The poultryman must keep in view that the nitrogenous element is the most important, for it is the nitrogenous (albuminoids) matter that is the most difficult to obtain. Excess of grain allows a larger proportion of the carbonaceous matter than is sufficient, and, unless they are so situated as to permit of plenty of exercise, the hens will not lay a fair proportion of eggs. The "balanced ration" is the ration for hens as well as for cows, and it is the cheapest. Any ration that contains an excess of any particular food will be fed at a loss. The safest plan is to feed a variety, for then fewer mistakes in feeding will be made, and the hens will be better supplied.

TOP VENTILATION.

When the weather changes, and the warm nights are passed, close the top ventilator, and shut off the draughts of air, if you wish to avoid roup in the winter season. More cases of roup result from draughts of air in the winter than from any other cause, as the supposition is that the fresh air must flow into the poultry-house in a constant stream. Poultry of all kinds detest draughts, and especially at night, and when exposed to such, while on the roost, the head and eyes become swollen, and, in a short time, the disease changes to malignant roup, and carries off the entire flock.

THE INCUBATOR SEASON.

The incubator season begins at any time after the warm days are over, October being the month some prefer, but November is selected by the majority. The hatching is continued until March, and the work is specially a winter pursuit. We do not claim that the incubator and brooder are superior to hens, but we can claim that, as but few hens will hatch and raise broods in winter, the artificial process is a necessity at that season, as a single incubator can do the work of fifty hens, or more, according to its size and capacity.

POULTRY AT FAIRS.

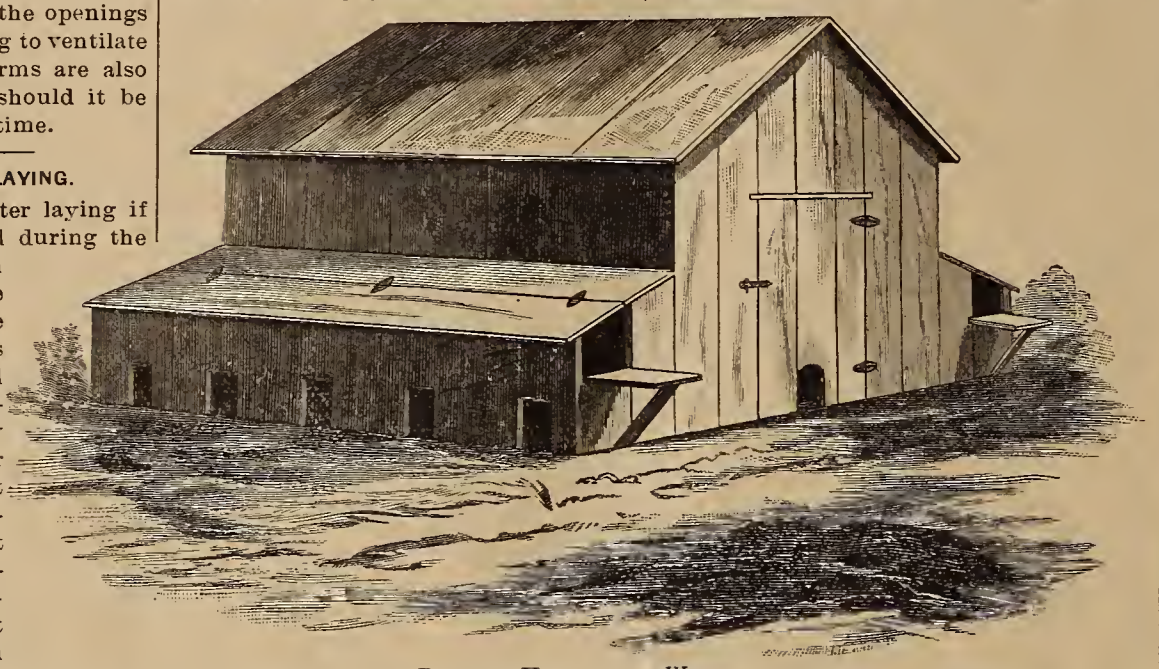
Show your stock, and thus support your county and state fairs. It is the proper way to assist in building up the poultry industry by encouraging others, and it makes known to others the kind of stock you possess. Procure the pure breeds, take a pride in them and take them to the shows.

LARGE POULTRY FARMS.

It is a remarkable fact that but few very large poultry farms exist, a thousand hens on a farm being a rare sight. It is not because poultry does not pay but the lack of large poultry farms is due to the fact that but few have given poultry the consideration due it. Small flocks pay large profits, but large flocks demand more labor and care, proportionately. The keeping of a few hens is sometimes a pleasure, and the labor is not estimated, but to manage large numbers, the poultryman must pay for labor and expend a large amount of his capital.

PRICES WERE GOOD.

All through the summer, and up to the middle of September, prices have been higher than is usually the case at this season, and the outlook for October is promising. At no time have choice ducklings, of about five pounds per pair, been less than fifteen cents per pound, which should pay well for this season, considering the fact that during the summer the ducks pick up a large share of their food.



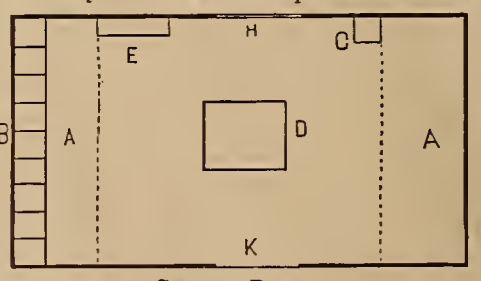
Poultry-House with Wings.

ABSORBENT MATERIAL.

During the winter season, some kind of absorbent material should be used on the floors of the poultry-house and under the roosts. Nothing excels dry dirt for this purpose, and if you wish to lay in a supply of it, the present time is when it should be done. The facility with which dry dirt can be procured, and its low cost, should be an inducement to have a plentiful supply stored away for winter use, and the poultryman who does so will not regret it.

TONICS FOR LAYERS.

A healthy hen needs nothing. If a tonic, or medicine, is required, let it be something simple. Give it in the drinking water, and in small quantities. Never compel the hens to drink or eat anything that they do not seem to partake with a relish. The simplest tonic is fresh, air-slacked lime in the water, a small quantity only being necessary A little salt in the food will also be beneficial.



Ground Plan.

GEESE FOR BREEDING.

The old geese make better layers and mothers than the young ones, and can be kept for breeding for years. As old geese are not readily salable in market, the young ones only should be sold. If given a good range, geese will cost but very little, as they delight in green food and insects, and forage industriously.

DO NOT GREASE CHICKS.

While grease will kill lice, it will also kill the chicks if used too freely. A few drops on the heads, necks and faces of chicks is sure death to lice, but some other remedy must be used on the body. Because grease has proved beneficial, when used in small quantities, some have been tempted to use more of it than is desirable, with fatal results to both lice and chicks. Kerosene, when applied on fowls or chicks, is a dangerous remedy, as it irritates and blisters the skin, and quickly kills if too freely used. Sweet oil, cotton-seed oil, lard oil or linseed oil are harmless, but even they should be used with judgment.

A CHEAP FENCE FOR PEKINS.

Take two pieces of scantling (one by three inches), known as shingling lath, and then saw as many laths in half as may be desired. The sawed lath will be two feet long. Nail them to the scantling, the lath being two inches apart. Let the ends of the lath extend three inches above and below the scantlings, which brings the scantlings about a foot apart. You will then have a panel that can be fastened to short posts. A fence two feet high is sufficient to confine Pekin ducks.

INQUIRIES ANSWERED.

Lice.—M. C., Backushurg, Ky., asks: "What ails my chicks and fowls? They become sleepy, get lame and die."

Reply:—The symptoms are those of the large lice on the skin of the head and neck. Apply a few drops of sweet oil.

How Much Profit.—A. H. D., Kansas City, Mo., writes: "How much profit can one expect from 500 hens, in one year, from eggs and chickens?"

Reply:—It depends on management and breed. It is estimated that with large flocks each hen will afford about one dollar profit per year, though some hens will exceed this. Among 500 hens, there will, at all times, be some unprofitable members of the flocks.

FOR YOUR MOULTING HENS.

Moulting is a very exhausting process. Eggs have not been so high for years at this season as now; they will be still higher. Hens rarely ever lay while moulting, then help them to get their new plumage quickly.

Many people get only five to six dozen eggs in a year from a hen and lose money, when they ought to get three times that many and make money rapidly. How? There are about 600 eggs in the ovaries of a hen; get all you can of them in two years, then kill the hen. You thus save two or three years feeding of the hen, which is no small item if you buy all the food. When a hen is in "condition," says a high poultry authority, "she will lay plenty of eggs." Therefore, help her through the moulting season, that she may be in condition to lay during the winter. Thousands of people have proven Sheridan's Condition Powder to be worth its weight in gold when hens are moulting. It keeps them in health, helps form the new plumage, and gets them in condition to lay early. If you give them, during the moulting, Sheridan's Condition Powder, daily, in extra doses, they will get to laying much sooner and lay all winter; larger, better and more vigorous eggs for hatching, than pullets. But don't keep them a third year, get all the eggs in two. *Remember Sheridan's Powder is not an egg-food; you can raise or make food as cheaply as anyone.* To any person interested, I. S. Johnson & Co., Boston, Mass., on receipt of address and stamp for reply, will send a recipe for making a good egg-food at small cost. Any person buying and using Sheridan's Condition Powder now, will get their hens in good laying condition and stand a good chance to win one of the large gold premiums to be offered later by the same firm, who are the only makers of Sheridan's Condition Powder. For 50 cents they will send two 25-cent packs, five packs for $1; or for $1.20 one large 2¼ pound can of Powder, postpaid; six cans for $5, express prepaid. Sample copy of the best poultry magazine sent free. The paper one year and a large can of Powder for $1.50.

BREEDING TO A FEATHER.

Those who have visited the poultry shows have often been surprised at the beautiful lacing of the laced breeds, the spangles and the uniform marks of the plumage of some breeds, but, as we have often said, much beauty is gained at the expense of vigor. In order to preserve the lacing and other external marks of plumage, the fowl must be bred in and in. That is the whole secret. Breed your fowls in, do not allow any new blood, and you will be scored away up in the nineties at the show, but after awhile you will succeed in establishing a breed in which you will have implanted weakness, short life and susceptibility to disease, as well as preventing the hatching of the majority of the eggs, of which you will get but few. Scoring for points is very nice, but scoring for eggs is something else.

SPADE THE YARDS.

The yards should be spaded, and air-slaked lime applied liberally over the surface, as a preventive of disease. The liberal use of air-slaked lime over the ground is the best preventive of gapes known, and as its cost is so small compared to its advantages, it is invaluable for purifying the yards and poultry-houses.

Our Miscellany.

LIVE IT DOWN.

Has your life a bitter sorrow?
Live it down.
Think about a bright to-morrow,
Live it down.
You will find it never pays
Just to sit, wet-eyed, and gaze
On the grave of vanished days;
Live it down.

Is disgrace your galling burden?
Live it down.
You can win a brave heart's guerdon;
Live it down.
Make your life so free of blame,
That the lustre of your fame
Shall hide all the olden shame;
Live it down.

Has your heart a secret trouble?
Live it down.
Unless griefs will make it double,
Live it down.
Do not water it with tears,
Do not feed it with your fears,
Do not nurse it through the years;
Live it down.

Have you made some awful error?
Live it down.
Do not hide your face in terror;
Live it down.
Look the world square in the eyes;
Go ahead as one who tries
To be honored, ere he dies;
Live it down.

IOWA'S corn crop has been estimated at 75 per cent of the average.

THE crow does not fly from the cornfield without caws.—*Washington Star.*

IT is reported that a larger acreage has been sown in wheat this fall, in Michigan, than usual.

TRAMPS never have to inquire their way. With them all roads lead to roam.—*Binghamton Republican.*

"DO YOU hear from your son often, who went West to seek his fortune?"
"Yes; frequently. Every time his board bill falls due."

THE French project of running a railroad one thousand miles into the interior of Africa is as big a thing as their Panama canal enterprise, but it is more feasible. If anything will civilize the dark continent and draw white immigrants, it goes without saying that it is a railroad. The enterprise should be encouraged.

MANY a clergyman who can preach a capital sermon is very unhappy as a speaker out of the pulpit. The *Philadelphia Times* has heard of a clergyman whose duty it was to introduce to an audience a missionary from Ceylon, and did as follows: "This faithful missionary of the cross comes from Ceylon, a land where, as you all know, 'every prospect pleases and only man is vile.'"

GEORGE KENNAN finds the greatest possible assistance in his wife. The couple have no children, and she is enabled to devote all her time to her husband's interests, which she does both willingly and successfully. Each day finds her at work recopying manuscript, reading proofs, translating some Russian piece, or going over the receipts from his work, and seeing to its investment or deposit. Mrs. Kennan is a thorough business woman, of considerable business tact and of a great deal of personal attractiveness.

ADVICES from Florida state that the excitement in the phosphate fields is intense. There is much dissatisfaction over the news from Washington that all the phosphate lands will be classed as mineral lands, and that those who have taken homesteads must give them up. Many persons have been staking out claims, and when the proper papers come from Washington there will be a greater upheaval than Oklahoma ever saw. Lawyers and business men have been staking out claims, and at least 5,000 ejectment suits have already been filed. The value of the property involved is at least $10,000,000, and the homesteaders will not yield to the government without a stubborn fight.

INDIAN corn is not known in France as an article of food. One of our consuls there, Mr. Griffin, writes that if corn meal could be introduced, a lasting benefit would be conferred upon the poor, and a new outlet would be found for the overproduction of American farms. A simple way to reach the French country people would be to follow their monthly fairs held in every canton. At these fairs corn meal could be cooked in various ways before the eyes of the people and served to them. In a short time the French would see that corn meal is a cheap, wholesome and easily cooked article of food. It would pay to start a similar crusade in every civilized country in the world. The result would create a new demand for the corn which our western farmers now burn as fuel, and the crop would become the most valuable of all our food products.

WHAT IS A MODEL WIFE?

A model wife is the woman in whom the heart of her husband doth safely trust.

She is the woman who looks after his household, and makes her hospitality a delight to him, and not a burden.

Who has learned that a soft answer will turn away wrath.

Who keeps her sweetest smiles and most loving words for her husband.

Who is his confidant in sorrow or in joy, and who does not feel the necessity of explaining her private affairs to the neighborhood.

Who respects the rights of husband and children, and in return has due regard paid to her.

Who knows that the strongest argument is her womanliness and so she cultivates it.

Who is sympathetic in joy, or in grief, and who finds work for her hands to do.

Who makes friends and keeps them.

Who is not made bitter by trouble, but who strengthens and sweetens under it.

Who tries to conceal the faults of her husband rather than blazon them forth to an uninterested public.

The woman whose life-book has love written on every page.

Who makes a home for a man—a home in a house and in a heart. A home that he is sure of, a home that is full of love presided over by one whose price is above rubies.

She is the model wife.—*Ladies Home Journal.*

"PANTS" IT MUST BE.

The regular quarterly attack on the word pants appears on time in the New York *Sun*. The war is useless. The American people have adopted it, and protests, ridicule and arguments are all wasted. Whether we like it or not, pants is here to stay. The average American regards the word trousers as an English affectation, and is no more disposed to adopt it than the word waistcoat for vest or topcoat for overcoat.

Since the word pants will stick in the face of all opposition, it is sensible to make the best of it. And there is nothing very bad about it. Both the *Sun* and the *Herald* declare that pants are not pants, but trousers; but it is also true that trousers are not trousers, but breeches; and that breeches are not anything worn off the stage. Originally, trousers were applied to breeches worn by pages—a hip and thigh covering. Pantaloons resemble the leg-coverings of to-day more than trousers or breeches—for pantaloons covered the entire legs and feet. As the modern leg-coverings are pantaloons cut short why shouldn't we cut the word short and call it pants? Besides, we have some justification in this in the word pantalet, derived from the word pantaloon. The pantalet, as may be seen in old prints, was a leg-covering for women and children, which reached to the shoe-top and resembled the modern male leg-covering more than trousers as originally known. The word trousers comes from the French *trousse*, a bundle—or a hunch about the hips. Let us accept pants as a good democratic term, since there is no way to get rid of it.

HE WAS COUNTED.

"I don't see anything freaky about you," said a visitor to a dime museum to one of the exhibits. "What's your specialty?"

"I'm the man who wasn't missed by the census enumerators."

RICHES HAVE WINGS.

McCall—"What's the matter, old man? Have you got the blues?"

Seaman—"No, not now. I had $5 worth last night, but I got rid of them mighty quick."—*Yonkers Statesman.*

A HOMESEEKERS' EXCURSION

AT HALF RATES, VIA WABASH LINE, will be run October 14th, to points in Southwest Missouri, Kansas, Nebraska, Arkansas, Indian Territory, Oklahoma, Texas, Colorado, New Mexico, Wyoming, Utah, Idaho, Montana, South and North Dakota, Iowa and Minnesota.

RATE.—One Fare for Round Trip. For time tables, tickets and other particulars, apply to the nearest Ticket Agent of the Wabash or connecting Lines.

Smiles.

THE BLUSHING HABIT.

Why should the maid endowed with grace,
In youthful beauty's pride,
Whene'er a blush comes to her face
Feel strangely mortified?
What's fairer than a maiden's blush,
Of innocence the hoon,
As radiant as the rosy flush
Upon the face of June?
Sweet maid, be not ashamed to blush;
'Twill all too soon be gone;
Some future day you'll use a brush
And pink to put it on.

—*New York Press.*

A ROSE BY ANY OTHER NAME.

First the teacher called the roll;
Clost to the beginnin',
"Addeliney Bowersox!"
Set the school a-grinnin'.
Winter time, an' stlugin' cold
When the session took up;
Cold as we all looked at her,
Though she couldn't look up!

Total stranger to us, too.
Country folks ain't allus
Nigh so shameful unpolite
As some people call us;
But the honest facts is, then,
Addeliney Bower-
Sox's feelin's was so hurt
She cried half an hour.

My dest was acrost from her'n;
Set and watched her tryin'
To p'tend she didn't keer
And a-kind o' dryin'
Up her tears with smiles; tel I
Thought: "Well, Addeliney
Bowersox' is plain, but *she's*
Purty as a piney!"

It's be'n many a year
Sence that most oncommon
Curious name o' Bowersox
Struck me so abomin-
Nubble and outlandish-like;
I changed it to Adde-
Liney Daubenspeck; and that
Nearly killed her daddy!

—*James Whitcomb Riley, in Indianapolis Journal.*

"SO'D I."

"HY, is that you?" cries the first woman, as they met on the street, says the *Detroit Free Press.*

"And is that you?"

"Just get home?"

"Yes."

"So'd I. Have a good time?"

"Beautiful!"

"So'd I. Splendid time. What'd you see?"

"Everything."

"So'd I. Gain any?"

"Five pouuds."

"So'd I. Baby sick?"

"Yes."

"So was mine. Have any mosqultoes?"

"Lots."

"So'd I. Hate to come home?"

"Yes."

"So'd I. Make lots of friends?"

"Yes."

"So'd I. I just cried when I left. Did your trunks get smashed?"

"Yes."

"So did mine. Did your dresses wrinkle?"

"Awfully."

"So'd mine Got a girl yet?"

"No."

"Neither have I. Isn't it dreadful? Well, good-by."

"Good-by."

THE WRONG MAN FOUND.

Citizeness—"Did you go and thrash that editor for printing those things about you?"

Citizen—"I went to the office, but I couldn't find him."

Citizeness—"Whom did you find there?"

Citizen—"No one but a great, big, bull-necked fellow who pretended he was responsible for that article, but I knew from his looks that he couldn't write."—*New York Weekly.*

EASILY ACQUIRED.

Correspondence Editor—"Here's a fellow who wants to know how he can acquire a flow of langnage. What shall I say to him?"

Snake Editor—"Ask him if he ever tried stepping on a tack with his bare feet."—*Light.*

HOW'S THIS?

We offer One Hundred Dollars reward for any case of catarrh that cannot be cured by taking Hall's Catarrh Cure.

F. J. CHENEY & CO., Props, Toledo, O.

We, the undersigned, have know F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions, and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.
WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all druggists.

A LITTLE CHAT IN THE GARDEN.

"Pretty bad soil here for a garden, isn't it?" said a potato vine.

"I should think it was," said the onion. "I'm losing strength every day, and I never had much to begin with. I don't get along worth a scent."

"I can't get ahead here," said the cabbage. "I'm going to leave."

"I know I can't get 'long at all," said the cucumber. "Nor I," cried the asparagus. "I don't get 'long or tall."

"This place isn't fit for a herrying ground," said the strawberry, "but here comes the sun, so dry up, all of you."—*Detroit Free Press.*

BY HIS OWN PRESCRIPTION.

An African chief had a bad cold and sent for his family physician. The gentleman could no more cure a cold than any civilized doctor, and was as little likely to confess it. His business, of course, was to give a prescription, not impossible to be made, but a little out of the way, so as to inspire confidence and suggest anatomical study. He prescribed "a little fat cut from the heart of a fat man." Unhappily, for the doctor, all the attendants of the chief were lean, but the doctor himself was fat, and the chief, being unaccustomed to wait for anything—far less a cure for a cold—immediately put him to death and put his advice into execution.

TOMMY'S ENTERPRISE.

Our Tommy was a little distance from the house when the tramp came up to him. "Feel better now, don't you?" he said to the tramp, who had just received a dinner from Tommy's mother, after sawing some wood. "I told you she wouldn't refuse you if you'd saw the wood. Come around again." Then Tommy went to look for his bat and ball, chuckling to himself: "That's the way to get that wood sawed. If I can't scare up tramps enough to saw up all the wood we need my name is Dennis."

And a few days later Tommy's mother was heard to remark, "It's strange how many tramps there are around here lately."—*Munsey's Weekly.*

A SEPTEMBER IDYL.—MISUNDERSTOOD.

"May I kiss you?"

It was in the orchard. She answered him not. Picking a leaf from a pear tree near by she handed it to him. He thought he read her answer, "Leave."

Turning, he went his way.

She gazed at him in astonishment, for she meant her answer to be "You have leaf."

Alas! and so it all ended.—*Life.*

TIT FOR TAT.

Sophie Arnould was a last century favorite whose voice gave way in youth, and of her the Abbe Galiani caustically said: "She has the finest asthma I ever heard." But the lady revenged herself, if not on him, on the religious order to which he belonged. Hearing that a Capuchin had been eaten by wolves, she exclaimed: "Poor beasts! What a dreadful thing hunger must be!"

AN INCENSED PREACHER.

A Montreal clergyman was recently invited to marry a couple, the bride being his particular friend. The bridegroom, however, did not appear, and the minister was so incensed that he hunted him up the next day and gave him a sound thrashing.

IF IT MIGHT TAKE.

Dotkins—"What's the matter with Sister Nellie? She acts so queer."

Mamma (in a disgusted tone)—"Oh, she's in love again; this is the third time, and she's got it bad."

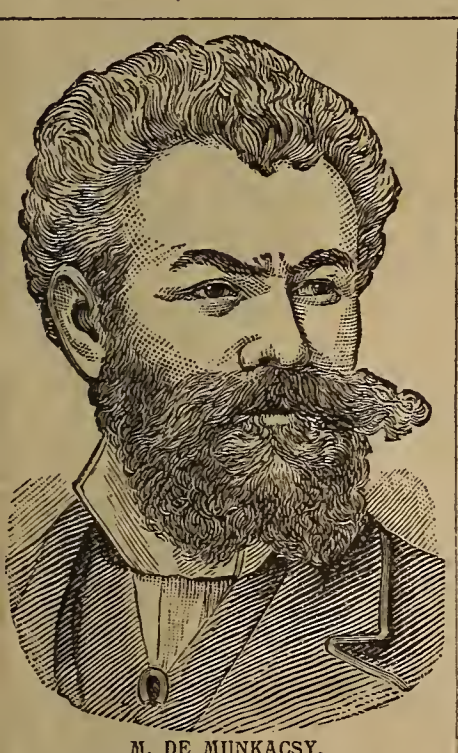
Dotkins—"Why don't you have her vaccinated so she can't catch it?"

MUNKACSY'S FAMOUS COMPANION PIECES,

"CHRIST BEFORE PILATE" and "CHRIST ON CALVARY"

Premium No. 100.] Said to Have Sold for $120,000.00. ✺ Said to Have Sold for $125,000.00. [Premium No. 210.

Reproduced in the Colors of the Original Paintings.



M. DE MUNKACSY,
PAINTER OF THE FAMOUS PICTURES, "CHRIST BEFORE PILATE," AND "CHRIST ON CALVARY."

The illustrious painter of these famous pictures has experienced a most extraordinary career. An humble Hungarian by birth, to-day his easel stands in one of the finest residences of Paris, and his name appears on the first page in the book of honor of his art, among the very proudest; and his great works will live forever.

His masterpiece is "Christ Before Pilate," and no other picture is oftener mentioned at the present time. The Emperor Francis Joseph, of Austria, knighted M. de Munkacsy in recognition of the great genius displayed in that marvelous picture, "Christ Before Pilate."

At an expense of several thousands of dollars, the publishers of this journal last year reproduced and offered its readers accurate copies of the great painting, "Christ Before Pilate," in the original colors. The matchless excellence of our reproduction, and its truthful likeness to the original painting, agreeably surprised those who secured copies, and the demand was unprecedented. Thousands of letters of approbation were received, many of the writers expressing a desire that we should also reproduce the great companion piece, "Christ on Calvary." Although a compliance with these requests involved an expenditure of thousands of dollars, a corps of experienced artists were engaged during the hot months of the past summer in engraving the stones. No expense or labor has been spared to accomplish the very best results possible, insuring a picture equal to that of "Christ Before Pilate" as a Work of Art.

We will send, postpaid, copies or reproductions of

The Two Most Costly Paintings in the World Free.

THE GRAND PICTURE,
"Christ Before Pilate"
Mailed free to any one sending 50 cents for this paper one year.

THE GREAT COMPANION PIECE,
"Christ on Calvary"
Mailed free to any one sending 50 cents for this paper one year.

BOTH PICTURES
Mailed free to any one sending $1 for Farm and Fireside and the Ladies Home Companion, both papers one year.

Or, a Copy of Either Picture will be Given Free to any one who sends a New yearly subscriber to this paper, at 50 cents.

In the latter case the subscriber is not entitled to a picture free, as only one picture can be given with each yearly subscription at 50 cents, and that only for a limited time.

Size of Pictures we send—both pictures are the same size—**21 by 28 Inches.**

Millions of people, in this country and Europe, have travelled many miles and paid an admission fee to get a view of these remarkable paintings. They are pronounced by critics to be the most notable pictures of the present century, truly grand and wonderful as works of art beyond the power of language to describe.

It is stated that Postmaster-General Wanamaker paid $125,000.00 for the original painting, "Christ on Calvary," that he might place it alongside of the masterpiece, "Christ Before Pilate," for which he had previously paid $120,000.00.

These princely sums are mighty tributes to the wonderful genius of Munkacsy, the born artist, and emphasize the wonderful triumph achieved in placing an artistic and magnificent oleographic reproduction within the reach of all classes.

If only a few thousand copies were made, each one would command a price that would limit its sale to the wealthy alone.

Either Picture is

Equal in Size and Artistic Merit to Pictures Sold in Stores for $10.00 Each.

"CHRIST BEFORE PILATE." SIZE, 21 BY 28 INCHES.

REMEMBER A copy of either Picture is given *free* to any one sending 50 cents for one year's subscription to this paper.

Or, a copy of either picture will be given *free* to any one sending one *new* yearly subscriber to this paper, at 50 cents.

BOTH PICTURES "Christ Before Pilate" and "Christ on Calvary," will be given free to any one sending one dollar for FARM AND FIRESIDE and the LADIES HOME COMPANION, both papers one year. Or both pictures will be given Free to any one sending two yearly subscribers to this paper. Postage paid by us in each case.

WE GUARANTEE SATISFACTION or will refund the money to any one who is in the least dissatisfied, if the picture is returned in good order.

ORDER THE PICTURE NOW. We have been disappointed in not having the picture "Christ on Calvary" ready for delivery sooner. The artists are determined to give the best possible results, even if there be some delay. They now inform us that the pictures will be ready about the middle of October, so that we will be enabled to fill all orders near the time of the date of this paper. All orders for the picture "Christ Before Pilate" are promptly filled as soon as received.

No cash commission or premium allowed club raisers when subscribers take advantage of our special offer of a picture and one year's subscription for only 50 cents.

The picture "Christ Before Pilate" is Premium No. 100, and "Christ on Calvary" Premium No. 210.

Order by the Premium Numbers and address all letters to THE FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

The Markets.

	Chicago.	New York	N. Orle'ns
Butter.—			
Fancy Cream'ry...	19 @ 23	20 @ 22	23 @ 25
" Dairy.....	18 @ 20	12 @ 21	15 @ 16
Common.....	6 @ 9	9	6 @ 8
Grain.—			
Wheat No.2w'nt'r	97	1 02	.....
Corn, "	47¼@ 48¾	55⅝@ 56⅞	61 @ 62
Oats, "	38 @ 40	43 @ 53	47 @ 49
Live Stock.—			
Cattle, Extra.....	5 15@ 5 30	.....	.....
" Shippers...	2 90@ 5 10	4 00@ 5 15	2 25@ 2 75
" Stockers...	2 00@ 3 20	3 60@ 3 80	.....
Hogs.....	4 20@ 4 35	5 50	4 00@ 5 00
Sheep,com.togood	4 60@ 4 80	4 50@ 5 60	2 25@ 3 25
" Lambs.....	5 60@ 5 80	5 00@ 7 50	.....
Provisions.—			
Lard.....	6 15	6 40	5 75
Mess Pork.....	9 50	10 50@11 00	12 00
Seeds.—			
Flax, No. 1.....	1 50	.....	.....
Timothy.....	1 27	.....	.....
Clover.....	3 85@ 4 15	.....	.....
Wool.—	Chicago.	Boston.	
Fine, Ohio & Pa...	.....	.....	.....
" Western.....	.....	.....	.....
" Unwashed..	17 @ 21	.....	.....
Medium,Ohio&Pa	.....	.....	.....
" Western.....	30 @ 33	.....	.....
" Unwashed..	23 @ 25	.....	.....
Combing&Delaine	.....	.....	.....
Coarse & Black....	18 @ 19	.....	.....

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

FARM AND FIRESIDE.

18 PAGES, WITH SUPPLEMENT. EASTERN EDITION.

VOL. XIV. NO. 3. PHILADELPHIA, PA., and SPRINGFIELD, OHIO, NOVEMBER 1, 1890. TERMS { 50 CENTS A YEAR. 24 NUMBERS.

Current Comment.

WHAT "Joseph" had to say in our last issue about transplanting onions has drawn the following interesting communication on the same subject from Prof. Green, of the Ohio Agricultural Experiment Station:

In a recent number of FARM AND FIRESIDE, "Joseph" gives his experience in transplanting onions, and says that he aimed at 2,000 bushels per acre, but fell a little short of that result. Doubtless there are many onion growers who have tried their best to grow half that amount on an acre, and have failed, who will say that "Joseph" will never do it. Having tried the plan pretty thoroughly, and having secured at the rate of 1,500 bushels per acre, I believe that Joseph will reach his mark sooner or later.

We have tried nearly all varieties by this plan, and some do better than others, but there has been an increase in yield in all cases. This is not all, however; there has been an improvement in appearance, which enhances the market value in some cases fully 150 per cent, and in none less than 30 per cent. The best result was obtained with Prizetaker (our Spanish King seems to be the same as Prizetaker), but White Victoria, Mammoth Pompeii and Giant Rocca fell but little behind Prizetaker. Red Wethersfield and Yellow Danvers seemed not to respond to this treatment so readily as the foreign sorts, but there is a gain with these, also, especially as regards uniformity in size, which increases the market value from 30 to 50 per cent.

In this latitude, onion growing on upland soil is quite uncertain, if seed is sown in the ordinary manner. There is first the difficulty in securing a perfect stand, and if we succeed in this respect, and thinning isn't attended to promptly and carefully, there are sure to be many small onions when the crop is harvested. By transplanting, both these uncertain elements are eliminated. We get a good stand, and all the onions are sizable and bring the highest price in the market.

Now, this being able to produce a uniform product, and that without fail, is just what constitutes the difference between successful and haphazard gardening. It is as though we brought machinery to our aid and turned out a finished product to order. If there were nothing more to recommend the transplanting of onions than increasing the certainty of securing a crop, it would pay upon upland soils in this climate. It simply reduces the risks, which is regarded as good policy in all lines of business. One can be content with smaller gains, if the risks are less, but to diminish the risks and increase the gains at the same time is surely a good stroke of business, and that is what transplanting onions accomplishes.

Another feature must not be overlooked; namely, advance in time of maturity. We sow our seed in February (about the middle is the right time in this latitude). This enables us to transplant into the open ground early in April, and in consequence, the crop matures nearly a month earlier than if the seed is sown in the ordinary manner. This makes it possible to market the crop earlier; but what is still more important, the ground can be cleared in time for celery or other crops.

Onions grown from seed are not regarded by many gardeners as a good crop, because they occupy the ground practically the whole season. If we can increase the crop, enhance the market value and clear the ground in time for another crop, will not transplanting pay? That depends upon the extra cost, of course. We kept an account of the labor on two beds, one of transplanted onions, the other not. The cost of extra weeding and thinning in one bed offset the cost of transplanting in the other. The work on the two beds was practically the same for the season, the extra expense being in the greenhouse room occupied, which might have been used for something else. This is partly compensated in the less amount of seed used.

Some one says, "This is an old thing, and not a new discovery." Well, what of that? If we have improved varieties that are better suited to this method than our fathers had, let us revive the method. I am of the opinion that the first discoverers did not see all there is in it, by any means, even with our common varieties.

ONE of the most important subjects that farmers can discuss at their institutes the coming winter is the improvement of country roads. Within the last quarter of a century marvelous improvements have been made in railway and ocean transportation, but within that time there has been little or no progress in the making or improving of common, country roads. Railroad transportation rates have been reduced until it costs no more to carry a bushel of grain to the seaboard than it does to haul it the average distance from the farm to the railroad. It does not look very well, then, to be grumbling about freight rates when there is such an enormous waste of power dragging loads of grain from the farm to town over bad roads. Good roads would greatly lower the cost of transportation, and bring the farm nearer the market. In no better way can the selling value of the average farm be increased than by good roads. The popular way to make any expense abhorred is to show it up as a tax. A very good application of this can be made to bad roads. Some of the taxes about which the farmer is urged to grumble are utterly insignificant in comparison with the indirect taxation of the bad road over—and often through—which he hauls his products to market. It costs money to build good roads, but they are worth all they cost. It costs a good deal more to travel over bad ones than it does to build good ones. One of the best things the farmers of any community can do for themselves and the common welfare is to unite, and thoroughly improve the highways. The best methods of doing this should be discussed and decided upon at the institutes, and organized efforts made to carry out the improvements.

GOOD commercial fertilizers pay well only when judiciously used; poor ones, never. A word of caution to purchasers, therefore, is not out of place. Be sure that the fertilizers you buy are good, and that they are exactly what they are represented to be. There are honest manufacturers, and there are honest goods on the market, but at the same time, in spite of stringent legislation on the subject, there is a good deal of fraud going on in the fertilizer business. Unscrupulous manufacturers and dealers are palming off worthless goods on purchasers. The laws of many states require all fertilizers sold to be branded with the analysis made and provided for by the state. But in spite of this, fraudulent fertilizers are boldly put on the market. This word of caution against them is given in the interest of the farmer and the honest manufacturer. Much has appeared in FARM AND FIRESIDE in favor of the judicious use of good commercial fertilizers, and this is not intended to be taken as advice against the purchase of such. What is advised, however, is this: Before buying from a dealer, let the purchaser have an analysis made from samples taken from the particular lot he intends buying. If he cannot readily have this done, as provided for by the state, he can well afford to pay a chemist's fees, if he intends using any considerable quantity of fertilizers.

In the use of fertilizers, the farmer is dependent for profits on so much that is beyond his control. He may prepare the soil thoroughly, select and sow the best seed at the proper time and in the best manner, and use the best fertilizer, but if the season is unfavorable, there may be no returns, either for his labor expended or for the money invested in fertilizers. Considering the risks he runs, the purchaser cannot very well be too particular as to the quality of fertilizers he uses. Another point: The farmer who expects to obtain all the profits possible from the use of commercial fertilizers, must become a careful experimenter himself. In no other way can he find out what are the most profitable fertilizers to use on his own soil. The results from experiments made at the stations or by other farmers he can take as a guide, but not to follow blindly.

WE know that many of our readers appreciate the practical poultry department of this paper. It is well named a practical department, because it is conducted in the interests of those who raise poultry and eggs for market. The business is entitled to more space in an agricultural paper than most people would imagine. Many look on poultry keeping as small business, and few have a correct idea of the magnitude of the business in this country. Last year the value of the products of poultry farms amounted to nearly $200,000 000. This is about two thirds of the value of the cotton crop, two thirds of the wool, and about one half the hay crop. Instead of being a small business, poultry keeping ranks high among the most important branches of agricultural industry.

IN a former issue there was a brief note on this page to the effect that it was by the principle of reciprocity that this country could secure better trade relations with other countries. The principle was finally embodied in the new tariff act, and the first response comes from Canada. In 1883, when this country lowered the duty on lumber, Canada increased the export duty, and the price of lumber was not lowered. The new tariff law lowers the duty on lumber about one half, provided no export duty is levied by the country from which it is imported, otherwise, the duty is to remain as before. This provision of the law has taken effect immediately, and Canada has abolished her export duty on logs and timber. This will be the natural working of the principle of reciprocity in whatever lines it has been applied. As applied to sugar, tea and coffee, it will have the effect of opening up and widening foreign markets for our agricultural and manufactured products.

ACCORDING to the estimates of the Department of Agriculture, the wheat crop of this country for 1890 is 401,118,000 bushels. Last year the crop was 490,560,000 bushels. Last year the average yield per acre was nearly thirteen bushels, this year it is a little over eleven. Does growing the average wheat crop pay? The corn crop for this year is estimated at 1,550,000,000 bushels. Last year it was 2,112,892.000 bushels. The indicated average yield per acre for this year is about twenty bushels. Does growing the average corn crop pay? Answer no, and then think of the immense amount of time, money and labor that is lost in growing the crops that fall below the average.

EVER since the advance in the price of wheat, corn and other products, merchants have been watching for an opportunity to mark up the prices on their goods. The opportunity having arrived, some of them are using it with a vengeance. The natural effect of the new tariff act is a temporary increase in the prices of those articles upon which customs duties have been increased. But speculative merchants are going a great deal farther than justifiable under the circumstances. They are endeavoring to force up prices on nearly everything, whether it is affected by the new tariff law or not, and in some cases have actually raised prices on articles upon which the duties have been lowered. They are taking advantage of an immediate and temporary rise in the price of some articles to endeavor to force an advance on all. They are certainly presuming a good deal on the ignorance of their customers to suppose that they can do this without being found out. Indeed, they know it already, and every advance in price, made without good reason, will act as a boomerang. Until the speculative flurry is over, and prices settle down to their legitimate level, customers will get along with as little buying as possible. Go slow in buying for a few weeks, is the warning that will be heeded by the shrewd customer. The speculative advance in prices will not last long. As to the prices of those articles upon which duties have been increased, the advance will not be a permanent one. New factories will be established that will soon add to the world's supply of those articles, and consequently, prices will ultimately be lower. Making the increase in duties on some articles a pretext for increasing prices on all, will soon be well understood by all consumers, and will react on the merchant speculators who are trying it. The increased profits on what they sell will more than be offset by diminished sales. People will not buy except what is absolutely necessary, when they know that prices are unreasonably forced up.

BY the enactment of a law making it a criminal offense to use the mails in any way for lotteries, congress has dealt a most effective blow to the Louisiana Lottery Company. Newspapers publishing lottery advertisements are denied the use of the mails, so that the law has been made as stringent and far-reaching as possible. It will be a blessing if it can blot out of existence and memory what is a deep disgrace to a state and a curse to the nation.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY

MAST, CROWELL & KIRKPATRICK.

This paper has been entered at the Post-office as second-class mail matter.

TERMS OF SUBSCRIPTION:

One Year, - (24 Numbers), - 50 Cents.
Six Months, - (12 Numbers), - 30 Cents.

The above rates include the payment of postage by us. Subscriptions can commence any time during the year. **Send for Premium List and see premiums offered for obtaining new subscribers.**

Payment, when sent by mail, should be made in Express or Postal Money Orders, Bank-checks or Drafts. When neither of these can be procured, send the money in a registered letter. All postmasters are required to register letters whenever requested to do so. Do not send checks on banks in small towns.

Silver, when sent through the mail, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope and get lost. Postage stamps will be received in payment for subscriptions in sums less than one dollar.

The date on the "yellow label" shows the time to which each subscriber has paid.

When money is received the date will be changed, which will answer for a receipt.

Discontinuances. Remember that the publishers must be notified by letter when a subscriber wishes the paper stopped, and all arrearages must be paid.

When renewing your subscription, do not fail to **say it is a renewal.** If all of our subscribers will do this, a great deal of trouble will be avoided. *Also, give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal.*

We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

The Advertisers in this Paper.

We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

Our Farm.

DESCRIPTION OF A NEW KNAPSACK SPRAYER.

BY B. T. GALLOWAY, IN JOURNAL OF MYCOLOGY.

In view of the fact that any one has the privilege of making and selling this pump, we have thought it best to give a detailed description of it, accompanied by illustrations of such a character that any intelligent machinist can use them as working drawings. The demand for the sprayer will be largely confined to the spring and early summer months, and to those who contemplate manufacturing it we will say that it is of the utmost importance to have the pumps in stock at this time. As a rule, we find that the men who use machines of this kind wait until the last moment before sending for them, consequently they are anxious to have their orders filled promptly, which, so far as our experience goes, is never done. Hence, therefore, the importance of having sufficient machines on hand to fill all orders without delay. Coming now to a description of the machine, we have first:

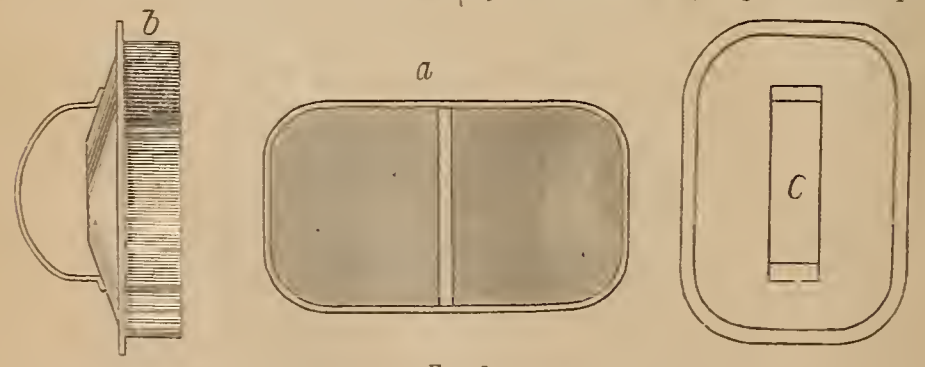


Fig. 3.

The reservoir, Fig. 1, is made of 16-ounce copper, and holds a little over four gallons. The height of the reservoir is 16 inches, its breadth 15 inches and depth 5 inches, 10 pounds of copper being necessary for a tank of these dimensions. When filled with the Bordeaux mixture, or any of the copper solutions now in use, the machine weighs practically 50 pounds, which is about as much as a man wishes to carry on his back for any length of time.

The bottom of the reservoir as well as the top is soldered in, and, as shown in Fig. 2, the top is provided with two openings, one for the pump and the other for introducing the liquid. The pump orifice, *a*, is 1½ inches in diameter, while the opening for the liquid, *b*, is 4½ inches wide by 7 inches long. Above and surrounding this opening is a rim 1½ inches high, into which is fitted a strainer, made of fine copper wire. The strainer, Fig. 3, rests on a slight projection made in the copper at the bottom of the rim, and is removed by means of a handle across the middle, *a*, Fig. 3. For closing the opening, a lid made of copper, Fig. 3, *b* and *c*, is used, this fitting down tightly in the rim.

The pump, Fig. 4, is 17½ inches long and 1½ inches in diameter, and for making it, 6 castings, weighing 2⅓ pounds, 15½ inches of 1½-inch brass tubing and 14¾ inches of 1-inch brass tubing are required.

It is not necessary to go into the details of the various parts of the pump, as the figures and explanations thereto will, we think, enable any one to understand the offices of the various parts. The pump is soldered to the bottom of tank, the solder being placed at the several points shown at *a* in Fig. 5.

It is fastened at the top, Fig. 5, *b*, by means of solder also; for some reasons this is objectionable, but as it will not be necessary to remove the tube it is not a serious inconvenience after all. To obviate the difficulty, a nipple might be soldered in the tank at *b*, into which the tube could be screwed. The plunger is shown in Fig. 4. This is screwed to the end of the tube, the end being left open. As seen in cut, the plunger is not packed, the space *bb* being left for this purpose; ordinary wicking is used for packing.

In using the pump, the hollow piston is drawn up, creating a vacuum into which the liquid rushes through the opening *d*, Fig. 4. The piston is then forced down and this closes the valve *d*, Fig. 4, and opens the one at *E*, Fig. 6. This operation being repeated, the liquid is forced out of the opening in a continuous stream, the latter being effected by means of the air chamber in the piston. The figures show plainly the various parts necessary for working the pump, etc. We use, as a rule, about 4 feet of ⅝-cloth insertion hose, and this is fastened to the pump and lance by means of copper wire.

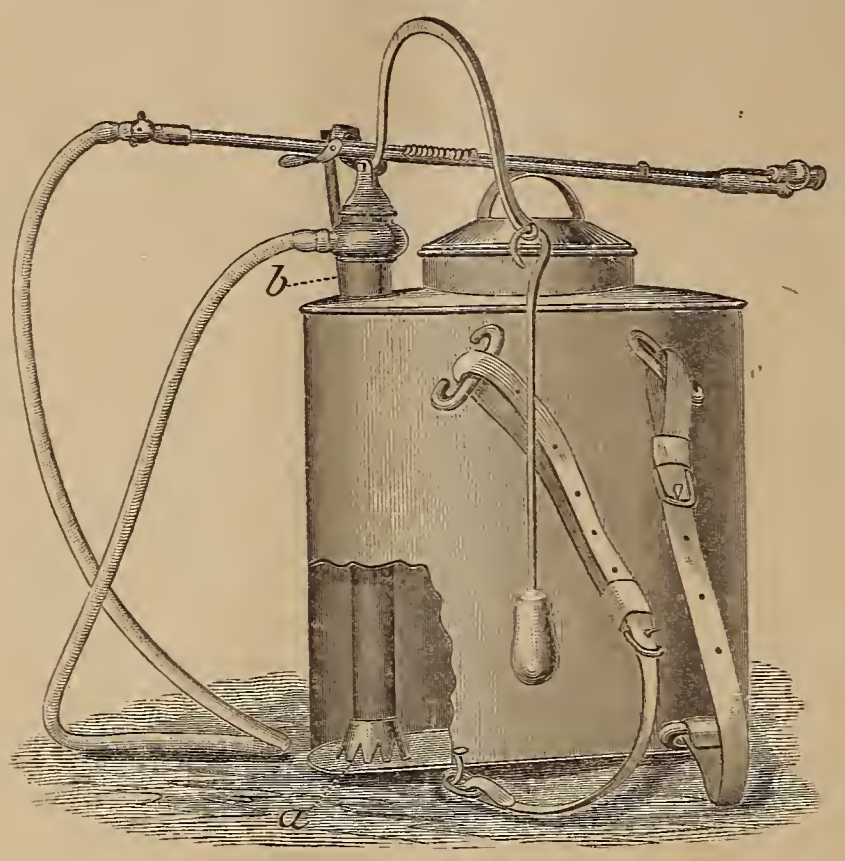


Fig. 5.

EXPLANATION OF FIGURES.

Fig. 1. Back view of reservoir, showing pump, handle, lance, hose and fulcrum; also manner of attaching the latter.

Fig. 2. Top view of reservoir. Top view of pump, opening 2½ inches in diameter, *a*; opening for introduction of liquid, 7 inches long, 4½ inches wide, *b*; casting for holding the fulcrum, *c*; one fourth actual size.

Fig. 3. Strainer, 7 inches long, 4½ inches wide, 1 inch deep; wire gauze soldered on the bottom, and handle, *a*, across the top; *b* and *c*, lid, one fourth actual size.

Fig. 4. Pump complete. 1, one fourth actual size. The cross piece made of brass, shown at *a*, holds the ball of the valve in place.

Fig. 5. Front view of reservoir, showing pump inside; soldered at points seen at *a*.

Fig. 6. Plunger with ball valve showing ball at *E*, and space for packing at *FF*, actual size. The tube to which this is fastened is 14¾ inches long, making its total length with the top piece shown in Fig. 4, 17 inches.

ONIONS FROM SEED AND SETS.

For a long time I have wondered what are the true relations between the common, black-seed onion and the top-set onion. Recently, the following letter was received from one of the Farm and Fireside family members, W. M. Robertson, Kansas:

"In spring of 1889 I planted some onion sets in my garden, which made fine, large bulbs. Of these I wintered about two hundred, and planted them this spring in four rows. All the plants by the fence running north and south are making tops for sets; all the plants except seven, in the rows running east and west, are fully blown for seed. Why is this?"

After a little reflection I began to suspect that top onion as well as potato onion or multiplier are merely modified forms of the ordinary, black-seed onion. I thought it advisable to ask Prof. L. H. Bailey, of Cornell University, about this, and he confirmed my suspicion. Top sets are produced by the flowers changing to bulblets. "The same thing," says Prof. Bailey, "is common in one of our wild onions (*Allium canadense*). The top onion undoubtedly originated in the garden. It was described over 300 years ago, and perhaps earlier."

Undoubtedly, the top set is also liable to return to the original form, and to produce black seed. All this accounts for our inquirer's experience with this onion, but it does not account for the singular regularity in the behavior of the rows running in different directions. Personally, I have but little experience with the top-set onion, and can venture no explanation. The multipliers also are, without doubt, a mere modification of the black-seed onion. It is not unusual to find an onion grown from seed that will divide in a number of bulbs.

JOSEPH.

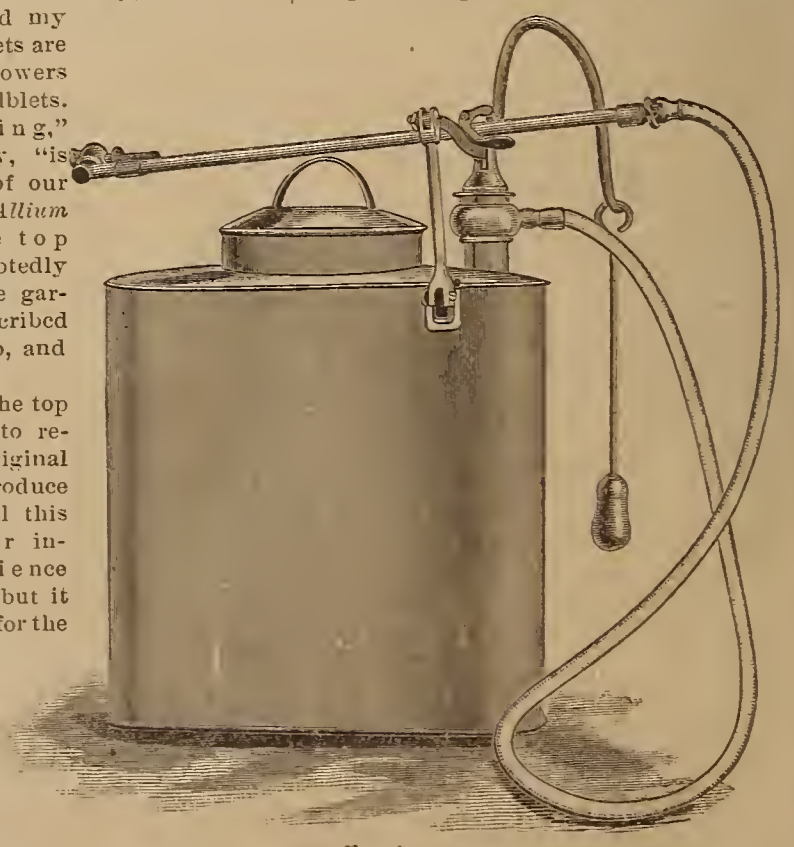


Fig. 1.

LINCOLN'S MELANCHOLY.

Those who saw much of Abraham Lincoln during the latter years of his life, were greatly impressed with the expression of profound melancholy his face always wore in repose.

Mr. Lincoln was always of a peculiarly sympathetic and kindly nature. These strong characteristics influenced, very happily, as it proved, his entire political career. They would not seem, at first glance, to be efficient aids to political success; but in the peculiar emergency which Lincoln, in the providence of God, was called to meet, no vessel of common clay could possibly have become the "chosen of the Lord."

Those acquainted with him from boyhood knew that early griefs tinged his whole life with sadness. His partner in the grocery business at Salem, was "Uncle" Billy Green, of Tallula, Ill., who used at night, when the customers were few, to hold the grammar while Lincoln recited his lessons.

It was to his sympathetic ear Lincoln told the story of his love for sweet Ann Rutlidge; and he, in return, offered what comfort he could when poor Ann died, and Lincoln's great heart nearly broke.

"After Ann died," says "Uncle" Billy, "on stormy nights, when the wind blew the rain against the roof, Abe would set thar in the grocery, his elbows on his knees, his face in his hands, and the tears runnin' through his fingers. I hated to see him feel bad, an' I'd say, 'Abe don't cry'; an' he'd look up an' say, 'I can't help it, Bill, the rain's a fallin' on her.'"

There are many who can sympathize with this overpowering grief, as they think of a lost loved one, when "the rain's a fallin' on her." What adds poignancy to the grief sometimes is the thought that the lost one might have been saved.

Fortunate, indeed, is William Johnson, of Corona, L. I., a builder, who writes June 28, 1890: "Last February, on returning from church one night, my daughter complained of having a pain in her ankle. The pain gradually extended until her entire limb was swollen and very painful to the touch. We called a physician, who, after careful examination, pronounced it disease of the kidneys of long standing. All we could do, did not seem to benefit her until we tried Warner's Safe Cure; from the first she commenced to improve. When she commenced taking it she could not turn over in bed, and could just move her hands a little, but to-day she is as well as she ever was. I believe I owe the recovery of my daughter to its use."

SOME TOMATO EXPERIENCE.

One cold day in early October, I was at a grocery with a load of vegetables, as was a young market gardener of a neighboring town. Will it freeze to-night?" I asked, as the grocer inspected our loads.

"I hope so," was the young man's reply. "I am sick of selling truck."

"Well, I am not," said I; "with tomatoes at 80 cents per bushel, sweet corn 10 cents per dozen and potatoes 20 cents per peck, I could dispense with frost for some weeks."

During this conversation the grocer had inspected our stuff and concluded to take my tomatoes at 80 cents when the other man asked only 70 cents. The man expostulated and said his measure was best, which was true, as I had my baskets only rounded up, while his were piled close up to the handles. The groeer was firm, however, saying that he knew mine to be carefully seleeted and fully ripe, judging from past experience. The young man went grumbling on his way to hunt a market, while I went my way rejoieing.

The next day, in passing my tomato pateh I noticed the pile of refuse from eleven bushels, and as they were too soft to measure I counted them, and found

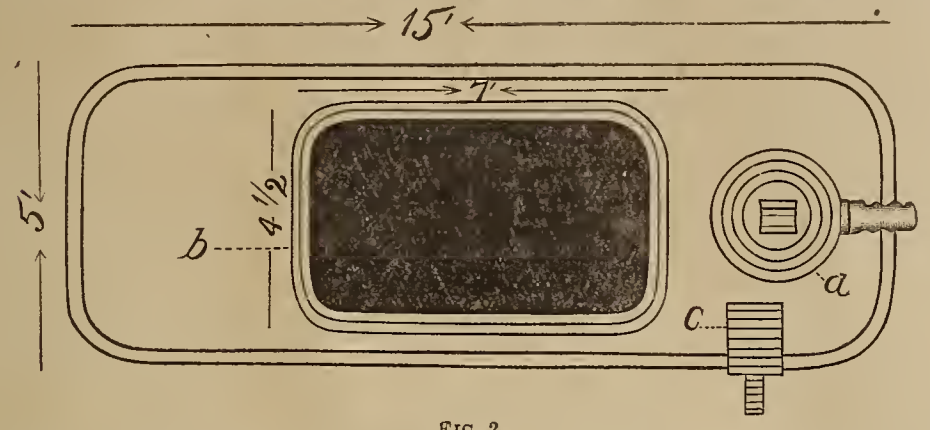


FIG. 2.

there were sixty of them. At 10 cents per bushel this made a profit of nearly 2 cents each by throwing them on the ground. Of eourse, these were not all the refuse, somo being left in picking, but they probably represented the differenee between my tomatoes and those of the young man, or between a selected article and a common one. But the $1.10 did not represent the whole of the profit. Time was not only saved in this transaction, but it helped my future sales.

This was only one instance of many in twenty years of marketing of perishable stuff, where I have gained by careful preparation of vegetables and fruit before taking to market. I noticed on the young man's load another case of want of eareful study of the situation. We both had green tomatoes to sell as well as ripe ones. These brought one half the price of ripe ones. The young man had gathered everything, from big, partly-eolored ones to little ones scarcely bigger than hickory-nuts. This not only gave a bad appearanee to the lot, but the little ones did not help increase the measure. Mine were nearly uniform in size, being about one and one half inches in diameter; this is about the size women like for piekling, and being smooth, green and glossy, as well as uniform, they sold on sight.

It is the usual custom for tomato growers, on the approach of October frosts, to pull off indiscriminately the green ones, to fill their pickling orders, reasoning that they will not loso much, anyway, as the time is short. But I have made money several times by having late, ripe tomatoes in a favorable Oetober, which I could not have had by following by practieing substantially tho same thing early in the season. When each plant had set what at maturity would be about eight pounds of fruit, the side shoots and new blossoms were pinched off, and the strength of growth matured the fruit already set with great rapidity. The woman sold several bushels from one hundred hills at $1.80 and upwards per bushel before I had any ripe ones. Mine rotted badly, hers not at all, but whether the pinching baek helped hers I cannot say. It may be, that by having increased vitality, the plants were better able to resist tho fungus that causes rot. Mine rotted up to the time of the heavy September rains, but suddenly stopped, and have done nicely since, having already produced at the rate of more than $200 per acre, prices having been high.

I believe tomatoes are generally planted too close. This year I put the rows five feet apart, with plants thirty-three inches in the row, and I never had a heavier yield. My plan for next year is as follows: In September I plowed ridges through an old strawberry bed, throwing two furrows together and leaving a spaee of strawberries about three feet wide. This makes the center of the ridges about six feet apart. These ridges will be thoroughly worked down before winter and again in the spring. I propose to set them to tomatoes about the time strawberries are in bloom. They will be hoed once before strawberries are done, and then the strips of strawberry sod will be plowed and thorough cultivation given each way. In this way I shall lap one crop onto the other, getting, perhaps, $50 to $80 per acre in strawberries in June, and a crop of tomatoes two months later.

Summit county, Ohio. L. B. PIERCE.

COMMENTS ON CURRENT DEPARTMENT AND STATION LITERATURE.

BY JOSEPH (TUISCO GREINER).

FIGHTING FUNGOUS DISEASES.—No. 11, of Vol. 6, *Journal of Mycology*, issued by the Division of Vegetable Pathology, United States Department of Agriculture, eontains matter of more than ordinary interest. Among other things, it tells us that potato blight, which is doing such terrible work in many sections of the United States just now, can be prevented and how this is to be done. Watching and praying might have secured us good

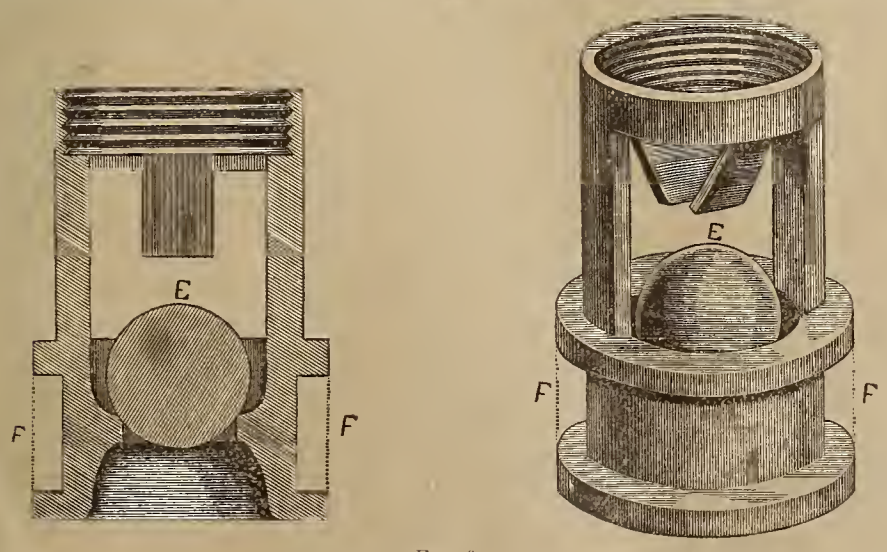


FIG. 6.

the usual practice. When the period of the year is such that frosts are not imminent for three weeks, there is a prospect that with favorable weather, all two inches or more in diameter will ripen, provided the whole energy of the vine is turned in that direction. By picking off those of less size and selling for pickles, the vine is relieved of half its load and its strength goes into what is left.

A neighbor woman who got her plants from me gained about three weeks' time

potato crops in former years; now we must supplement this with working and spraying. The use of preparations of copper sulphate as a means of checking the potato blight and rot has proved a brilliant success in the thorough tests made in Germany in the years 1887 and 1888. Of the various formulas used, the best and most efficient were what is known as Bordeaux mixture and copper-soda solution. The conclusion is reached that potato fields should be sprayed twice, the first spraying about July 1st, the second about August 15th. For early varieties, of course, the treatment should be earlier. I think, in this country, it will not be found neecssary to spray early potatoes at all, or at most not over a single time—say, middle of June. The German experimenter recommends, above all others, the following preparation: 4 pounds 6 ounces copper sulphate, 6 pounds 10 ounces soda, 26 gallons water.

The Bordeaux mixture, whieh is recommended as second ehoice, and which is also entirely safe and effective, should be reduced to 6 pounds 10 ounees eopper sulphate, 6 pounds 10 ounees lime (caustie), 26 gallons water.

Of course, this mixture is to be made in the after-described way, by dissolving the copper sulphate in one vessel, slacking the lime in another vessel, then mixing the two liquids.

All potato growers should now recognize this faet, that spraying for blight and rot has become inevitable, and even more urgent and necessary than the applieation of poisons for the potato beetle. The sprayer is now one of the most indispensable implements in the potato field, as it is in the orchard and in the vineyard; and once in our possession we can employ it also to good advantage in applying our potato-beetle remedies eonveniently, speedily, safely and economically.

THE SPRAYER FOUND.—At last we are going to have a reasonably cheap knapsack spraying machine. Prof. Galloway, in the bulletin named, gives a full description with detailed illustrations of the machine. It holds a little over four gallons of liquid, and when full, weighs about fifty pounds. There is no patent on the whole or any of its parts, and any manufacturer ean make it and put it on the market without fear of being interfered with. A liberal estimate of cost, everthing included, puts it at $10.87; and should be placed on the market for not more than $12. The following firms, Albinson & Co., 2026 Fourteenth street, and Leitch & Sons, 1214 D street, both of Washington, D. C., are now manufaeturing it. I am sure no progressive farmer can afford to be without a sprayer. The $12 which it eosts will be saved and returned by its use many times almost every year.

By a little modification of the hose and nozzle part we can use it to spray our orchards to rid them of codling moth, curculio, seab fungus and other diseases; we can spray our potato vines for blight and potato beetles, our grape vines for mildew and rot, also for rose chafers and other inseets; our tomatoes for blight and rot; our eelery plants for blight; our cabbages for worms, etc. We can spray with kerosene and kerosene emulsions, buhach (insect powder) in solution; with eopper sulphate and Paris green solutions, ete. Liec and mites in poultry-houses, green lice on plants, bugs, beetles, etc., as well as the various fungous diseases now destroying our crops, will have no more terrors for us, when we have sueh an efficient weapon as the knapsaek sprayer, promptly used. Of course, I am going to have one, and this right away. I cannot afford to wait until spring, when I want to use it. I might have to wait weeks before I can get it, and be compelled to be without it just at the time it is most needed. The majority of people will do this very same thing.

The manufacturers will be crowded with orders at that time, and those tardy in ordering their machine will have to wait. I am sure this is not going to be my case.

Modifications of nozzles, one intended for spraying bushes from the underside and another for spraying large orchard trees, are described by Prof. L. H. Bailey, in Bulletin XVIII., of the Cornell University Experiment Station (Ithaea, N. Y.) The devices are simple and decidedly ingenious.

OX-WARBLE OR BOT-FLY.—Every observing farmer is probably acquainted with the larva of the bot-fly. During the spring or early summer one may often find along the middle and backs of eattle, just beneath the skin, hard lumps, usually having in the center an opening, whieh sometimes appears as a running sore. These are the warbles, and the lump is caused by the presence of a whitish maggot. Early in summer these maggots wriggle out of the warbles and fall to the ground, where they soon change to the pupa or chrysallis state, and a month later emerge as adult flies, ready to deposit eggs again on the baek of the cattle. The eggs hatch into grubs that work their way into the skin to form the warble cells, irritating the flesh and causing ulceration, whieh is distressing to the animal, injures the hide aud flesh, and lessens the quantity of milk. The aggregate damage done to cattle in the United States by these insects is simply enormous. Prof. Clarence M. Weed, in an earlier bulletin of the Ohio Experiment Station, gives a full account of the doings of the bot-fly and recommends remedies.

"Perhaps the simplest remedy to use during spring and early summer," he says, "is to squeeze the maggots out of the warbles. When they are nearly full grown this can be done with little trouble; and when smaller, the opening can be enlarged with a pen-knife so as to let them out. A pair of medium-sized forceps are often helpful in removing them.

"Another simple remedy is to apply to the opening a little oil or grease, whieh closes the breathing pores of the maggot, thus causing it to die. Kerosene applied to the warbles either in autumn, winter or spring also destroys them, as does, indeed, the application of almost any oily or fatty substance. The destruction of the larvæ

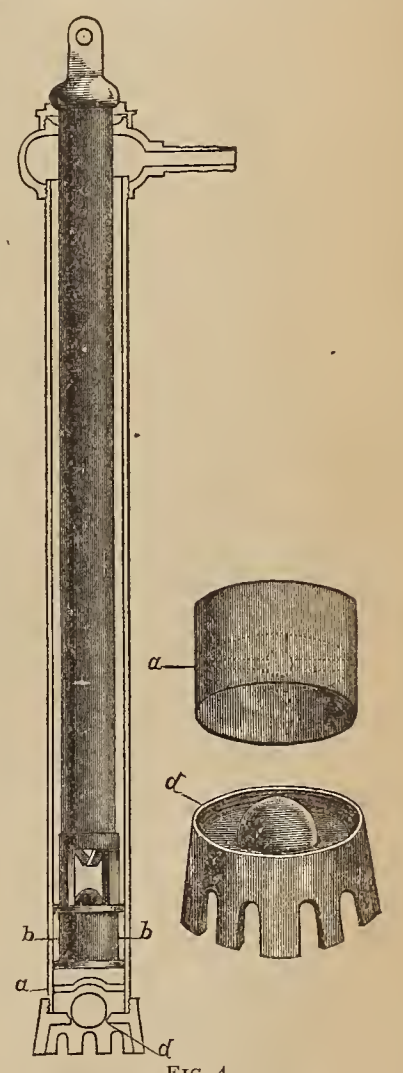


FIG. 4.

in this way may be effected by one or two applications in autumn, and is the most satisfactory method of controlling the pest."

Now is the time to apply the remedy. It is not much trouble, and will provent suffering to your cattle and loss to yourself.

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

USE OF FRAMES DURING SUMMER.—Egg plant, if well prepared, is a palatable dish, and at the extreme North especially, even a luxury. As the plant at the same time is handsome, curious, yes, ornamental, I always plant a few dozen of them. Of course, the large Improved New York Purple is too late for ordiuary purposes here in western New York, but the fruit is so immensely large and so handsome, that I think it pays me to take a little extra pains with it. So I start my plants in the usual way. It requires more heat, both for germination of the seed and growth of plant, than tomatoes. As soou as some of the frames become vacant, say early in May, I dig the soil over, and set these egg plants about twenty inches apart each way, and give glass protection until along in June, when the weather becomes real hot. Then the sashes are taken off entirely. Hot and dry weather, however, is trying to plants in frames, and it is necessary to protect the soil from drying out too fast. For this purpose I put a good mulch of moss or similar material all over the groun I between the plants. and thus secure a good crop of "eggs" for table use.

Later in the fall I make use of my frames for growing parsley, lettuce, spinach and radishes. I like parsley for flavoring my soup, fish, etc., and so I take up a few plants from the bed outdoors, and plant them in the frame under glass in October, or even November. More protection by straw or mats is given in winter; thus, I can have my parsley right along. Lettuce, radishes, etc., should be planted early enough to make their growth before winter.

JAPANESE EGG PLANT.—I have spoken of this on an earlier occasion. It is remarkabie for its hardiness. Seed germinates freely at about the same temperature required for tomatoes, and the plant grows under the same conditions that tomatoes will. Its growth is less succulent and more spreading than that of our larger egg plants: color of stalks and leaves, a dark purple; stalks without spines. The fruit is rather small, seldom more than six inches long by four inches wide; but it is plenty large enough for table use, and it makes up in number what it lacks in size. I often count six or eight specimens on one plant. At this writing, October 8th, the large New York Improved, in open ground, is badly hurt by the light frosts we have had; while the Japanese egg plants have hardly lost a leaf.

POTATO ROT.—While we had little trouble this year with potato-bugs, the rot has proved a much more formidable enemy. The destruction from this source is such that I now fear the country will not have potatoes enough to go around. My private news from the great potato sections are discouraging. Prices will be near the prohibition point. Seed potatoes next spring will cost us a nice lot of money, and the country will have use for all we can get, foreign as well as domestic. Just at this time I deplore the increase of the tariff on potatoes to 25 cents a bushel. For this season, at least, it can only help to make a bad matter worse. I advise all my friends to be very saving with their potatoes. Let none go to waste; feed no sound tuber, no matter how small, to stock. Save everything, as there will be demand for anything looking like a potato, at good prices.

THE MELONS.—We have again enjoyed the fine Emerald Gem melon in abundance, even in this cool, wet season. I have not found an earlier nor a better sort than this. True, it is small, but, oh, how delicious; how sweet; how spicy and rich. Under high culture some of the fruit will be of fair size, yet many specimens are quite small. Even the smallest, however, are enjoyable. Having a lot of small windows, which could be spared from barn and poultry-house in early May, I made small frames to fit them, and planted my melons—both Emerald Gem and Volga water—in large hills using plenty of seed and scattering it over the whole space to be covered by one frame, then adjusted the frames and put on the windows. The plants started up quickly, and in the rich soil grew vigorously under this glass protection. No bug troubled the vines until after the glass was removed, first partially and afterwards entirely, and as there were plenty of toads around, one or more were placed inside of each frame, and here they served as police. Bugs had no show whatever. Most of the hills had more plants than needed, although I thought best to leave a good many, as the hills were somewhat far apart. The surplus plants, however, were taken up with a chunk of soil on a spade, and were transplanted to new hills. In my tenacious clay loam this operation turned out to be quite successful, some of the transplanted hills doing fully as well and gave ripe fruit as early as the original hills. As soon as the plants began to run vigorously at the advent of hot summer weather, the frames were removed, and are ready to do service again in the same way next season.

I shall try to get a few loads of sand next year, and then mix a wheelbarrowful with the clay loam in each hill. I imagine I shall have earlier melons by such treatment. I succeeded in getting a few good, ripe watermelons (Volga), but they were small and late, and not quite as good as the fine ones I raised on New Jersey sandy loam. Perhaps, by the free use of sand, as mentioned, I may be able to grow good specimens here. At least, it will be worth the trial.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

SUN-SCALD.

In settling at Nora Springs, in Iowa, in 1853, we found a few hundred acres of the most noble of deciduous trees I ever had the pleasure to behold. There were ash over one hundred feet high, oaks and black walnuts, nearly, if not quite, as tall, and many over four feet through at the ground, and quite a number of each of the latter fully five feet through. We had many fine butternut trees nearly as tall and as perfect, and as free from sun-scald as could be. The town was located near the center of this grove. The old trees fast disappeared before the woodman's axe, and in their place there came up hundreds of young trees, many of which were left along the streets, in vacant lots and corners, for shade and ornament. These were mostly trimmed up, and in a few years were nearly all found with more or less of their trunks leaning from the sun, and in all these cases the bark and sap wood was found dead and rotten, often rotten to the center of the trunk. What strikes the casual observer with surprise is these unerring facts as they present themselves; namely, all trees susceptible to sun-scald, such as butternut, black walnut, maple, hickory, ash, cherry, and every variety of our common apple, are found dead or dying if they lean from the sun; while all of the above varieties, and many others, if found leaning to the sun, are perfectly sound and healthy. Even where they start from the same stump and grow *to* the sun they are invariably found sound; if *from* the sun, they are universally found dying or dead. All through the groves and thickets, where they protect each other from the steady, direct rays of the sun from 9 A. M. until 4 P. M., they are found perfectly sound, no matter how much they may be found leaning from the sun. By no means is it necessary to have their trunks entirely shaded to prevent this injury. Anything that will partially shade the stems will effectually disarm the evil effect of the sun. A limb or bush placed on the sunny side will entirely protect from this evil. It is the steady, continuous rays of the sun for two or three hours that puts its dead marks on very many varieties of both fruit and forest trees. I have found it impossible to grow any variety of the apple tree, with the trunk high and no protection, except it be grown to the sun. I have grown them with high tops, with low tops, and with leaning trunks. High tops should always be avoided in the North-west, as such pave the way for long years of watchfulness and care, to keep such a tree constantly protected.

All trees leaning fairly to the sun are self-protected, and if so kept till the trees are thoroughly established, will cease their inclination to grow off to the north-east. Trees branching low, and properly trained, are self-protecting; but rabbits and mice, to say nothing of sheep and calves, are always constant foes to the low-headed apple tree. Then head your apple trees three or four feet high, set the main branches towards half-past one o'clock, keep all branches off from the north-east side till the tree has borne three seasons, and then the tree will cease to stray to the north-east, and will build itself up in the way it should go.—*Edson Gaylord, in Minnesota Horticultural Report*, 1890.

CORRESPONDENCE.

HENDERSON'S BUSH LIMA.—I must say a good word for this bean, especially for northern climates. The larger sorts are so late for this section, that, although I have tried them year after year, all the good I had from them were pods. Now the Henderson's Bush Limas are very full, and this is a poor season for garden stuff, on account of dry weather lasting almost all summer. They are also of better quality than the large sorts. LIZZIE HOFFA.

Iowa.

FROM CANADA.—The province of Ontario usually produces many thousands of barrels of superior fall and winter apples for exportation to the English and north-western markets, including British Columbia and the province of Quebec, and quite often the New York dealers in fruit purchase largely of our Canadian fruits, as our fruits are larger and more free from the effects of insects, and do not spot so bad, as a rule. This is especially the case with apples and pears. The apple crop here, this year, will not be sufficient to give each family one barrel. In the province of Ontario, one of my neighbors offered me the crop of 1,200 trees for six barrels of winter apples. This will give the reader some idea of the shortness of the apple crop in the province of Ontario. There will be no trouble to get rid of the surplus stock of canned and dried fruit this year. Plums and pears are very scarce, and pears are badly spotted, and so are the apples in many places. The Snow apple seems to be more subject to spot than some of the winter varieties. The only variety that seems to be proof against the spot is the Duchess of Oldenburg. There is a case a few miles from here where two neighbors have adjoining orchards. One of them keeps fifteen or twenty hogs. They have free scope in the orchard, while the other has allowed his orchard to go to grass. The orchard in which the hogs run is in full bearing and free from spots, and the other orchard has but very few apples, and spotted so badly that they are worthless. Our apples never spotted here till about six or seven years since. I have 800 bearing trees, and two years since they were free from spots, and I had nearly 300 barrels. Last year, they were badly spotted. I had only ninety barrels. This year my crop is badly spotted, and I think I will not have over fifty barrels. Buyers are here, and want to contract for everything in the shape of fruit, and I fancy that fair, salable, winter apples will be worth from $3.50 to $4 per barrel. Western Ontario usually produced a fair peach crop, and this year we have none, and I observe that there is no peach crop in New York, New Jersey, Delaware, Maryland, and other southern and western states, and there is no doubt but that the tropical fruits will have to supply the deficiency in many cases.

Trenton, Ont. J. H. P.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Old Raspberry Roots for Planting.—B. E. H., Reading Centre, N. Y., writes: "I would like to ask, through your horticultural department, if raspberry roots grown from old, bearing bushes, six or seven years old, are as good as those grown from young bushes that have borne no fruit?"

REPLY:—If the old plants are thrifty and vigorous, their offsets will be. Should prefer to propagate from strong, healthy stock, and whether it is young or old matters very little.

Strawberries for North Carolina.—C. W. B., Biltmore, N. C., writes: "I am just starting a home at Asheville, N. C., and wish to plant a strawberry bed. Please inform me what varieties you would select for this climate and altitude."

REPLY:—The Crescent pollenized with Wilson, set alternately, would be a good arrangement for a productive bed; but for high quality you had better try Miner's Prolific. I think, also, that Triomphe de Gand would do well for your garden.

Currant and Grape Cuttings.—E. W. G., Albion, Mich. Currant cuttings, for the best results, should be made in August or September, when the leaves commence to fall, but may be made at any time before growth starts in spring. They should be from six to eight inches long, and planted at once in rows two feet apart, with two inches between the cuttings, in a rich, moist loam, making sure that they receive a firm pressure around the base. All but two inches of the cutting should be below ground. Before hard freezing weather sets in, the bed should be covered with several inches of mulch to prevent the action of frost throwing them out of the ground. They are ready to plant in the field when two years old. Your inquiry in reference to grape cuttings was answered in reply to another correspondent.

Sumac Leaves.—W. E. C., Illinois. Sumac leaves are gathered in quite large quantities in some of the states, as far north as Massachusetts. Some attention is paid to gathering it, but the leaves grown in Virginia, and southward, contain much more tannin than those grown farther north. The smooth-leaved sumac (*Rhus glabra*) is the most valuable of our native species for tanning purposes. The usual course in gathering the leaves is to gather them without much regard to season, and, after drying them, to sell them to the owners of mills for grinding. The proper way is to gather the leaves when full of sap, and before they turn red or begin to wither, and especially before frost. After wilting in the sun, they should be spread on shelves or racks to dry, in a shaded place. Its value is judged by the color of the leaves, which should be of a light green color.

Seedling Apples—Seedling Peaches—Grafting the Pear on the Apple.—W. L. W., Clarksville, Ind., writes: "Is there known an apple that the seeds will bring the same kind of fruit every time?—What are natural seedling peach trees, and is there a seedling peach that will bring the same peach from the seed?—Could pear scions be grafted on apple seedling roots the same as apple scion with the same success?"

REPLY:—There is not *known* an apple of our cultivated kinds that comes "true" from seed. It has been often claimed for several varieties that they would, or had, in some instances, come from seed and borne fruit similar to that of the parent tree. This has been claimed for the Nickajack apple.—There are several varieties of the peach that produce trees true, or nearly true, to the type from seed. By natural seedling peach trees is meant those from unimproved stock, which is supposed to have more vigor than the cultivated kinds. Such stock is found growing in an almost wild state in Tennessee and similar climates.—Pear could be grafted on apple, but they do not unite closely in their cell structures, and after a short time the graft will die. It is not a practicable method of propagation, although a possible one. When grafted below the ground I have had them do fairly well, but in such a case the scion itself sent out roots, and was able to care for itself after a short time.

Grape Cuttings—Grapes Failing to Ripen.—W. A. B., River Vale, Ind., writes: "Please tell an amateur, through your columns, whether grape cuttings which were set out in the spring and have made a fine growth, should be transplanted this fall to where it is intended they shall grow, or whether they should remain where they are until next spring.—My Focklington grapes (six-year vines) have failed to ripen for two seasons. Can you tell me how to remedy this next year? My vines are vigorous, and the grapes attain full size, but remain hard and green. I am only one degree north of Louisville, Ky."

REPLY:—Some growers plant out their vines in the fall, putting a mound of earth over each to protect from freezing and thawing. Others prefer to lift the young vines in the fall and to bury them until spring, and then plant in the vineyard. The success of the work in either case depends upon the care with which it is done. If you plant rather deeply, and firm the soil well around the roots and stem, and put at least three inches of soil over the whole plant for protection. I think the fall as good as spring planting; but if you have to leave the work to incompetent help, or have not much experience in planting yourself, you had better plant in spring; but in either case the vines should be lifted in the fall.—If your vines are vigorous, and do not drop their leaves before the berries ripen, I do not know what is the matter with them. Perhaps they are not true to name.

Quince Cuttings—Tool for Cultivating Orchards—Analysis of Fertilizers.—J. C., Pleasant, Ind., writes: "I want to save some cuttings of quince trees this fall, and don't know anything about the way to do. Please make it plain.—I have an orchard with trees twelve feet apart. Is there any tool that I can cultivate the ground with and not get it in ridges? I want to break it up in the spring.—Who could I get to analyze sample of fertilizer, and what would be the probable cost?"

REPLY:—Quince cuttings may be made from one-year-old wood, and from this up to wood four or five years old. They should be made from six to eight inches long, in the fall after the leaves have fallen, and should be buried in sandy, or light, well-drained soil, outdoors, until spring. Plant out early in the spring, in rather heavy, moist soil, so deep that only two buds will be above the ground. They do not do well on light soil. They are easily propagated by layering the branches in the spring. Nurserymen generally propagate them by grafting short quince cuttings on very small pieces (three inches long) of apple roots. When so grafted they grow very readily and throw out roots. After one season's growth they should be taken up and the apple root, which has now only partially united with the quince, may be broken off.—There is no other tool that will do the work of a plow in breaking up sod. The simplest way is to back furrow one way the space between the rows, throwing the sod from the bushes this fall, and next spring, rather late, cross plow, doing the same thing the other way, and then finish, if possible, with a disc harrow, which will cut up the turf and leave it in good shape for a crop. A disc or "Cutaway" harrow is a very nice tool in such a place.—The state inspector of fertilizers, at the experiment station, Lafayette, Ind. The cost will depend upon how much you want to know. An ordinary analysis of a commercial fertilizer ought not to cost over $3, and might be done for nothing, for the state makes provision for doing free such analytical work as is of general interest.

Our Farm.

OUR ALLUVIAL DISTRICTS.

PRIOR to the emancipation of southern slaves, the levees on the Mississippi and Red rivers kept off the overflows from those fine cotton and cane plantations which form a continuous clearing along their banks. During the war, many of these levees were cut and many thousands of acres of the most productive soil on the continent were rendered unavailable for cultivation. Since the restoration of peace, the river planters have made many efforts to rebuild the levees, but the work is one of such magnitude that they have not been financially able to more than partially restore them. The great overflow of 1890 will long be remembered for the loss it occasioned to those unfortunate people. In their present crippled financial condition they can do nothing, comparatively, to protect themselves. Our congress makes yearly large river and harbor appropriations in aid of navigation, but, so far as I know, no steps have been taken by the general government to rebuild the broken levees and build new ones where needed.

Going down to the bed rock of the situation, as it were, is it not more important to advance the productive interests of these fertile valleys than to devote so much money to the interests of transportation companies? Is it not more important to first make provision for the production of something to transport, and then lookout for the means of moving this produce?

It does not follow, however, that the giving of government aid to levee purposes necessarily entails the neglect of the river channels. It looks reasonable that the confinement of the vast volume of water that enters the Mississippi and its tributaries during the spring to the channels of the streams would naturally deepen them and keep them clear of obstructions.

These overflows do not merely damage the current crop, but much material harm is done. This year's overflow drowned a great deal of stock, killed many fine orchards, and washed away the rich surface soil of many acres. It also cut much land up into immense gullies, thereby utterly destroying many fertile acres.

Considering the loss entailed by these spring floods, it would seem a matter of great economy for the general government to take full control of all our levees. The state of Louisiana is giving what aid she can to assist her planters to rebuild their levees, but state aid, even, is not sufficient to meet the exigencies of the case.

Much of the overflowed cotton land this year was not planted until the middle of June. On a recent visit to Red river bottom, I saw many acres of this late cotton that looked green and vigorous, and full of young bolls, forms and blooms, while the old cotton had completed its growth. Should the fall prove late, and frost be delayed, much of this late cotton will make half a bale per acre. Had it not been for the overflow, the same land would have made a bale per acre. Now, would it not be politic for our government to spend a few million dollars on these levees in order to insure a full crop instead of a half? The object of all law is "the greatest good to the greatest number." A full cotton and cane crop on our river bottoms certainly means more general good than half a crop. More cotton and cane means cheaper calicoes, domestics, sugar and sirups for the masses.

NEEDED REFORMS.

Our river planters work on the plan of large areas rather than thorough culture. With good levees, there is no agricultural region in the world where *intensive* instead *extensive* farming would pay better. Their present methods, though, will hardly undergo much change until security from inundation is assured.

As a rule, the river planter is a merchant also, and supplies his tenants and hirelings (usually Negroes) with all the goods they consume. There is one very reprehensible custom which is almost universally followed by these river planter merchants; that is, the sale of whiskey. They claim that they are compelled to sell it in order to secure labor, but there is little or no truth in this argument. There are country stores in other sections, and some few in the river bottoms, where liquor is not sold, and where labor is just as easily obtained. If the river planters would banish whiskey from their stores, they would greatly improve their labor. Instead of general drunkenness and shiftlessness among their Negro tenants, they would be more industrious, better contented and in every way more reliable. Being very gregarious by nature, the Negroes would still flock to the big river plantations just as well without whiskey as with it, and be more profitable both to themselves and the planters. This liquor traffic is both a business blunder and a moral wrong on the part of our river friends.

DICK NAYLOR.

WINTER DAIRYING.

The advantages of winter dairying over summer are many. A cow will give more milk and butter in the year, to be fresh in October, than she will to come in in April or May, and she is doing her best at a season of the year when her product is worth most, when hired help is cheapest, and you have more time to devote to her welfare. It is a well known fact that milk is richer in butter fat during the winter months than any other time in the year. My cows, that were making one pound of butter to every twenty-four pounds of milk in May and June, are now producing the pound from nineteen pounds of milk. Better calves can be raised in winter than during the summer months, and when they go on grass in May, you have the skimmed milk for the pigs that should be carried in connection with the dairy; but it would be folly, in my judgment, to undertake winter dairying without warm cow-stables, warm water, proper and liberal feeding, and the best of care. Cows like a variety, and will do better than when fed continually on the same feed.—*Western Farmer.*

EXTRACTS FROM CORRESPONDENCE.

FROM OREGON.—The Willamette valley is one of the finest in the world. Salem, the capital of the state, has a population of 10,500. This is the best fruit belt in the world. Cherries, prunes, pears, plums, peaches, apples and every variety of small fruit is grown in abundance. Land planted to fruit yields from $300 to $500 per acre. Our climate is most healthful, and crops never fail. If you want to come west, no better place can be found than the Willamette valley, Oregon.

Salem, Oregon. E. C. M.

FROM MICHIGAN.—Last spring, many of our people sold out and disposed of their possessions for what little they would bring in cash, so that they could move away. But many have returned with far less than they had when they started, and others write that if they could be back, situated as they were, they would be satisfied to stay. This year has been very successful with us. We have had an abundance of fruit, with the exception of apples. Wheat, oats and rye are good, corn an average and potatoes splendid. The Grand Traverse region is the place for the poor man, if he is willing to work and work hard.

Summit City, Mich. J. J. K.

FROM MINNESOTA.—Cottonwood county is in the south-western part of the state, and is a fine farming and grazing county. Wheat and oats will make about half a crop; flax and barley are fair. Windom is the county-seat of this county. There have been lots of improvements made here this summer. Two large, brick buildings have been completed, and another is nearing completion. I came here from Ohio over three years ago, but I would not return to Ohio to live. I would rather face a blizzard than wade in mud knee-deep for about five months in the year. The churches are Presbyterian, Methodist Episcopal, Norwegian Lutheran and Baptist. J. L. G.

Windom, Minn.

FROM WEST VIRGINIA.—Marion county is becoming one of the banner counties of the state. We have no blizzards or cyclones, and as healthy a country as ever I saw. We raise all kinds of grain that can be raised in the temperate zone. We have an abundance of coal, of good quality. We have plenty of petroleum. Mannington is the center of the great oil field. There are several wells, and but two or three are dry. Mannington is doing a larger business than any other city in the state, and it will not be long before she will be the largest city. Carpenters are busily at work, and then can't keep up. There are hundreds of coke ovens doing a large business. We have good schools and churches. Land is generally high, especially in the oil regions. Farmers' Alliances are being organized in some parts of the county. H. T. H.

Mannington, W. Va.

FROM ARKANSAS.—This year has been a very prosperous one for Grand Prairie. The spring was very wet, rendering it impossible to get in the corn and cotton crop until very late in the season. But owing to the even temperature of the long summer and the peculiar, moisture-retaining and supplying nature of our prairie soil, the crops are maturing nicely, and corn will make a good average yield, and cotton is about the usual crop. Hundreds of acres of fine cotton have been produced on prairie land this season, which amply demonstrates that this is a cotton soil, and of the best quality. Another important item for this country is the building of two new railroads, one east and west, another north and south, practically opening up the whole prairie country to quick settlement. With such a delightful climate, productive soil, pure water, abundant timber, these cheap, choice lands will not long wait for owners. We want more industrious, wide-awake farmers, stock raisers, gardeners and fruit growers. The native "Arkansawyer" is as lazy as his appearance indicates and his home environments substantiate, and he will tell you that this is the best lazy man's country on earth, because one can make a living so easily. But we don't want any more citizens of this kind. We want men of energy, determination and good sense. R. S. G.

Ulm, Ark.

FROM SOUTHERN ARKANSAS.—In the rush of emigration to western Kansas, Nebraska and Oklahoma, Arkansas seems to be strangely overlooked. The drouth is driving out many settlers this fall from those regions, while here in the heavy timber of southern Arkansas we have been favored with plenty of rain. Our cotton, corn, potatoes, turnips, sorghum, strawberries, peanuts, etc., have done fairly well. Our average annual rainfall in Hot Spring county, Ark., is fifty-five inches, pretty well distributed through the year, the driest months in the year being September, October and November, when rain is least needed. Land can be had here as low in price as in the arid belt. Even this county, traversed by two railroads, is still three fourths forest, and several counties south and west of this are still four fifths woodland, heavily timbered, mainly with oak and pine. Most of this land can be had at government prices, or can be taken up by homestead entry. Our winters are mild. Peach trees do not winter-kill. The two essentials, timber and water, we have in great abundance; also a variety of minerals. There is no prairie south of Little Rock. Our uplands are not rich in soil, yet the natural facilities for making a living are far better than on those nearly treeless plains. Here lumbering, railroad ties, shingles and cord-wood furnish employment to all who are able and willing to work, as the saw-mills and railroads are utilizing immense quantities of pine and oak trees the year around. Within two miles of Malvern are two immense steam saw-mills and a shingle mill, employing an average of two hundred persons in cutting and preparing building material for shipping, both north and south, while the two railroads are generally ready to buy ties at twenty-five cents each, and cord-wood at $1.50 per cord. The reward for labor here is not large, but no man need be idle, winter or summer, fall or spring. Growing small fruits and vegetables for shipping, both north and south, promises to be an important industry, and the growing and shipping of the peach, pear, plum and apple will pay the man with perseverance, energy and some skill. Railroad charges are still higher than they should be, but are moderating gradually. Their rates are high in proportion to prices sent back to the shipper. We ship strawberries to St. Louis, 388 miles, to Hot Springs, 20 miles, to Galveston, Dallas and many other points north and south. We expect, within about two years, to have a new railroad, the New Orleans and North-western, traversing the state from near the south-east corner to the north-west corner, connecting Natchez, Miss., with Kansas City, crossing the Iron Mountain at Malvern, giving us a direct line to Kansas City northward, and New Orleans and Mobile southward. A. B.

Malvern, Ark.

Recent Publications.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

ALABAMA.—(Auburn) Bulletin No. 14, April, 1890. Pea vines as a fertilizer. Analyses of fertilizers. Bulletin No. 18, August, 1890. Climatology of Alabama.

IOWA.—(Ames) Bulletin No. 10, August, 1890. 1. Our rusted and blighted wheat, oats and barley in 1890 2. Experiments with arsenites. 3. Stocks for the cherry, plum, prune and apricot. 4. A chemical study of Blue grass. 5. Corn fodder.

KANSAS.—(Manhattan) Bulletin No. 12, August, 1890. Preliminary experiments with fungicides for stinking smut of wheat. Bulletin No. 13, August, 1890. Experiments with oats.

KENTUCKY.—(Lexington) Bulletin No. 30, August, 1890. Wheat experiments. A new wheat insect.

MARYLAND.—(Agricultural College P. O.) Bulletin No. 6, September, 1889. Commercial fertilizers. Bulletin No. 10, September, 1890. Wheat.

MASSACHUSETTS.—(State Station, Amherst) Bulletin No. 38, September, 1890. Feeding experiments with milch cows.

NEBRASKA.—(Lincoln) Bulletin No. 15, September, 1890. Meteorological record for the year 1889. Record of soil temperatures for the year 1889. Farm notes.

NEVADA.—(Reno) Bulletin No. 11. Plant lice infesting the apple.

NEW YORK.—(State Station, Geneva) Bulletin No. 23, September, 1890. Comparative test of cows. Loss in keeping manure.

SOUTH CAROLINA.—(Columbia) Annual report for 1889.

TEXAS.—(College Station) Effect of cotton seed and cotton-seed meal on butter product. Quality of sweet cream butter as compared with butter made from acid cream.

UNITED STATES DEPARTMENT OF AGRICULTURE.—(Washington) Experiment Station Record, September, 1890.

MEN, women and children, all ages alike, find endless pleasure with the new Parlor Game. The Elastic Tip Co., of Boston, Mass., are mailing this intensely amusing novelty for 75 cents.

Our Fireside.

"HANNER."

BY S. Q. LAPITS.

So, Hanner, you're goiu' to get married.
And leave your old father alone;
You're goin' to jump out o' the old nest.
To help to huild one o' your own.
Of course you are sure to be happy,
Whenever you marry Jack Heath,
But you're tyiu' a knot with yonr tongue, dear,
That yon can't untie with yonr teeth.

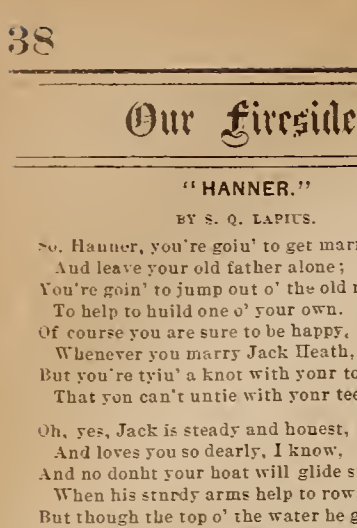
Oh, yes, Jack is steady and honest,
And loves you so dearly, I know,
And no donht your hoat will glide smoothly
When his stnrdy arms help to row;
But though the top o' the water he glassy,
There's rocks and there's sand-bars beneath,
And you're tyin' a knot with your tongue, dear,
That you can't untie with your teeth.

You're now in a flutter o' pleasure,
But life's not a picnic, yon'll find,
And when Jack is peevish and fretful,
Then you shonld he patient and kind.
So, remember, I left you this warning.
Along with the rest I heqneath,
That you're tyin' a knot with your tongue, dear.
That you can't nntie with your teeth.

Yes, Hanner, you've heen a good daughter.
Unselfish and lovin' and true,
But now you are leavin' the old nest
To help to huild one that is new;
So keep in mind your old father's advice.
When yon put on your hridal wreath,
For yon're tyin' a knot with yonr tongue, dear,
That you can't nntie with your teeth.

On Bohemia's Border.

BY DOROTHY SMITH.



CHAPTER I.

As the clock struck twelve, the little chocolate-pot which had heen simmering hefore the fire hoiled over with a sputtering hiss, and Mrs. Janet MacCossatt, who had given herself license for "forty winks," and had been taking something nearer forty thousand, jumped up from the big arm-chair with an energy which made the cheerful red how on her matronly cap hob agitatedly up and dowu for several seconds. She hurried, with a housewifely self-reproach through all the drowsy confusion of her sudden waking, to wipe up the overflow of chocolate from the polished tiles of the hearth, and stifle with a quick sprinkle of salt the tell-tale smell of its hurning. After assuring herself, hy a critical teaspoonful, that the conteuts of the pot hadn't "caught a scorch" through her neglect, she glanced rather uneasily at the big clock whose hands were industriously crawling along toward the quarter past midnight, and then, with the comfortable, rolling, soft-footed gait to be expected of her geuerous proportions, crossed the room aud pushing aside the draperies of dull-colored, old Persian silk, stood looking out into the snowy night.

One glanciug ahout the cosy, fire-lit room on which the good lady had turued her hack, to peer a little auxiously through the frosting window-panes, would hardly have guessed and wou his guess, at what manner of outdoor world she looked, when the curtain was drawn aside. There was about shape and furuishing and atmosphere—the velvety, shabby, old Orieutal rugs which, with their worn, lovely coloring, strewed the floor as with dusty jewels; the queer carvings on a dark Dutch chest, its top plied with photographs and engraviugs; the dozens of cushions, each lending a note to the full harmony of the room's color; the crowding pictures, large and small, framed and uuframed, which even in the subdued light won one to a certainty that they came from no 'prentice hand—all these details and that effect of gentle breeding and traditious which was the sum of them, would lead one to a guess that outside the window there might stretch some quiet, old west end street; one whose past was as eloquent of dignity and position as were the Oriental rugs and the Dutch chest within, though its present, perhaps, like theirs, hinted of something of wear and decline. But such a guess would have missed its mark.

Through the draperies, Mrs. MacCossatt was peering down at a narrow court or "place," appareutly wholly given over to business uses. The loneliness and desertion of night were upon it. The fitful flashing and falling of the electric light at the corner showed, by means of a three-foot sign, that the building opposite was occupied by Dryve & Hitchum, wholesale harness makers; the dark front of the tall, brick structure which but lately had replaced a row of cosy, irregular, old, wooden buildings, was frescoed with announcements of all shapes, sizes and manners of lettering telling of the various crafts practiced within. Indeed, to come within touch of the great world of business, Mrs. MacCossatt needed to go no farther away from home than down one of the many flights of stairs which gave approach to the old room of the rugs and the firelight. For there was just beneath the parlor of Madame Framboise, the manicure, flanked on the right by the editorial office of the *Theosophistic Communicator*, and on the left by the rooms of the Royal Beruheimer Orchestra, the familiar, brazen strains of whose nightly practice had helped to woo Mrs. MacCossatt to her too prolonged nap; and on every landing, as one progressed downward, there were evidences of as little domesticity in the uses of the various rooms of what had once heen as stately a house as any self-respecting Boston merchant might care to establish himself in.

It was, indeed, within the limits of good Mrs. MacCossatt's memory, that such an one had both owned and occupied the house to whose upper floor, in the days when the rugs' jewelled coloring glowed less dustily, and the Dutch chest held a just-doffed bridal gown, Alan Dowlar had brought across the sea aud across that yet wider gulf which separates the every-day social world of fixed traditions of etiquette, aud precedent and conveutionality which is sometimes called Philistia, from that sunny, irrespousible, happy-go-lucky realm which is called Bohemia, his girl wife. Those who knew her best—aud chief amoug them her childhood's friend, Anne Ripley, who had been married and brought to America by a famous hanker years before Margaret Dowlar had left her happy English home—said that the double transplantatiou had wrenched with too rude a strain at the tastes and the habits which were as the roots that held the life of the gentle young English girl to the life of the world which never seems a quite congeuial dwelling place for hearts as sensitive as hers. She had loved Alan Dowlar with the love of her whole nature; she had never for an hour repented following him to a land and a life far alien to her own; but the merry, careless world of Bohemia had never been home to Margaret Dowlar, nor had its ways ever grown to be her ways. Yet, blessed with a love richer than most women know, hers had been a happy life in that pleasant studio, and the quaint little rooms grouped about it, on the topmost floor of the old house on Roscommon Place. Bright and tender memories consecrated the place to her, as the years went by. Here came to enrich her life the two little lassies whose attitude toward that life so strangely reflected her husband's and her own. Helen, who grew so tall and strong, with the keeu and merry and brave gray eyes which might have been Alan Dowlar's eyes seen in a mirror, so like were they, and all her father's impatience of forms and restraints, and his full-breathed delight in the free Bohemian atmosphere which trains individuality to no strait trellis of precedent. And, seven years later, fragile, gentle, little Lois, with her color that fluttered like a wind-blown rose, and her quaint, little orderly ways, so like her mother's, and her inborn perplexity and discomfort at the queer ways of doing things which, in Bohemia, make what has happened yesterday give no suggestion whatever as to what is likely to happen to-morrow.

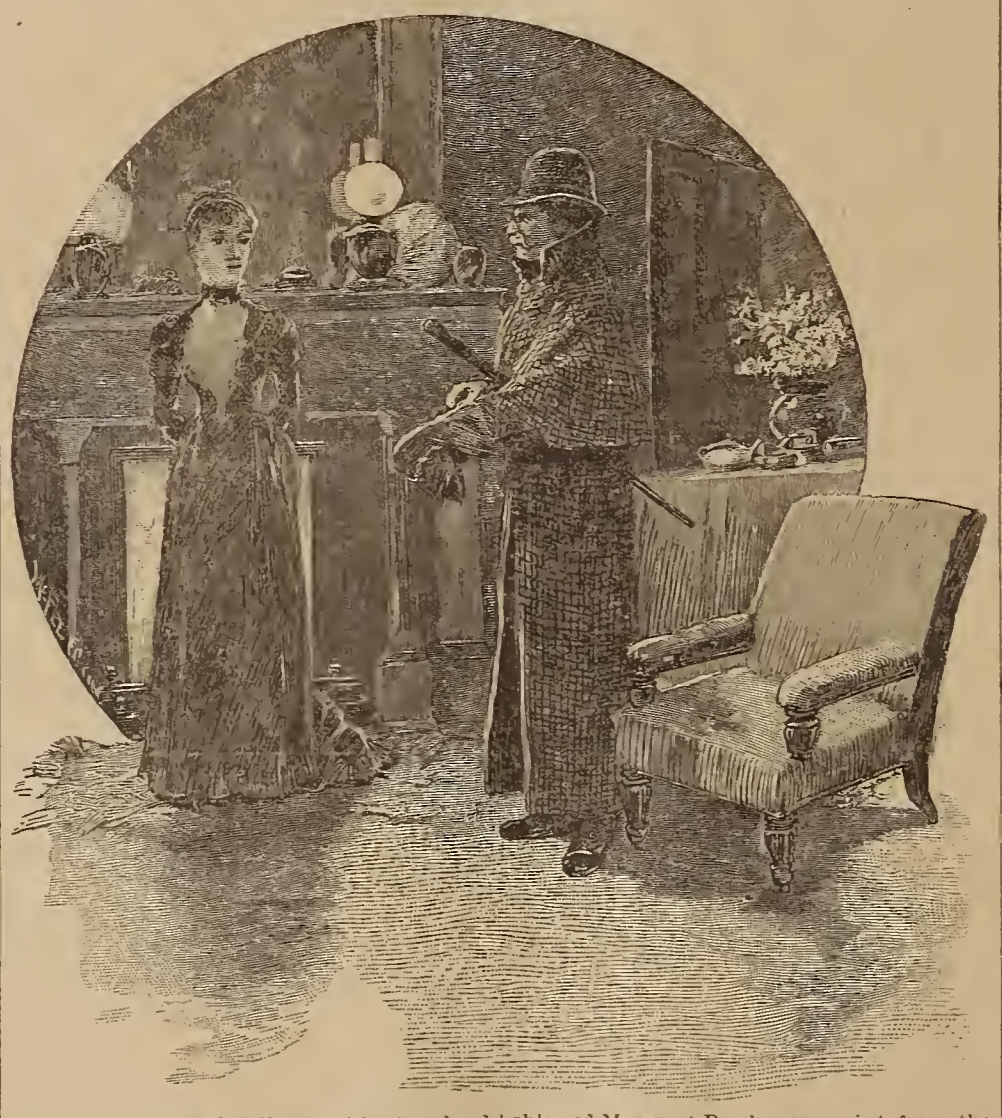
Yes, through feast days and fast days, her home grew dearer to Alan Dowlar's wife, until that black and fatal day when she had urged him to rest himself from so much hard work in that brief yachting cruise down to Mt. Desert he had been asked to share. He had kissed her many times, with the loverlike closeness of tenderness he had never lost, when he had parted with her that day. He had gone down the stairs lingeringly, as one who leaves his heart behind him. And four days afterward, they had brought him up the stairs, dead. Drowned in the splendid and fruitless effort to save his friend's son, swept overboard, that black night of fog and tempest off the rocky Maine coast.

There was nothing in the environment of her life to hold back Margaret Dowlar from going to seek her husband.

"Alan would miss me more than the children would miss me," she said, when she was dying. "Janet will not let them forget us, and Helen is so strong, so like her father, that it seems almost as if I left Lois to a brother's care."

It was curious that she never seemed troubled by anxiety as to the material future of her little daughters. The one comfort she had drawn from the life of Bohemia had, perhaps, been the knowledge that life is practicable, and sometimes even interesting, when one has no bank account whatever, aud that the most practical of friends are often those with whom the next day's dinner is an hypothesis. It had proved, however, to every one's amazement, that in this case there was a substantial substitute for the bank account, in the life insurance policy which Alan Dowlar, concealing this provision for the future as carefully as if it had been high treason against Bohemia, had taken out on the day his eldest daughter was born, and had kept paid up, with what shift through pinched and rainy days it is hard to imagine, to the day of his tragic death.

Its income was not great, but Anne Ripley had loved her gentle friend well, and she had a deep purse and a generous heart; and then there was old Dr. Ainsworth, who had worshipped Margaret Dowlar as a saint, from the day she had said of his motherless boy Max:



"Ah, poor, dear, little lad! Doctor, bring him home to me to get *mothering!*"

And so, though Helen Dowlar, child that she was, would share no home opened to her, but clung to the old rooms where the father who was her idol had loved and worked and dreamed.

"And where his children will sometime do work that shall not shame him," she cried.

Somehow, life went not ill with the orphaned girls; and Janet—who had been foster sister, servant and guardian angel, all in one, to Margaret, their mother, and who had transferred to their helpless childhood all the homely passion of loving service that their mother no longer needed—saw them grow to womanhood and beauty and strength, as different from each other, aud yet as bound together in depth of love as had been the father and the mother before them. She had seen many another change, from her place in the chimney corner of the old studio, as the years had come and gone.

Kind old Dr. Ainsworth's footsteps ponderously climbed the many stairs no more, though Max Ainsworth, boy no longer, but since a decade of years the inheritor of his father's place and work, had inherited as well his familiar fireside seat in the old studio, and his intimacy as friend and counsellor and helper. Something of Helen Dowlar's proud, childish prophecy seemed by way of coming true; there was artists' work done under the sloping roof of glass which used to light Alan Dowlar's easel, that did not shame his name and his ambition. The reviews had had more than one fine word to say of that little book of "Guesses and Insights," which had been Helen's last year's contribution to the vexed question of realism in art. And no more quaintly delicate etchings went out to charm the patrons of the great art shops than those which grew, under needle and acid, in the slender hand of girlish Lois.

There was pardonable pride beginning to mingle with the always honest affection of Anne Ripley, for the two girls who, thanks wholly to Helen and not to Lois, she found it every day more difficult to woo across Bohemia's borders into the drawing-rooms of Philistia.

It was with satisfaction enough, always, that Janet saw them go, for her dreams and ambitions for them were not Helen's dreams and ambitions. It was with pride and pleasure she had sped them on their way to Anne Ripley's, that late evening when we have left her standing so long, and peering so anxiously down through her parted curtains into the snowy silence of Roscommon Place. Midnight was a most unheard of hour for Mrs. Ripley's decorous "evenings" to extend themselves to, and it was with a "Thank goodness aud gracious!" of immense relief, that just before the old clock struck the half hour, Mrs. MacCossatt saw a herdic turn the corner from Tremont street, and plunge its way heavily through the deepening drifts to the door below her window.

It has already been mentioned that good Mrs. MacCossatt no longer moved with the lightness of first and slender youth, and it was not to be wondered at that she had hardly crossed to the hearth and lifted the chocolate-pot to its last quick boil, when the door was flung open and her girls, with, as she had counted upon, Max Ainsworth in brotherly charge of them, came blithely in.

"Now, may I please to know," cried the good woman, loosening Lois' snow-sprinkled cloak with as quick, solicitous tenderness as if the girl had been in truth still the "baby" she often called her, "what junketing has been a keeping you to such hawful hours—with 'ere it is morning, and I scared all to a tremble? If you're after ten o'clock at Hanne Ripley's," she went on, with the confusion of her h's uncommonly strong in her earnestness, "I think you're upset or kidnapped or something, sure; for I know 'ow Nell 'ere 'ates parties——"

"And Nell 'ere 'ated this party quite as much as its predecessors, I assure you," said, composedly, the tall, gray-eyed young woman, who, having laid aside her wrappings, was deftly "milling" the contents of the chocolate-pot to a highly appetizing froth, "and she would have come home at her usual decorous hour, if her sister had not been kiduapped, and, in spite of the mad efforts which Max assures me he made to rescue her, not returned to my charge until the last guest but one had departed, aud the butler came in to turn out the lights."

"Oh, Nell," cried Lois, laughing, while her face grew as pink as the heart of a rose. "I always told you that your forte was romance, and not essay writing. When you know Mr. Caird was not presented to me at all, until just before supper; and it could not have been much more than an hour that we sat on the stairs, in the plainest sight of you all, as you know quite well. I ought to have come to you earlier, perhaps, Nell," with a wistful look at the little shadow on her sister's face, "but he was telling me Harvard stories—you know he only graduated last year—and they were so amusing; and it was so pleasant to see the pretty gowns and hear the music. Nell," she cried, suddenly, and ran impetuously to her sister and reached up a light, caressing hand to her cheek, with a sort of pleading touch, "I did not mean to vex you, dear. I know it does not please you to have me so happy in my glimpses of the world that is not our world! It seems frivolous to you for me to be so entertained with commonplace people and amusements and talk. Nell," and the light hand fell to her sister's shoulder, where, with a little confiding gesture, Lois' bright head nestled itself beside it, "I sometimes think I reverse Hans Andersen's lovely little story, and am the duckling born among swans. For while you are so happy with the people who think great, free, original thoughts, aud talk about wise questions, and do all sorts of odd things if they feel like doing them, I cannot help feeling more at home in the safe, dull, old-fashioned, orderly ways, and with the people who are just like other people."

"But I tell you, Lois," her sister said, and there was something as eager in her tone as if Lois had spoken in accusation instead of in soft apology. "I tell you, Lois, that is because you idealize this life of which you know so little. You would weary of the limitations of it all; the hard and narrow judgments, the dread of anything true and new. And cannot you understand, poor child, that no one can have place in Philistia who cannot wear the fine and appropriate gowns which are the uniform of Philistia, and date their life from some well-set-up house on a street in Mrs. Grundy's directory——"

"Nell," said Dr. Max, "I trust you will excuse my mentioning that the froth is rapidly leaving that chocolate, and, in my professional opinion, chocolate without froth——"

Mrs. MacCossatt had brought forward a little round table into the firelight, set with

qualut, shallow Indian cups aud saucers, and they drew their chairs about it, as if it were quite a matter of course to partake of chocolate and cakes as the clock was striking ooe in the morning. And as they sipped and chatted, the doctor, as he had done many a time before, attacked Helen Dowlar's contemptuous estimate of the world which lies outside Bohemia, aud protested that she showed, in her wholesale condemnatiou of it, a narrowness as reprehensible as auy she found in it to hold up to scorn.

"There are all sorts in Philistia as there all sorts in Bohemia, Nell," he said, "and that I, who live on both sides of the line, can testify. If on one side there is the arrogance of money, on the other there may be an arroganee of brains and talent. And it is all nonsense to say that because one happens to have money aud be accepted in Philistia, that he is necessarily a fool or a snob. Now, Archie Cairn, for instance, whose monopoly of Lois you resented so much to-night, for all his inherited half million is as simple aud jolly aud honest a lad——"

"I was sure you thought so, Max," cried Lois, in soft interruption; and the glance she turned upon him was full of an odd sort of gratitude. "It was easy to guess that you approved of him from the way you looked him all over, from head to foot, with that smile as if you were 'taking stock' of him, somehow, as you held out your hand to him."

"And for how long has—in spite of the slight discrepancy of your years—this union of souls existed between you and Archie Cairn, Max?" asked Helen, and her voice was not as merry as her light words.

"Oh," said the doctor, laughing, "young Cairn has looked upon me as the model of manly virtues ever since he discovered that I was honored with the familiar acquaintance of the younger Miss Dowlar; and I," said Max Ainsworth unblushingly, "have regarded him with burning affection since I realized him to be the nephew of Mrs. Harriet Griswold, who, as all the world knows, is one of those millionairess invalids whom to secure as a patient justifies any doctor in marrying aud settling down at once."

"And have you secured her, then," asked Lois, saucily, "that you make such a step in the marrying direction as to spend a full hour this evening in the society of Miss Emily Westhorne? Mr. Caird tells me she was quite the belle at class day, this year, and I am sure that for dangerous prettiness——"

Dr. Max smiled behind his moustache.

"With a vanity unworthy my years," he said, "I yearned to show the gilded youths of twenty-one that one may be double their age and yet not be quite out of the race. And I confess I had a curiosity for a closer acquaintance with a girl of whom I heard one of the most critical dowagers in Philistia say, to-night, 'I do not believe that girl has a fault in the world!'"

"I could find that easy enough to believe," said Helen Dowlar, laughing, as she began to help Janet clear away their little feast. "She certainly looks as if she hadn't a characteristic."

While the doctor was protesting against such a waspish comment on "such a charming girl—really a type, Nell," Lois bade them good-night.

"And thank you, Max, for making the evening so nice for me," she said.

When Mrs. MacCossatt had followed her, and the doctor was looking up ulster and gloves, aud good naturedly grumbling over the prospective chill of his snowy, homeward walk, Helen, who had been standing before the fire, lost in a not all-pleasant reverie, asked abruptly:

"Max, what had you in mind, to-night, in presenting Archie Caird to Lois?"

"Why, what should I have in mind," he answered, somewhat taken aback by the quality in her tone, that was somewhat like a challenge, "but to make her evening amusing in the society of one of the cleverest young fellows I know, and to triumphantly keep the promise I had given him to introduce him to the personal knowledge of 'the girl with a face like a dream.'" He paused and laughed a little. "I don't suppose Caird would thank me for quoting that rhapsody of his," he said. "But the truth is, that once, when I happened in at the Athenæum Library, I came upon Caird, established in a chair before one of the bookshelves—the one with the works on Assyrian inscriptions, by the way—taking surreptitious surveys over the top of his book, of a young woman who sat reading by the great window. She was well worth peeping at, Nell, for she had the most sensitive, great hazel eyes in the world and hair that makes sunshine in a shady place; and her cloak, with its fur close about her white throat, was draped as only an artist's hand could have draped it; and her face, against that pale background of gray sky and phantom trees, looked like the face of some old picture. As I passed Caird, after I had had my word with her—her name was Miss Lois Dowlar, Nell—that young man sprang at me with an effusion which I assure you flattered me deeply; and *did* I know that young lady, and might he be told her name——"

"And you told him, I hope," said Helen—her cheeks had taken on a sudden depth of color, and her eyes were very bright—"you told him, I hope, that she was a quite impossible acquaintance for Mr. Archester Caird, the orphaned and wealthy nephew of Mrs. Harriet Griswold of Commonwealth avenue; that she was a girl who lived up any number of stairs in a common court somewhere in the business part of the city, and worked every day at the making of etchings, or some such Bohemian occupation——"

"I told him," said Dr. Max, speaking very quietly and slowly, as he towered before her to the height that shamed even hers, aud drew on his heavy fur gauntlets, looking quite steadily, as he spoke, into her proud and shining eyes, "I told him that she was the daughter of Alan Dowlar, the well-known painter of the best marine pictures America has ever exhibited, and the dearest friend of my dear old father; that she was a girl with a nature like a wild flower, aud gifts of mind and heart as rare as her sweet face; and that her home had been a home to me since her mother, in her great love to the lonely lad that had never known mothering, welcomed me to it, five and twenty years ago."

Her eyes were shining still, but it was with the light of sudden, grateful tears.

"You are always so kind and so just!" she cried, impetuously. "I don't mean to be unjust, Max; to be querulous and absurd. But you know that nothing hurts me like Lois' attraction to that life I can never give her. When she speaks as she did to-night, it brings all back again the old, puzzling, bitter question as to whether I did right in refusing her to Anne Ripley's adoption when she was a little child; whether I did right in using all my influence to keep her with me when Anne Ripley, only so few years ago, urged her once more to come and share her home. I did not think my father would have wished it so; that she should bury all her talent aud ambition in that rapid, aimless life——"

"Your mother would have led no 'rapid, aimless life,' Nell, even if she had never crossed into Bohemia!" said Dr. Max, with that outspokenness which held, always, between these life-long friends. "But you know I always thought you right in keeping Lois with you. And had you not spoken one word, nothing that Anne Ripley could offer would have called Lois from you, I am sure. But that is no reason why she should not spend happy hours in Philistia now and then."

"If only there were no after hours! But to taste where one may not eat one's fill—one always pays so heavily for that. Poor little Cinderella, whose clock strikes her home to her Bohemian attic——"

"And her wicked sister, eh, Nell?" laughed the doctor. "And speaking of wicked sisters, what did you say to-night that broke up the coterie of amiable mentors whom I flattered myself you were so safely placed with into such 'admired disorder?' I heard one of them, later, refer to you as such an '*unusual* young lady,' and it was clear to me that you had been indulging in one of your startling perorations."

Helen laughed merrily.

"Was it as bad as all that? Why, it seemed to me quite an obvious and simple little remark; yet I do seem to remember, now you speak of it, that several of the 'coterie' edged away from my vicinity shortly afterward. They were speaking of the Allington family, you know, apropos of Ned Allington's marriage. Mrs. Markham—isn't that the old lady whose hair is in a crest, like a cockatoo?—said with the air of one having something worth hearing to communicate, 'Do you know, I heard the other day, on the very best authority, something so exceedingly shocking; that Mrs. Allington's father, some thirty years ago, actually served out a term in a Georgia penitentiary!' Of course, there were all sorts of exclamations of gratified horror—you needn't laugh, Max, you know what scandalized pleasure most people take in such things. And then little Miss Appleton—she's so young, you know, she hasn't learned what bad form it is to spoil a sensation—chirped out: 'But papa says that was for planning the escape of a fugitive slave, and is one of the shames one is proud of.' That rather staggered Mrs. Markham for a moment; and then she rose to the occasion with, 'But to have had a relative in the penitentiary *at all*—fancy how painful!' And then I inadverdently lifted up my voice and said yes, indeed, how true that was; and I had often supposed that Saint Stephen's relatives must have had to give up society altogether after that painful matter of his stoning. And then they all looked at me so oddly; but I'm sure I don't know why!"

"Nell, you incorrigible Bohemian," laughed Dr. Max, giving her his hand in good-night, "I believe you, in some unholy, serpentine sort of way, attract one kind of unlucky Philistines toward you purposely to presently gobble them up. And now, good-night, or more correctly, good-morning; for I am sure I shall meet the milk-carts on my way up Park street. And by the way, Nell," he called back, mischievously, with his hand on the open door, "speaking of Cinderella, isn't there something in that old story about a prince who met her at a party, and——"

"Oh, but I'm not afraid of any modern princes!" she said, laughing happily enough. "There's not one among them with pluck and muscle enough to surmount untold flights of Roscommon Place stairs to find any Cinderella, were she never so fair!"

He smiled to himself, as he ran down the "untold flights," as if he was by no means certain that he could not name such a prince, if he were to be put to the test. But if he could have seen, by some shadow of events that were to be, how a prince might come, only to go again and leave sorrow and scathe behind him, it would not have been with so light a heart that he went out into the wild aud snowy night.

[To be continued.]

A man who has practiced medicine for 40 years, ought to know salt from sugar; read what he says:

TOLEDO, O., Jan 10, 1887.

Messrs. F. J. Cheney & Co.—Gentlemen:—I have been in the general practice of medicine for most 40 years, and would say that in all my practice and experience have never seen a preparation that I could prescribe with as much confidence of success as I can Hall's Catarrh Cure, manufactured by you. Have prescribed it a great many times and its effect is wonderful; and would say in conclusion, that I have yet to find a case of Catarrh that it would not cure, if they would take it according to directions. Yours truly,

L. L. GORSUCH, M. D.,
Office, 215 Summit St.

We will give $100 for any case of Catarrh that cannot be cured with Hall's Catarrh Cure. Taken internally.

F. J. CHENEY & CO., Props., Toledo, O.
☞ Sold by Druggists, 75 cents.

Our Household.

LEARN TO KEEP HOUSE.

Beautiful maidens—aye, nature's fair queens!
Some in your twenties, some in your teens,
Seeking accomplishments worthy your aim,
Striving for learning, thirsting for fame;
Taking such pains with the style of your hair,
Keeping your lily complexions so fair;
Miss not this item in all your gay lives,
Learn to keep house—you may some day be wives.

Now your Adonis loves sweet moonlight walks.
Hand clasps and kisses and nice little talks;
Then, as plain John, with his burden of care,
He must subsist on more nourishing fare;
He will come home at the set of the sun,
Heartsick and weary, his working day done;
Theuce let his slippered feet ne'er wish to roam,
Learn to keep house, that you thus may keep home.

First in his eyes will be children and wife,
Joy of his joy, and life of his life.
Next his bright dwelling, his table, his meals—
Shrink not at what my pen trembling reveals;
Maidens romantic, the truth must be told—
Knowledge is better than silver and gold;
Then be prepared, in the spring time of health;
Learn to keep house though surrounded by wealth.

—*Exchange.*

CHRISTMAS TALK.

I AM so glad you've come, Nell. Now we can have a nice talk about our Christmas preparations. I like to make my Christmas things instead of buying them out and out, because that takes so much money. I'm embroidering some strips of flannel to trim little Gwen's skirts. Of course, I could buy it, but I like to do it, and taking it up this way of an afternoon I soon accomplish an amount of it. If I have more than I want I'll sell part of it for what the material cost, thereby getting Gwen's without cost. I often do that with my needlework. One year I bought myself a black silk dress with the proceeds of lace knit in odd moments. I enjoyed that dress; it seemed so wholly my own. When I was away this summer I saw so many kinds of pretty hand-bags. I have one or two on hand for friends. One was a party bag, for slippers, fan, etc. Not a clumsy thing, like some I've seen, but so dainty. It was made of strips of pink and gray ribbons sewed together. The ribbon was two inches wide and thirty inches long. Five strips—two of gray and three of pink. After sewing them together, the ends were turned over and hemmed, then a casing run in, then the sides sewed together. A draw ribbon of pink was put through the casing. This is the ribbon. The black and red I shall give my chum; the green and red I shall give Cousin Clara."

"What elegant two-faced ribbon and so wide. Won't it be a rather expensive present, though?"

"Well, as the ribbon only cost twenty-four cents a yard, I do not think so."

"Twenty-four cents?"

"Yes, that is all. I know a bargain when I see it, and I never wait till the holidays to pick them up, either. I saw, while I was away this summer, a shopping or traveling bag of black satin made the same way, only it had a pocket on either side, inside, one for a pocket-book, the other for a door-key, two of the very hardest things to fish out of the depths of a hand-bag. The inside of the bag was lined with chamois skin. This keeps the silk from wearing. For mamma I am working a very large initial on a dozen of napkins. I was in at S.'s store one day, and saw some of beautiful quality for two dollars a dozen, dinner size. Of course, it doesn't seem possible, but it was their bargain day in linens and the counter had good and poor on it. That's the way they even up things. The one who gets the bargain is the one who knows how to pick it out. For Aunt Nettleton, who is so thoughtful for us, I am fixing half a dozen of beautiful china cups. I don't paint well enough to risk designs, so I am tinting them and putting on gold trimmings; those I have done are lovely. I find boys like dainties as well as girls, so for Jerome I have made a lovely case for cravats and his best handkerchiefs. I covered the outside with chamois skin, painted a band of flowers over it, lined it with India silk and perfumed it, and I think he will like it. For little Kitty, who adores flowers, I have made a pretty knit silk purse: in it I shall put three gold dollars, to spend entirely for cut flowers during the winter months; she likes to get them Saturday for Sunday. I believe it is just as well to give people something they want as something they don't. She will enjoy it. For some I have made slippers; they are old, but we must have them. With one pair goes a comfortable little flannel wrapper. For two who cannot wear wool mittens I have got chamois-skin gloves, and for one I made chamois-skin mittens, which can be washed when soiled."

"Well, I must go, it is getting late."

"Come again."

"Yes. Good-by." CHRISTIE IRVING.

CHRISTMAS TALK.

HOME TOPICS.

BANANA PIE.—Doubtless there will be more bananas eaten during this fall and winter than in any previous season, owing to the scarcity of other fruit. A friend lately gave me this recipe for banana pie, which we find a pleasant change from the fresh fruit: Take two large bananas, peel and rub them through a colander; add one pint of milk, two heaping tablespoonfuls of sugar, two eggs and a pinch of salt. Bake this in one crust like a pumpkin pie.

JELLIED CHICKEN.—This is a most tempting dish for a luncheon or afternoon tea. Boil two good-sized chickens in just enough salted water to cover them, until the meat will readily slip from the bones. Remove the skin and cut the meat into small pieces, mixing the light and dark meat together. Have ready eight hard-boiled eggs, slice them, cover the bottom of a pudding-dish with them, and put in the chicken. Skim all the grease from the water in which the chicken was boiled, and season the broth with pepper and salt to taste. Have ready two thirds of a box of gelatine which has been soaked in cold water while the chicken was cooking; add it to the hot broth, stirring it until the gelatine is dissolved. Add to this two tablespoonfuls of cream, strain it through a cloth and pour it over the chicken until the dish is filled. After cooling, set the dish in the ice-box until it is jellied. When ready to serve, turn it out on a flat dish and garnish with parsley or celery.

CARE OF THE EYESIGHT.—In the last issue of FARM AND FIRESIDE I talked some on this subject, but wish to add an item of personal experience given me by W. M. K., whose signature is so well known to many readers of our paper. He told me that some time ago his eyes were giving him so much trouble that he was about to consult an oculist. He was then writing at a desk where all the light came in at the right. Happening to change the position of his desk so that the light came from the left side, he experienced no further trouble, and his eyes soon recovered their usual strength.

There is no doubt that many people injure their eyes by buying cheap glasses of traveling salesmen, which, besides not being fitted to their eyes, often contain flaws, scratches or opaque spots on the glasses. When from age or any other cause it becomes necessary to put on glasses, it is always best to go to a reliable optician and have the eyes fitted. Often the eyes are not alike—one will be more far-sighted than the other—and, consequently, need a different glass. The eyes are of too delicate a mechanism to be trifled with.

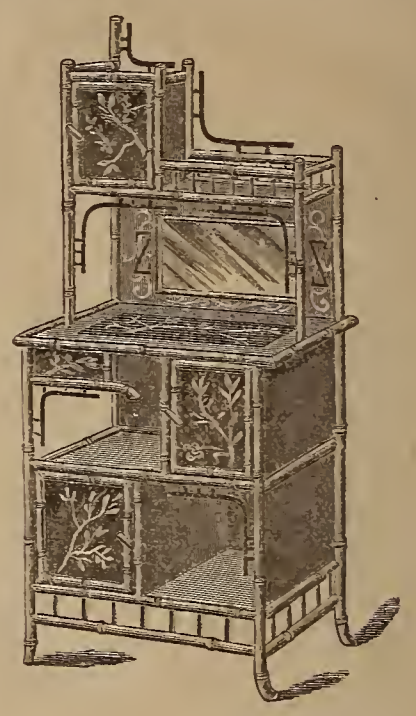
DOMESTIC SCIENCE.—It is an encouraging fact that with the increasing interest in manual training for boys comes the no less important training of girls in domestic science. In a constantly-increasing number of cities it is given a place in the common schools, and in our best agricultural colleges girls are given an education as precisely adapted to their probable future needs as are the boys. To Mrs. Nellie S. Kedzie, M. Sc., professor of household economy hygiene, in the State Agricultural College of Kansas, the girls should ever be grateful for the work which she has so well begun in that progressive state. There, girls are not only taught how to prepare savory dishes for the table, but are given instruction in the chemical composition of foods and the effects upon them of various causes. They not only learn to *do by doing*, but also *why* they do certain things in a certain way. Theory and practice is so pleasantly combined that what under other circumstances might be deemed the drudgery of household duties, becomes pleasant, because homely tasks are made scientific experiments. Practical dress-making is taught, and plain sewing, both by hand and machine, together with some fancy work. During the third year of study, attention is paid, particularly, to hygiene and other matters pertaining directly and indirectly to woman's work in building a true American home.

In deciding upon a college where our daughters shall be educated, this should have great weight. No girl ought to allow herself to assume the responsibilities of a home without having first acquired both skill and taste in every art of the household. While much may be learned at home, with mother, yet it is but reasonable to suppose that many of the methods which have been handed down from mother to daughter can be improved by care and study. If our sons need scientific training to make them better farmers, our daughters need it to make them better and more intelligent housewives and home makers. MAIDA MCL.

YULE-TIDE FANCIES.

Because the corner bracket craze has subsided, the scroll saw has in many families been relegated to the lumber-room, with never a thought that its possibilities may not have been exhausted, while the boys wish they had "something to do."

Well, here is what one boy did: He saw an imported bamboo whatnot that cost in London £3 18s 6d, and he decided that, with the aid of his discarded scroll saw and his old turning lathe, he might duplicate it, using wood in place of the cane. And he did. The dimensions were 5 feet 10 inches high, 2 feet 6 inches wide, 1 foot 4 inches deep, and there were three cupboards in addition to the shelves. He used soft pine and stained it with ebony stain, using the fashionable dull black that has no lustre. Where the model showed lacquered panels he had sawed a scroll pattern. When



done, it made one of the handsomest gifts among an unusually handsome collection of wedding presents.

And that gave him another idea. He went on making the whatnots. In some he fitted a small, beveled glass at the back of the shelf showing no cupboard, and he used different woods to lend variety. He put one of the handsomest of the whatnots on exhibition, with a schedule of styles and prices, and orders came in from the start rapidly enough to employ all the time he cared to give to the work in odd hours, and now he is devoting all his time to the business that has grown up almost without exertion from what was meant to be merely a pastime.

This lad did not live in a city where all woods could be bought a block or so away, but he sent for samples to the nearest large city, and for his purpose, succeeds in getting just what he wants at fair prices. DINAH STURGIS.

A WORD TO THE GIRLS.

How many of the little friends are thinking and preparing for Christmas? Has any one tried to get a memento patchwork quilt for mamma? It can be made of nicer goods than calico blocks if one wishes, but that is more expense, and more difficult work. Calico piecing is something the little ones can do all by themselves. And don't you know, those are the very presents that the mammas love best from their little ones; something that has been studied out and accomplished by their own little heads and hands. Cross stitching on gingham is easy work; either use the single or double stitch. Can't you make some aprons? There are lots of pretty patterns in nearly every ladies' paper. FARM AND FIRESIDE has quite a good many; they are easily traced out. Perhaps you will have the patience to work a dress for some one. Cut off the desired number of breadths—three for a child under eight, then four breadths until one is nearly four feet tall, then it requires five breadths for an ordinary gathered skirt. After the breadths are sewed together (and care should be used that the checks are matched as much as possible), turn the hem and then work some pattern around the bottom of the skirt. Don't use too wide a pattern, unless you have lots of patience, for it is a long way around five breadths of gingham.

Another pretty way is to use some pattern that can be repeated nicely, one row above another, and just work the front breadth, making the cross stitching extend from the bottom of the skirt to the waist. Side plait the side breadths, making the plaits turn towards the front, and lapping over on to the front breadth a little. Gather the fullness in the back breadth. It may take six breadths in this style if the person is large, and the plaits at the side are very deep. A pattern given in the issue of April 1, 1890, is very

nice for this style, two rows of leaves, and finish with the small figures, until the waist is reached. Perhaps the waist had not better be made until after Christmas; as there are so many styles to choose from one may not select the one desired by recipient of the gift. Mutton-leg sleeves cut on the bias, and finished at the wrist with some portion of the cross-stitching pattern, are very pretty. Or a full upper sleeve with a deep cuff, and the latter covered with the cross stitching, makes a nice sleeve.

If the waist is to be a yoke, work that; if a jacket front, work the edge of the jacket in front, and cut the front of the waist under the jacket on the bias, whether you have it a full blouse front or tight fitting.

Plain basques, with long revers which are cross stitched, look nice on fleshy people.

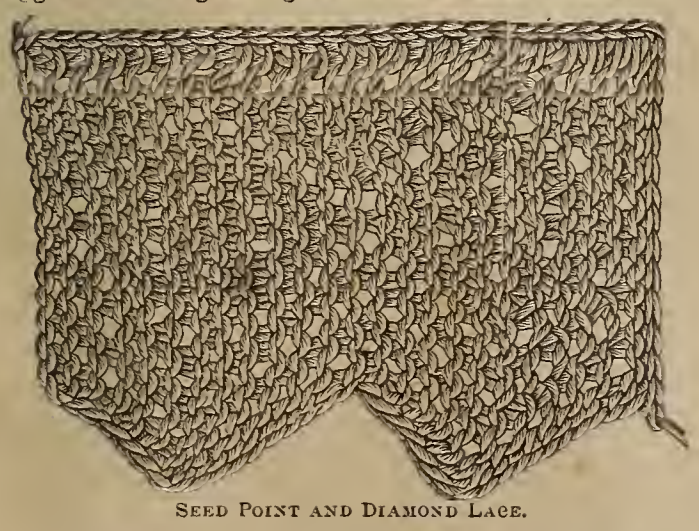
Who has a stamping outfit? Here is an endless variety for Christmas work. Splashers, pillow-shams, lambrequins, tidies, aprons, picture-throws, lounge-throws, napkins, tray-cloths, etc., one can never get to an end in the list of pretty things that can be manufactured with the help of these outfits, and the patterns may be worked on cotton with red or blue working cotton, or silk and velvet done in chenille or silk. A present may be here made for fifteen cents or as many dollars.

White Lonsdale cambric aprons, with a spray of roses or daisies worked in the lower corners, are both useful and pretty presents. Some prefer them worked with red and some with white floss. They are pretty worked in outline with black silk.

Where are the little ones that can use a crochet needle? Can you make mamma or sister some trimming for an apron or some underclothes? A sampler, made of blue or red canton flannel, pinked around the edge and covered with different patterns of crocheted and knitted lace, basted down securely, is a present that will be appreciated by some friend who is fond of that kind of work and has the time to devote to it. With the great number of patterns that are given in the ladies' papers, one could fill a sampler with different specimens of lace in a short time.

We like the crochet cotton that comes in balls, ten cents each, better than thread, and it is much cheaper. The balls are almost as large as those of darning cottons. The numbers run from 40 to 70, No. 40 being about like No. 24 thread, No. 70 about like No. 36 or 40. You can get the red working floss in balls, too.

Have you taken any lessons in painting oil or water colors? Blow an egg, making the holes at each end large enough so that a narrow ribbon may be run through and tied in a loop with bows and ends. Paint some pretty little flowers or vines on the egg shell, and when dry and the ribbon tied through, they are very pretty little ornaments and brighten up a Christmas tree wonderfully, and may be given away as souvenirs of such an occasion. A goose egg would be large enough so that a small winter scene could be painted on one side, but even a hen's egg is pretty with just flowers or sprigs of mistletoe or holly berries painted upon the shell. The ribbon should match or harmonize with the color of the flowers. GYPSY.



SEED POINT AND DIAMOND LACE.

HAVE YOU CATARRH?

There is one remedy you can try without danger of humbug. Send to H. G. Colman, Chemist, Kalamazoo, Mich., for trial package of his Catarrh Cure. His only mode of advertising is by giving it away. Postage, 4 cents. Judge for yourself. Mention this paper.

SEED POINT AND DIAMOND LACE.

Cast on 14 stitches, knit twice across plain.

First row—Sl 1, k 1, o, n, k 3, o, k 1, o, n, o, n, o, k 2.

Second, fourth, sixth, eighth and tenth rows—Sl 1, knit rest plain.

Third row—Sl 1, k 1, o, n, k 1, n, o, k 3, o, n, o, n, o, k 2.

Fifth row—Sl 1, k 1, o, n, n, o, k 5, o, n, o, n, o, k 2.

Seventh row—Sl 1, k 1, o, n, k 1, o, k 1, n, o, k 1, o, n, k 1, o, n, o, n, o, k 2.

Ninth row—Sl 1, k 1, o, k 3 together, o, k 9, o, n, o, n, o, k 2.

Eleventh row—Sl 1, k 1, o, n, o, k 3, o, n, k 1, n, o, k 3, o, n, o, n, o, k 2.

Twelfth, fourteenth, sixteenth, eighteenth, twentieth and twenty-second rows—Sl 1, k 1, pass sl stitch over the one k, k rest plain.

Thirteenth row—Sl 1, k 1, o, k 3 together, o, n, k 7, n, o, n, o, n, o, k 2.

Fifteenth row—Sl 1, k 1, o, n, k 1, o, n, n, o, k 1, o, n, n, o, n, o, n, o, k 2.

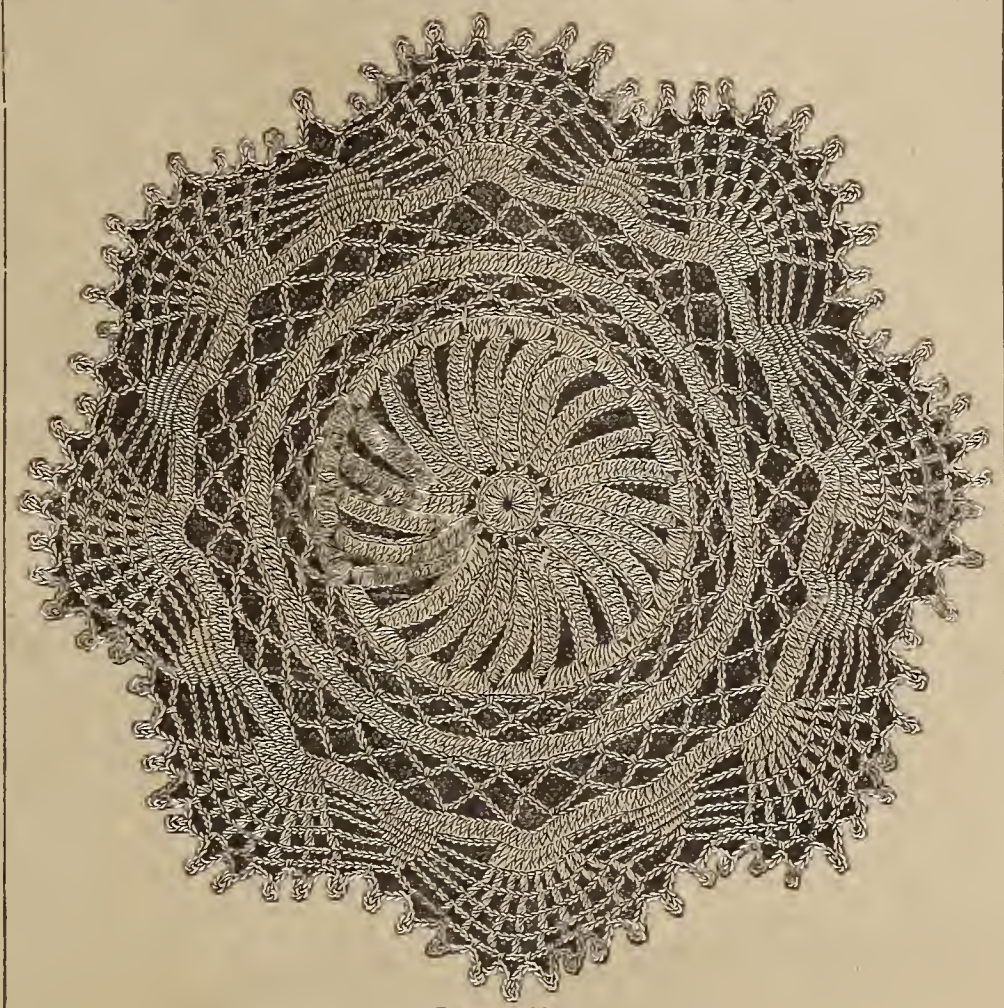
Seventeenth row—Sl 1, k 1, o, n, n, o, n, k 3, n, o, n, o, n, o, k 2.

Nineteenth row—Sl 1, k 1, o, n, k 2, o, n, k 1, n, o, n, o, n, o, k 2.

Twenty-first row—Sl 1, k 1, o, n, k 1, n, o, sl 1, n, pass slipped stitch over the one just narrowed, o, n, o, n, o, k 2.

Commence again at first row.

Terms used—Sl, slip; o, over; n, narrow; k, knit. ELLA MCCOWEN.



DAHLIA MAT.

DESCRIPTION OF DAHLIA MAT.

Use No. 12 spool thread, or a fine cotton about the size of No. 12. Terms, ch, chain; d c, double crochet; s c, single crochet.

First row—Ch 10 stitches and fasten in a circle.

Second row—Ch 3, then d c into circle till you have 18 d c, and join.

Third row—Ch 4, 1 d c into next stitch; ch 1, and d c into circle until there are 12 open squares; join to first ch of four, between 3rd and 4th stitches.

Fourth row—For long points in center, ch 14, fasten back 3 stitches, then d c into every remaining stitch of ch, till the circle is reached, fasten into a stitch of one of the open squares, ch again 14, and work back as before, till there are 12 long points, work around again, making 12 more long points, each one being fastened under the center of one of the first row points, making 24 in all.

Fifth row—Break the thread and fasten in a point by 2 s c stitches; chain 4, and fasten next point by 2 s c stitches; make the entire circle of points, take up alternately one of the upper and one of the lower row of points.

Sixth row—Ch 3, then d c 5 into each ch of 4 of the last row.

Seventh row—Ch 6 all around.

Eighth row—Ch 7 all around.

Ninth row—Ch 8 all around.

Tenth row—D c into each stitch of last row, putting 9 d c into every sixth chain, instead of 8 d c, making 196 d c in the whole round.

Eleventh row—Ch 7, and fasten in every 7th stitch of last round, making 32 short chains.

Twelfth row—Ch 8 all around.

Thirteenth row—Ch 8 and ch 9 alternately, all around.

Fourteenth row—D c into each stitch of last round.

Fifteenth row—(*a*) D c into one section of 9, ch 8, and s c into next section of 9; ch 8, (*b*) and d c into next 9; ch 8, and s c into next 9, repeating from (*a*) to (*b*) till the circle is complete.

Sixteenth row—D c into each stitch of last d c, put 1 ch between; ch 8, and s c 7 stitches into each 9 of s c; repeat this till the block of s c is worked out to 1 s c, and the chains between each d c increases to 4 stitches.

For picot edge, ch 9, fasten between third and fourth stitches, ch 3, and fasten in last row; repeat for picot edge all around. EMMA N. WARWICK.

Edray, Pocahontas county, W. Va.

PUMPKIN PIES.

Why is it that we see so few good pumpkin pies? The process for making one is very simple and easy of accomplishment. The majority, as far as my long experience goes, are perfect failures in the culinary art. Much of our poor cooking is the result of recipes displayed to the public by incompetent authors. For instance, here is one showing how to cook a beefsteak: "Put it in a pan." Now, a steak and pan, every good cook knows, should be perfect strangers, but she goes on: "Cook it, then take it out and pound it, then put it in the *pan* again and cook it, then turn it over and cook more, then turn it back again." Poor, mutilated steak! If it is not tired, I am. Now, this is not exaggerated. I read the account classed among *valuable* recipes.

This is why there is so much failure in cooking. Every housewife thinks she knows how to make a pumpkin pie. Of course, you must stew the pumpkin, mash and add milk and eggs and sugar and ginger. The quantity must be determined by the size of the pumpkin. Three eggs to a quart of milk is a good rule; but the secret is in the depth of the pie-plate and in the baking. Let the top be browned nicely at intervals, and the edges of the crust a light, crispy brown, too. If you are obliged to use an ordinary pie-plate, the crust, which should contain a very little yeast powder and lard, can be built up around the edges, but a condition of this kind will require a very hot oven.

When a thin-bladed knife escapes unsmeared from the pumpkin, then, and not till then, will it be safe to remove it from the oven. This delicious pie should always be eaten cold, for then it is at its best. A piece of cheese adds a pleasant flavor to pumpkin pie. A. E. THOMAS.

MY WINTER FLOWERS.

Flowers are always welcome during the winter season, when nature is at rest, and nothing but snow or bare, brown fields are to be seen. Then is the time we turn lovingly to our window plants, and watch every tiny bud and leaf which forms and slowly unfolds. For flowers for winter I know of nothing which affords so much pleasure for so little outlay of work and money as the hardy Holland bulbs.

The crocus, one of the sweetest of our early spring flowers, makes a pretty winter flower. There are the blue, white, yellow and purple striped. Try a dozen this winter. They are very cheap; any florist charges only ten cents a dozen. Fill a deep plate with two inches of sand, set a dozen bulbs on top, water enough to make the sand quite damp; then cover with nice, green, woods moss, and set in a dark place for three or four weeks, for the bulbs to make roots; then set in a sunny window. The flower stalks and leaves will push up through the moss and make a lovely window ornament. If any of the sisters live in the city, where they cannot obtain moss, I will send them some from northern Michigan.

Every fall we get bulbs of the Chinese Sacred Lily, from China, and while I have had fair success with them when grown in water, as the florists recommend, I have always succeeded better when set in five-inch pots of rich soil, and the pots set in saucers of water. The bulbs produce the flowers quicker, and they last longer.

I hope every flower lover will try the ornithogalum, or great Arabian flowered Star of Bethlehem. As a window plant they are very beautiful. The flower stalk is over a foot high, crowned with a cluster from six to eight inches across, of pure white flowers, a little larger than a twenty-five-cent silver piece. It is also very hardy as a cemetery plant, living in the ground over winter where it is often thirty degrees below zero.

My spotted callas were lovely last winter. I had several in my bay-window, and some had four to six flowers on during the winter. The flowers are not quite as large as the common calla, and the foliage is spotted with white, making the plant an ornament without any flowers. I always give my callas plenty of water, and never fail to have a nice lot of flowers from them. CHATTA BELLA.

Our Sunday Afternoon.

HOW THE REVIVAL CAME.

It was Sunday night in the old stone church,
And the preacher's work was done;
But with weary eyes and an anxious heart,
He earnestly watched to see if a dart
Had entered the "hearts of stone."

With solemnly silent, most orthodox air,
They listened to all that he said
Of the Savior's love and his tender care,
Of the griefs he will tenderly, lovingly share,
Of the beautiful home just ahead.

And then on the people there settled down
A silence long and deep;
And the preacher's heart grew heavy with pain,
And the clock ticked over and over again,
While the people seemed to sleep.

Then one of the brethren slowly arose,
And with solemn voice and slow,
He told what the Lord had done for him
About fifty years ago.
And his face was as long as the moral law,
As he spoke of the heavenly Prince,
And it seemed as if God had forgiven his sins,
But had never done anything since.

Then followed a silence longer still,
That covered the church like a pall,
And the people with hungry, empty hearts
Just wondered if that were all.
And the pastor thought with a wistful face,
Of the lands far over the sea,
Where the servant of God toils night and day,
But the people hear with glee.

Then another brother slowly arose,
A man of most godly life,
Who, while loving the cause and the souls of men,
Had grown weary in the strife.
His heart was heavy, his faith was weak,
And it seemed, when he was done,
As if the Lord was a long way off,
And couldn't take care of his own.

Then followed a prayer of most awful length,
Grammatical, polished and cold,
But it reached to the uttermost parts of the earth,
As the waters did of old,
And the careless, ungodly, but hungry hearts
That were just outside the fold,
Could but wonder if they had as good a chance
As the sinners near the pole.

Then a trembling sister slowly arose—
God's spirit shone in her eyes;
A woman whose heart was true as steel,
Whose life was a sacrifice;
But her voice was timid, and weak, and low
And few were the words which she said,
And the sinners back by the door couldn't hear,
So they rattled the seats instead.

Then the pastor arose with a sigh of relief,
For the hour of closing had come,
And the rustle of wraps and of overshoes
Proclaimed that 'twas time to go home;
When slowly, timidly, down the aisle,
With a child's unconscious grace,
Came a little figure, poorly clad,
And gazed in the preacher's face.

Her voice was as clear as a silver bell,
And she spoke with a childish ease,
As she, timidly touching the pastor's hand,
Said, "I want to see Jesus, please!
You say he has gone to prepare a home
For the homeless, and that means me;
That he tenderly cares for us every day,
And I love him for that, you see."

Then followed a silence most strangely sweet,
For all felt that God was there,
As the preacher knelt by the little child
And lifted his voice in prayer.

An hour passed swiftly, silently on,
But the congregation stayed,
While voices that long had been silent there,
Thanked God for his strength and aid.
Then hearts that were weak grew brave and strong,
And a mighty faith was shown,
And the angels sang in the heavenly choir,
"The Lord brings back his own."
And the preacher's heart grew light as a bird,
Though he labored both early and late,
For the night was passed, the morning had dawned,
And the old stone church was awake.

—*Margaret J. Bidwell, in Zion's Herald.*

PLEASURES OF A SMALL INCOME.

There are some pleasures enjoyed by people of moderate means that rich people can never know. How many loving wives are beginning now to plan and contrive some surprise next Christmas! Will not that present—gained by walking instead of riding, saving ten cents from this thing and a quarter from that—give far more pleasure than the slippers or the dressing-gown Mrs. Moneybags will buy for her husband in December?

THE VESTIBULED PULLMAN CAR LINE.

The Monon Route is the finest equipped line on the continent and affords choice of four daily trains from Chicago to the South via Indianapolis and Cincinnati, or via Louisville. For full information call on any ticket agent of the Monon Route, or address James Barker, Gen'l Pass. Agent, Chicago, Monon Block.

READING CLUBS IN THE COUNTRY.

She who establishes a woman's reading club in an agricultural district does more to check the deadly progress of farmers' wives to the insane asylum than all the doctors and medical journals in the land. The book selected for social reading and discussion may be nothing more dignified than a popular novel of healthy tone. But it will lift the toiling creature's thoughts out of the straight, deep rut worn by plodding feet, glorify "the level stretches, white with dust" of the "common" days which—heaven help them!—are every day with this class. The changed current of thought and interest will blow over the cook-stove and dish-pan and wash-tub like cool air from heights she has no time to climb. It gives her somthing to talk of, too—boon of boons—in a circle where gossip is the pabulum of tea-party conversation and rare "evenings out;" where the men's "talk is of oxen" and the women's of butter making in holy Sabbath twilights, with the harvest moon looking down upon them over the tree tops. —*Marion Harland.*

A GOOD BOOK.

A Chinese merchant came into the American Baptist mission chapel in Shanghai, and, after talking with him for a short time, Dr. Yates sold him a copy of the New Testament. He took it home, three hundred miles away, and after about three months appeared again in the chapel. He came back to say that he was under the impression the book was not complete; that surely it must have other parts; and so he came to get the Old Testament, as he had read and studied the New. What had he done with the New Testament? He had taken it to his home, and shown it to the schoolmaster and the reading people. They said, "This is a good book. Confucius himself must have had something to do with it." As there was only one copy, they unstitched this one, and took it leaf by leaf; and all those who could write, took a leaf home. Thus they made twelve or fifteen complete copies of the New Testament, and introduced it into their schools as a class-book throughout that district.

EXPECT LITTLE.

The less we expect from this world, the better for us. The less we expect from our fellow-men, the smaller will be our disappointment. He that leans on his own strength leans on a broken reed. We are always *going* to be something stronger, purer and holier. Somewhere in the future there always hangs in the air a golden *ideal* of a higher life that we are going to reach; but as we move on, the dream of better things moves on before us also. It is like the child running over the hill to catch the rainbow. When he gets on the hill-top, the rainbow is as far off as ever. Thus do our day-dreams of a higher Christian life keep floating away from us, and we are left to realize what frail, unreliable creatures we are when we rest our expectations of growth and victory over evil in ourselves. "My soul, wait thou only upon God." My expectation is only *from him.*—*Dr. T. L. Cuyler.*

Cold Weather is Coming.

Buy your Horse Blankets now. Two or three dollars for a 5/A Horse Blanket will save you ten dollars worth of feed. A horse not blanketed in the stable eats more to keep warm than a blanket costs. The warmth must be kept up, and if the horse is not blanketed he must eat more to keep warm.

5/A Horse Blankets are the strongest. Like all good things they have been imitated. Beware of imitations which look well but won't wear. Always look for the 5/A Trade-Mark sewed inside.

5/A HORSE BLANKETS are made by Wm. Ayres & Sons, Philadelphia, and are for sale by all dealers. If you can not get them from your dealer write them. There are **Thirty Styles** at prices to suit all. Among them are the **5/A Five Mile**, with five miles of warp threads in each blanket. **5/A Boss Stable**, a giant for strength. **5/A Electric** for out door use, very strong. **5/A Extra Test** which stands the highest test for strength. Also the celebrated **5/A Baker** which is used by railroad, express and fire companies in all the large cities. These are shown in the **5/A Book**, which you can get free from your dealer. Ask for it.

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Johnson's Universal Cyclopædia,

I am convinced that while it is excellently adapted to the needs of professional and business men, it is eminently useful to the earnest, thorough self-educator.

"This work, with its corps of contributors, offers accurate articles on the widest range of subjects. To the value of trustworthy information is added the inspiration of personality, associated with great names. I heartily commend *this* cyclopædia to all, and especially those who are pursuing self-set courses in the great university of life."

From the Librarian of Harvard University, Cambridge, Mass.

"There is, perhaps, no better test of the merit of a cyclopædia than its usefulness in such a library as ours at Harvard; and here JOHNSON'S UNIVERSAL CYCLOPÆDIA has, during many years' experience, been found more useful *than any other* in the English language."

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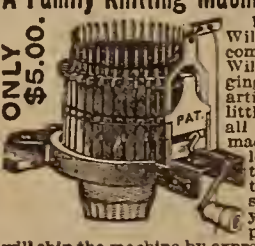

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Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammontou, New Jersey.

NATURAL CONDITIONS.

What are natural conditions for the keeping of poultry? Some will say the open air, plenty of range and a variety of food. But there are conditions for one season of the year and conditions for another. It may be "natural" for poultry to be exposed in the summer, but it is not natural to subject the hens to colds and storms in winter. In the wild state many birds are migratory, and change their feeding grounds as the seasons change, but our domesticated birds are, to a certain extent, creatures of our own, made up and adapted to conditions to which we

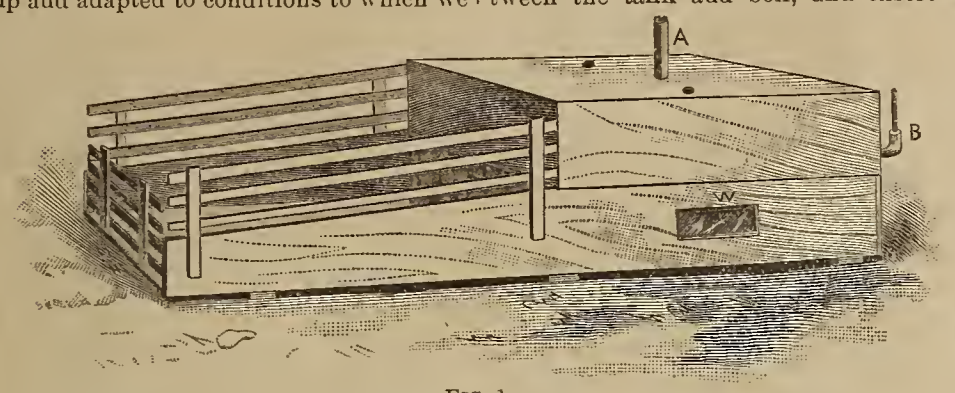

FIG. 1.

are subject, and their thrift depends upon the manner in which they are protected during the seasons when they need the most care.

The wild bird is fixed in its characteristics. Many of them are the same to-day as they were centuries ago, and can exist under a great many disadvantages. They are free, have greater powers of locomotion, and select their own mates in order to breed, and thereby produce offspring that are as hardy as their progenitors, but the domestic fowl has been bred to a place in the barn-yard, and to remain near the habitation of man. They look to him for help, come at his call and cannot well exist without his aid.

The natural conditions are, so far as the barn-yard fowl is concerned, the conditions provided for it by man. Warm quarters in winter, to protect against the cold, and a variety of food, that it may lay eggs in winter (which is really unnatural) and clean yards and feeding places, in order to guard against disease. There are no conditions that fit all breeds of poultry, for no two breeds can exist under the same treatment and both prove profitable, as one breed will fail under conditions that are favorable to the other. The attempt to subject fowls to what may be termed "natural" conditions has only led to roup and other winter diseases, resulting in the loss of a large portion of the flock and prevented the realization of a profit.

NO-LAMP BROODER FOR FIFTY CHICKS.

A convenient and easily-constructed brooder, without the use of a lamp, for 50 chicks (or 100 very small chicks) is sent us by Mrs. Adelaide Henning, Lompoc, Cal., and which she describes as follows:

Fig. 1 shows the brooder complete, except screen cover over the run, or feeding place. Fig. 2 shows the lower part of the brooder, ready to receive the heater. Fig. 3 shows the heater, with a door attached to close back part of brooder.

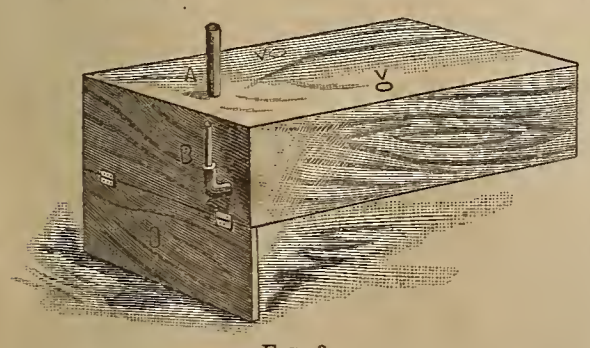

FIG. 3.

To make such a brooder, cut three pieces of 2x4 lumber, 23 inches long, on which lay the floor of matched boards, 5 feet 6 inches long and 26 inches wide. Now cut out the side pieces for the lower part, 5 feet 6 inches long, 8 inches wide, and one inch thick, leaving about 30 inches full width, and slope the other three feet to six inches at the end. Nail the sides securely to the bottom, after cutting an opening in each, 2x6 inches, for a glass window. Next, make a box 28x28 inches, inside, and 10 inches deep. Put a bottom 5 inches wide all around it, which is intended to set the inner box on, the inner box to be 4 inches smaller and only 6 inches deep. Make a galvanized iron tank to exactly fit the inner box, the bottom of the outer box projecting just enough to allow the tank to rest on it. There should be a pipe on top of the tank, 8 inches high, for filling, and one at the bottom or back for drawing off the water, to project 4 or 5 inches from the box. Bore a hole in the outer box, and cut a place in lower edge of inner box, to let it down over the filling pipe, put them together, fasten inner box in place, put top on inner box, and it is ready for packing. Bore a hole on opposite sides in the cover of inner box, just over the air spaces, between the tank and box, and insert a small pipe in each, long enough to reach through the top of outer box, pack all around with sawdust (or chaff or bran) and put on the top. Now set the heater on the lower part, letting it project one inch at the back, to which hang the door to enclose the back end. Tack cloth, cut in strips, to the front of the box, and also tack thin muslin on the bottom, to protect heads of chicks from the iron. The sides of the runs are made as high as necessary, with light strips, and closed at one end of sliding gate with the same material. Nail a piece across, just in front of the heater, 1x2 inches. Make a screen cover for the run, or of wire or slats. A very important part is the false bottom, or roosting

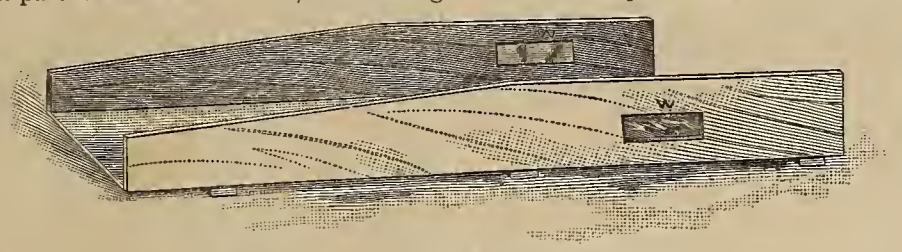

FIG. 2.

board, which should be made of light, ¼ or ½-inch lumber, with two or three battens under it, 26x28 inches, which is to be pulled in or out from the back end, for cleaning off. It should always be kept covered with sand or earth.

To operate the brooder (which has no lamp), fill the tank with boiling water 24 hours before the chicks hatch, and at the end of 12 hours draw off two gallons, heat it to boiling point, and return it to the tank. We find it very little trouble to heat the water while we are getting breakfast and supper. This brooder is for those who fear having lamps burning, and we have had excellent success with it. In the illustrations, A is the filling tube, B the tube for drawing off, C the door at back, W window and V the ventilator holes.

CROWDING IN WINTER.

More fowls can be kept together in the winter season than in the summer, in the poultry-house, and in fact, on very cold nights it is an advantage to have enough of them together in order that the animal heat of their bodies may raise the temperature of the house, yet they should not be crowded or they will not thrive. During the warm season each hen should have 10 square feet of room, but in winter 5 square feet are sufficient. That is, a house 10x10 feet should accommodate ten fowls in the summer, but in the winter season such a house can be made to keep twenty hens with less inconvenience than to put ten of them together in summer. But very little yard room is needed in winter, as there is nothing that the hens can then pick up, but the poultry-house should be light, and made as cheerful and comfortable as possible. Plenty of fresh air during the day is essential, but at night the house should be closed, and all draughts shut off in order to avoid disease.

REGULATING THE QUANTITY OF FOOD.

A hen is said to consume five pecks of grain food in one year, or 40 quarts. Hence, if one hen eats 40 quarts of food in 365 days, then 365 hens should eat 40 quarts in one day, or about one quart a day to nine hens. It has always been the rule that one quart of corn is the proper allowance for ten hens in one day, giving a pint in the morning and a pint at night. This, however, is the estimate of the total quantity of food required. If green food or meat is given, the amount of corn must be reduced proportionately. How can this be done, as it requires very nice calculation to equalize the difference between a pint of corn and a head of cabbage, there being no standard by which the two foods can be compared, to say nothing of the fact that in some flocks one hen will eat more than another, and one will eat largely of one kind of food while another hen will prefer some other kind. It is a wise poultryman who can estimate in advance the exact quantity to give, as the hens may eat more to-day and less to-morrow.

FALL SHIPMENTS.

Although the weather is now cool, it is possible that for a short while prices in market may drop, as the warm weather deterred many from selling off the surplus. We would suggest to our readers to carefully watch the market reports and notice the fluctuations in prices. Do not be in too great a hurry to sell at this time, but hold back until the prices begin to take an upward turn, which will indicate that there is a lessening of the supply of the large surplus which every poultry farm sends on to market in the fall.

THE RED MITES IN COLD WEATHER.

The red mites will not be active in the day time, in winter, but when the poultry-house becomes warm, due to the heat from the hens, they will be busy. They work by night chiefly, and for that reason are not easily noticed. Go into the poultry-house and clean up for the winter by saturating every portion of the house with kerosene oil. Leave not a square inch untouched, but use the kerosene freely, in order to destroy the eggs as well as the adults of the lice.

CHEAP NITROGENOUS FOODS.

It is the nitrogen in food that produces the flesh of the fowl and the albumen of eggs. If we feed nitrogenous foods, therefore, we provide something that is largely required. Lean meat is the best substance, but it is not always to be had conveniently. When the hens can secure grass, and especially clover, they can thereby supply themselves with a large proportion of nitrogen. It must not be overlooked, however, that all green plants are largely composed of water, and it may not be possible for some hens to eat enough of such food to supply albumen for a large number of eggs when the hens are laying. We should aid them by giving something more concentrated. This is not done by filling the hens with wheat or corn, for grains contain a large proportion of starch, and in the summer the hens are made too fat. In the winter, grain may be fed more liberally, because at that season of the year much of the starch is converted into heat to warm the body. Among the highly nitrogenous articles are linseed meal, which may be given moderately, for it, too, quickly fattens a fowl, while skimmed milk, blood, liver, and even skimmed-milk cheese, are safe and excellent always.

SOFT FOOD.

Always feed hard grains when it can be done. Ground grain is excellent when it is desired to give the hens a variety, and it is then necessary to moisten it, but, as a rule, the better way to feed grain is to give it whole, as the gizzard will reduce it to an impalpable powder.

Queries.

☞READ THIS NOTICE.☜

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Book on Carp Culture.—F. M., Okobojo, South Dak. You can get an excellent book, "Practical Carp Culture," from L. B. Logan, Youngstown, Ohio.

German Millet.—J. T. J., Dudleysville, Arizona. Millet is an annual plant. Here in the North the seed is not sown until warm weather—sometimes as late as the first week in June. It makes a very rapid growth, and is ready to be cut in six or eight weeks. For this reason, it is often used as a "catch" crop to substitute in place of hay.

Scallion Onions.—E. B. L., of St. John's, Mich., writes: "My onions on creek flats—a black, sandy loam—do not bottom evenly; some grow all to scallions, while others, right by the side of them, make nice bulbs. What is the reason?"

REPLY BY JOSEPH:—If sandy loam is well drained, so water will not stand on the surface at any time, and good seed is used, the plants ought to bottom well. See that drainage is perfect in the spots where the scallions grow; then plow in the fall, compact the soil as much as possible and only pulverize the surface in the spring, using harrow or shallow-running cultivator. Use good seed of the Yellow Danvers variety (bought of a reliable seed dealer), and I think you will grow onions that will "cap" well.

Harvesting Onions.—J. R. B., of Houghton Lake, Michigan, writes: "Please state how to harvest a crop of onions with regard to cutting off tops, drying, etc., and best way of caring for them afterwards."

REPLY BY JOSEPH:—When most of the tops have died down, the whole crop is pulled and left for some time on the ground to cure, or if late, and weather bad, it is removed to a dry, airy loft or to the barn floor, in any case to be spread out thinly. Thus the tops and roots will usually waste away, and all that is needed, then, is to sort them over when preparing for market, and pull off any tops or root that may yet be conspicuous. Sell as soon as convenient. If to be kept for winter or spring, the onions should be stored in small, open crates, and kept in a dry, airy room, safe from high or very low temperature.

VETERINARY.

Conducted by Dr. H. J. Detmers.

Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to DR. H. J. DETMERS, 33 King Avenue, Columbus, Ohio.

Hip Sweeny?—O. E. J., Lockville, Ohio, writes: "I have a horse affected with hip sweeny, and I would like to have a remedy for it, if you know of any."

ANSWER: You have got me. I do not know what you mean by "hip sweeny." If your horse has broken the hip-bone, there is no remedy, and if the muscles behind the hip are shrunken, the shrinking is caused by lameness, and will disappear after the lameness has been removed.

Retention of Urine.—J. R. B., Hougbton Lake, Mich. A retention of urine as you describe it, is often caused by a stone or concrements lodged in the neck of the bladder or in the urethra. A careful examination of the bladder through the rectum and of the urethra just above the scrotum, will very likely reveal the cause. If my supposition is correct, a surgical operation, which, however, can be executed only by a skillful veterinarian, constitutes the only remedy. Is your water very hard? Or, perhaps, have you fed much bran?

Epileptic Fits.—G. B., Ettle, Mo., writes: "I have a horse that has fits or cramps. He has an attack about once every six weeks or two months. It commences by a twitching and jerking of the muscles and leaders; he staggers about as though it was hard to keep on his feet and sometimes will fall backwards. It lasts about fifteen minutes and then he seems to be all right. He eats well, is in fine condition, is a good work horse and a good traveler."

ANSWER:—Your description, incomplete as it is, indicates epileptic fits rather than vertigo. No remedy.

So-called Sweeny.—G. M., Earlham, Iowa, writes: "I have a large, three-year-old colt that was worked only a few days at plowing (as the third in the team). He became lame and soon showed a deep-seated sweeny back of and parallel with the collar. Formerly, when my horses have had sweeny, it has been a shrinking of a greater space, but this is confined to a narrow space. Have been applying soap and salt, also blistering, but all seem unavailing."

ANSWER.—Exempt your colt from any work until next spring, or next summer, give the horse good, nutritious food in sufficient quantities, let him have all the voluntary exercise, and do nothing else. In about six, seven or eight months your colt will be all right again.

Vitiated Appetite.—H. W. E., Fairhaven, Mass., writes: "What shall I do for a calf that has an inclination to eat wood? I thought it might be that it wanted bone meal. I have been feeding it some, but it doesn't help it at all. The calf is about eight weeks old, and hearty enough, and gets enough to eat, but it bawls and eats, and then eats and bawls, as though it wanted something that it doesn't get."

ANSWER:—If you had informed me what you feed your calf, I might have been able to tell you what is wanting. Since you have not, all I can say is that you have to give the animal good, wholesome food, and, if the calf is kept in the stable, particularly good, sound hay in sufficient quantities. As the calf is yet quite young, it may want some milk.

Ringworm.—J. H., Buena Vista, Ohio. The disease you complain of seems to be ringworm. First, give your cattle, but especially the scurvy or scaly places, a thorough washing with soap and warm water, and then, before the diseased spots are perfectly dry, paint the latter with tincture of iodine. Repeat this application of the tincture of iodine (not the washing) once a day until a healing sets in, but do not neglect to subject your stable, if the cattle are stabled, to a thorough cleaning; otherwise, a new infection may take place. If the curry-comb and brush have been used on your cattle, you have to disinfect the curry-comb by dipping it for several minutes in boiling hot water, and the brush by thoroughly wetting it in a five per cent solution of carbolic acid.

Lameness.—C. F. S., Milford, Texas, writes: "My horse became lame in one front leg a year ago. Several pronounced it sweeny. I got a man to doctor his leg all last winter, but he is as lame as ever. If it is sweeny, can it be cured after so long a time? If so, what is the surest and least painful remedy?"

ANSWER:—If you had not neglected to tell me where the seat of the lameness is, or to give a description from which I would have been able to draw a conclusion as to the nature of the lameness, I might have been able to give you a satisfactory answer. As it is, I cannot, and the only advice I can give you is to have the animal examined by a competent veterinarian, if one is available. The shrinking of the muscles is probably a consequence and not the cause of the lameness, and will disappear after the latter has been removed.

Possibly Actinomycosis.—C. M., Hays City, Kan., writes: "About a year ago we noticed a large lump on one side of our cow's head. The lump has disappeared, and small sores break out near where it was. At first they look like proud flesh, but before they heal they look something like a wart, and when they disappear they leave a hole about one third of an inch deep, and then another will appear. Please give cure, and tell whether it will render the milk unfit for use."

ANSWER:—What you describe may possibly be actinomycosis, or so-called lumped jaw, but I am by no means sure of it. You undoubtedly failed to give a complete description, and only stated what attracted your attention. If not, such a disease as you describe is unknown to me, unless it be that some corrosive substance has acted upon the side of the cow's head, but you fail to say so.

Wants to Castrate Female Dogs.—T. B., Nicholson, Miss., writes: "Please give full instructions for spaying a female dog. If there is any difference between the ovaries of the dog and the hog, state what it is, and tell what age is best to spay."

ANSWER.—If you know how to spay pigs, full instructions will not be necessary, and if you do not, a full description will do you very little good; besides that, it would require much more space than is allotted me. The ovaries of female dogs are small, of the size of a pea or bean, and are found enveloped in fat behind the kidneys. The incision in the left flank has to be made high enough, and from upward, downward and forward. If the ovaries cannot readily be found, it is sufficient to sever the connection between the horn of the uterus and the ovary, and to leave the latter where it is. Any age will do, provided the animal is in good health, and prepared by a little fasting.

A "Lump."—A. W. W., Wichita Falls, Tex., writes: "I have a seven-year-old horse that has a lump on his right fore ankle joint. It is solid, but not hard, and seems to be sore when touched. It does not lame him, except when riding fast, then it seems to give away and he limps for a little way. I have been rubbing it with liniment, and it moved a little to one side and down the way I rubbed it, but did not get any smaller. It has been coming on for about two years, and is as big as a goose egg cut in half."

ANSWER:—If the "lump" you complain of is situated in front, or a little sideways, of the pastern joint, and neither soft and elastic nor hard, but solid, it must be either a callous swelling or an indurated gall. If it is the latter, and situated in the sheath of the extensor tendon, its removal is not impossible, but requires an operation which can be performed only by a competent veterinarian. Severe exercise, especially in hot weather, has a tendency to make it worse.

Probably a Fistula.—J. D., Dilworth, Mont., writes: "I have a horse which has a large swelling under the jaw, which I think was caused by a rattlesnake bite over a year ago. It keeps running at the bottom. It does not hurt him to touch it. The swelling is hard. He eats and stands the work as well as any horse. Can you tell me what to do to heal it, and reduce the swelling?"

ANSWER.—First, search for the opening from which the discharge comes, and then probe it carefully and thoroughly so as to learn where it leads. If you find that it is not deep, and leads only into soft parts—not into the jaw bone and to the root of a tooth—clean it thoroughly with warm water, and then introduce a stick of lunar caustic, and keep it in the canal for a few minutes. After that, all that is required is cleanliness. If, however, you find that the canal leads into the bone, or to the root of a tooth, the treatment just described may not be sufficient, and a more complicated operation, or even the extraction of the damaged tooth, may be necessary. In that case, a surgeon should be called in. If none can be had, you may sufficiently enlarge the opening with a hoof-borer, or with a strong, narrow-bladed knife, to be able to introduce, say, a lead pencil clear to the end, and then fill up the the canal with absorbent cotton thoroughly saturated with carbolic acid. This cotton should be renewed at least twice a day, until the discharge has lost its bad smell. After that, the same treatment may be continued, but, instead of saturating the cotton with concentrated carbolic acid, a 3 to 5 per cent solution may be substituted. If a tooth has to be extracted, I cannot advise you, because that is an operation which even the best description will not enable you to perform without suitable instruments.

Bruised Withers.—J. A. C., Merna, Neb., writes: "I have a two-year-old colt that had a bunch about three or four inches across come on top of his shoulder blade, about three months ago. It grows slowly. I lanced it, but there was nothing in it but blood. I have been blistering it with mercury and putting on iodine." V. R., Urbana, Ohio, also writes: "I have a mare eight years old, with a large lump or swelling on the top of the neck at the shoulders, caused, presumably, by a bruise, although I do not know exactly how or when it occurred. Is it a fistula? There is no discharge of pus from it, as yet, no opening having formed. Is there any remedy or treatment to scatter and cure it without permitting it to break open? I have been using Mustang Liniment on the swelling for a couple of weeks, but it doesn't cure."

ANSWER.—As it will be about a whole month after the date of your inquiries when this answer reaches you, and as in a month a great many changes may occur in cases like yours, the best advice I can give you is to call on a competent veterinarian and to intrust the treatment of the afflicted animals to him. You will find that it is the cheapest. Such a bruise, when fresh, may be treated by making frequently repeated applications of cold water. If several days old, but not yet showing any signs of an abscess formation, an application of oil of cantharides, prepared by heating one part of cantharides and four parts of oil for an hour in a water bath, and then straining it, will often reduce the swelling, and prevent an abscess formation. Its application may, according to circumstances, be repeated in about four days. If, however, an abscess is already forming, the oil of cantharides will hasten its ripening. If such an abscess is deep-seated, and the opening higher than the bottom of the abscess, a fistule will be the result. Its treatment is best left to a veterinarian.

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Our Miscellany.

What help is a comrade's bugle blast
When the peril of Alpine heights is past?
What need the spurring pæan roll
When the runner is safe beyond the goal?
Nay, if thou hast a word of cheer,
Speak it while I am alive to hear.
—*Margaret J. Preston.*

THE sailor is a generous soul. He is willing that anybody should take his watch.—*Boston Bulletin.*

IF the stream at which you wish to drink is muddy, go higher! The fountain is clear.—*Gail Hamilton.*

JUST now the crowned heads of Europe appear to be having every variety of escape from death in the midst of their festivities.

IT is declared that the fashionable hotels of London have two sets of prices, the highest schedule being "exclusively for Americans."

THERE are said to have been in Paris, the first two weeks of September, as many Americans as last year, when the exposition was "on."

WE call the attention of our readers to the advertisement of Cleveland Baking Powder Co., on Household page. Send for their Cook Book.

THERE is the most pronounced difference nowadays in sardines. The oil in which some of the cheaper brands are packed is about as vile as any one could taste.

FIVE-YEAR-OLD William was talking about his knuckles, and his brother asked what he meant. "I mean the little elbows on my fingers," was the ready reply.—*Babyhood.*

TRUE happiness never flows into a man, but always out of him. Hence, heaven is sometimes found in cottages and hell in palaces. Heaven itself is more internal than external. —*J. P. Newman.*

THE way to wealth is as plain as the way to market; it depends chiefly on two words—industry and frugality; that is, waste neither time nor money, but make the best use of both.—*Franklin.*

NOT all are called to heroic self-denial in the world's behalf. A wise, conscientious and proportionate setting apart of time and means helps on wonderfully in the world's evangelization.—*J. W. Barrett.*

A MOVEMENT is on foot at Lawrenceburg, Tennessee, Davy Crockett's birthplace, to erect a monument to the hero of the Alamo. Robert Crockett, a grandson of the great fighter, will take a prominent part in the ceremonies of the occasion.

A NURSE of the war of 1812, Mrs. Elizabeth Sands, died at Baltimore, lately, aged 101 years. She was a person of great activity, and it is said that after having passed her one hundredth birthday, she would go up and down stairs thirty times a day.

WE are ruined, not by what we really want, but by what we think we do; therefore, never go abroad in search of your wants. If they be real wants, they will come home in search of you, for he that buys what he does not want will soon want what he cannot buy.—*Colton.*

"UNCLE JOHN," said little Emily, "do you know that a baby that was fed on elephant's milk gained twenty pounds in a week?" "Nonsense! Impossible!" exclaimed Uncle John, and then asked, "Whose baby was it?" "It was the elephant's baby," replied little Emily.—*Toronto Empire.*

ANIMALS AS ACTORS.

Many animals have the dramatic instinct; that is, they enjoy acting a part and "making believe" as much as some children do. An English gentleman, who had once been in the cavalry service, use to tell me a great many anecdotes about a horse that belonged to his regiment.

"Old Sal," as she was called, had innumerable tricks and devices of her own, and was quite the practical joker of the company. A very common one with her was suddenly to nip with her teeth the man who was grooming her; and when he looked up angrily after such an unprovoked attack, he would always find her gazing innocently into the distance as if she never dreamed of doing such a thing. She knew how to turn her cleverness to her own advantage, too. The horses were fed from a long trough, with a swinging bar between each two to keep them apart, and secure the proper division of the oats. Old Sal would quietly blow her own oats into the farthest corner, and then, putting her head over the bar, blow her neighbor's oats within her reach, eat them, and then return to her own share.

Dogs are very fond of pretending. I know a little dog, the especial pet of his mistress, who will assume five or six different parts in the course of a game. One of his favorite plays is to rush at his mistress as if he was going to make a furious attack upon her with his teeth and claws, but he takes the greatest care never to really hurt her. Then he will be exceedingly mournful, and in an instant all life and fun, changing quite as suddenly into an air and attitude of resentful indignation, and all these with the same ease that a comic actor on the stage might show.

But the best acting I ever heard of was done by a dog of the kind called a "lurcher." He belonged to a famous poacher, who is a man that steals partridges, hares and pheasants from his rich neighbors. Many a fine lot of game did this dog help his master to secure. The laws in England are very severe against poaching or stealing game; for the gentlemen wish to preserve it for their own pleasure. So a great effort was made to bring this man to trial and convict him. Very little proof could be brought against him, however. He had never actually been seen with the game in his possession, although this dog had, when, as the game-keepers believed, he was carrying it to his master, who had trained him for this purpose.

He denied stoutly that the dog was his, or that he knew anything about it. So the judge had the dog brought into the room, thinking that he would immediately prove the falsehood of this by a joyful recognition. But, to everybody's surprise, the dog did not look at the man or notice him at all, nor would he even come near him. So the man was discharged as innocent.

But the dog was his, and had only been taught by his master to pretend not to know him when anybody else was present. If you have ever noticed how instinctively a dog's tail begins to wag and his ears to twitch with pleasure when he hears his master's voice, you will understand what a fine piece of acting this was. It is a pity his cleverness should have been used for such bad purposes.—*Waverly Magazine.*

Smiles.

PICKINGS.

The golden-rod is yellow,
The pansy's black and blue,
The sumach's blazing scarlet
Aloug each avenue.

The brooklet brightly sparkles
Down the meadows bright and glad,
Where each wild carrot's liftiug
Its silver liver-pad.

The fleecy cloud's eavorting
Around the peaceful sky,
And in the pie the huckle-
Berry joins the fly.

While black-eyed golden daisles
Upon the zephyrs hob,
The farmer with a feuce-rail
Just makes the bullock throb.

I look into the heavens
To see the wild birds fight,
And now aud then I listen
To hear the old Bob White.

Then come, my love, come with me
Into the shady glen,
We'll sit on banks of flowers,
By purling brooks, aud then

I'll read you dainty poems
On which the public's stuck.
Here is the pretty volume—
It's called *Pickings from Puck.*

USED AS AN ILLUSTRATION.

THE temperance lecturer stood for a moment silent and thoughtful before the immense congregation in the church after he had been rewarded for a hurst of eloquence with gratifying applause.

As he stood there, a look of sadness crept over his face, and the audience kuew that somethiug was to be told them hy way of illustration which would render the hardest heart there sorrowful.

"A short time ago," he began, "a young man was lying upon a hed in one of the public hospitals iu the city of St. Louis, dying. Yes, dying. Dying—the death of a *drunkard.* Upon his face, hardened and besotted hy debauchery, were still to he discerned traces of what had once been youthful, manly heauty. But it was all gone now. The demon, tempting at first with wine and gay company, drawing the bands a little tighter and a little stronger, as time wore on, weaving a web of appetite about the poor victim and dragging him down through the lowest depths of degradation, had done his work well.

"Robbed of his money, robbed of his health, robbed of his manliness, robbed of his soul, the poor wretch lay there dying.

"His mind wandered, and in his delirium he was again the happy, guileless lad. The end was not far away.

"Suddenly he called wildly for his mother, aud his aged mother, in her quaint old dress, came to the bedside and bent over her son. The dying man looked up into her face long and earnestly. 'At last, 'Mother,' he said, in a broken voice, 'Mother, where did you get that hat?'"—*Charles Newton Hood.*

LOOKING BACKWARD.

Miss Dasher (of Denver)—"So sorry the season's over, dear. What luck?"

Miss Brownbean (of Boston, dreamily)—"I am so transcendently happy. He whom I love asked me to be his wife. He is fond of Emerson, is a member of the Bellamy Society, and is possessed largely of this world's goods and the root of all evil."

Miss D.—"How jolly! I am too engaged. He is redheaded, says 'I seen' and 'I done,' and can lick anythiug of his weight in Denver. And he's got the rocks, you bet."

BOUND TO GET ON TOP.

In spite of all discouragements good gets on top. It takes long sometimes—it wears patieuce, and sometimes sours the dispositiou—but genuine good meets with genuine success. That's gospel to any one who knows the history of Drs. Starkey & Palen's Compound Oxygen Treatment. It is well known what obstacles had to be overcome at the outset, the most serious of which was the antipathy of physicians. But how is it now? To-day more than one thousand physicians use the Compound Oxygen Treatment in their practice. They have found it a faithful ally in their efforts to subdue disease and they have admitted as much. A 200-page book, which is free to any one, has the indorsements of many prominent physicians, besides the testimonials of clergymen and other professional men and women. It is over twenty years now that Drs. Starkey & Palen's Compound Oxygen Treatment has been doing its good work.

If you have anything that is good, you must say so; it is not enough to have value, the fact must be made known. So Drs. Starkey & Palen have given the Compound Oxygen Treatment its well nigh universal vogue by systematic and careful advertising. The troubles of introduction and general acceptance were over years since, but they wish to remind you that the Compound Oxygen Treatmeut is still available to assist the invalid.

Invalids need encouragement; it helps them to get well. The 200-page book above mentioned is filled from cover to cover with testimonials of grateful physicians and patients. It will be sent free of charge to any one addressing DRS. STARKEY & PALEN, No. 1529 Arch Street, Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.

TENDED STRICTLY TO BUSINESS.

For cool self-possession, or a remarkable display of indifference in trying and exciting times, the descendant of Ham, when he wants to be, is hard to discount. The fact was forcibly illustrated iu an incident connected with the recent trial of the Chambers case at Ironton. Oue of the principal witnesses for the defenee was Frank Jenkius, a Negro and eye-wituess of the tragedy. Frank was whitewashing a chicken-coop only a few feet away when the shooting occurred. On the direct examination he told his story in a plain, straightforward way, and his evideuce was very material. The cross-examiner propounded the usual questions, and made a strennous attempt to tangle the witness in giving his testimony. Concerning the facts immediately preceding and at the time of the shooting a question would be asked Frank, to which he would give a prompt reply, and then the attorney would ask:

"What did you do then?"

"I just weut on whitewashiug the chicken-coop."

"But when the defendant appeared with the gun, and it appeared as if some one was going to be hurt, what did you do then?"

"I kept on whitewashing the chicken-coop. It was none of my business, and where I came from, in Woodward county, Ky., I long ago learned not to interfere with two white gentlemen engaged in settling a question of honor. I turned up one end of the coop aud kept right on whitewashing."

"When the shot was fired what did you do?"

"Kept right on whitewashing."

"Did you do anything when they removed the body?"

"Yes; kept right on whitewashing."

The judge smiled, the spectators tittered, and the whole court room appreciated this wonderful display of disposition to attend strictly to one's own affairs.—*St. Louis Republic.*

NONE OF THAT FOR HIM.

"Your father refuses his consent to our uniou?"

"He does, Harold."

"Nothiug seems to be left for us, then, except an elopement. Do you think, Myrtle," said the young man swallowing a soh, "that you could leave this luxurious home, forfeit all the enjoyments of wealth, hanish yourself forever from your parents' hearts, and go to the West with a poor young man, to euter a home of life-long poverty?"

"I think I could, Harold."

"Then you are not the practical girl I have always taken you to be," said Harold, with deep dejection, as he rose up wearily aud reached for his hat.—*Chicago Tribune.*

DIDN'T WAIT FOR IT.

Lady (as the tramp came into the yard)—"I suppose you want something to eat, do you? Well, you'll get the cold shoulder from me."

Tramp—"Cold shoulder? Ah! if there is any one kind of meat of which I am particularly fond, it is cold shoulder, madam. Now, if you will also kindly supply me with a little bread and butter and a piece of appie pie, I should—"

But just then the servant girl, who had heard the conversation, came out of the back door with a pail of hot suds, and the tramp nearly broke the gate in his haste to get out of the yard.—*Munsey's Weekly.*

PAST, PRESENT AND FUTURE.

"Why do you keep a diary?"

"To read over in later years and see what a fool I was."

"It is a pity you cannot project your mind teu years iuto the future."

"Why?"

"So as to read your diary and see what a fool you are now."

LITTLE BITS.

"Oh, take me up, mamma, it's so muddy." Mamma—"Walk across, that's a good girl. Mamma has all she can do to carry poor Fido."

"I'm afraid, Johnny," said the Sunday-school teacher, rather severely, "that I will never meet you in heaven."

"Why, what you been doin' now?"—*Ashland Press.*

Simeral—"I don't see how a watch can keep accurate time."

Snooper—"Why not?"

Simeral—"Well, time flies, but a watch only runs."

Ethel—"Do you think he'll commit suicide if I reject him?"

Maud (sweetly)—"Oh, no. He didn't when I rejected him."

Ethel—"Ah, but you must remember that the two cases are different."—*Munsey's Weekly.*

A dog was barking at the moon when a sage inquired why he did so, adding that he could not possibly affect the great luminary oue way or the other, and that it seemed a useless waste of energy. "Oh, it isn't that it makes any difference with the moon," replied the canine; "but I want the other dogs in this neighborhood to know that I'm not dead." Moral—We uever know that some men are buried until we miss their bluster.—*Detroit Free Press.*

Selections.

IF YOU WANT TO BE LOVED.

Don't find fault.

Don't contradict people even if you're sure you are right.

Don't be inquisitive about the affairs of even your most intimate friend.

Don't underrate anything because you don't possess it.

Don't believe that everybody else in the world is happier than you.

Don't conclude that you have never had any opportunities in life.

Don't believe all the evil you hear.

Don't repeat gossip, even if it does interest a crowd.

Don't go untidy on the plea that everybody knows you.

Don't be rude to your inferiors in social position.

Don't over or under dress.

Don't express a positive opinion unless you perfectly understand what you are talking about.

Don't get in the habit of vulgarizing life by making light of the sentiment of it.

Don't jeer at anybody's religious belief.

Don't try to be anything else but a gentlewoman—and that means a woman who has consideration for the whole world and whose life is governed by the golden rule, "Do unto others as you would be done by."—*Ladies' Home Journal.*

FIRES.

There is a class of people who put their fires out on a certain date in the spring, and do not kindle them again till another certain date in the autumn, no matter how much the weather may have in way of protest against these changes in the respective seasons.

So it is, also, that there are people who will wear their heavy wraps on warm days (such as we are being favored with at the rate of one or two each week) just as they would if the thermometer were racing down to zero. The consequences are, that on these warm days they perspire, get overheated and catch cold, as well as suffering much inconvenience and fatigue; and on the cold days they are not nearly warm enough, because they have nothing thicker to wear.

While, of course, much discretion must be used in making these changes, and those who go out early in the day can scarcely dare to wear light wraps, those who wait till they can tell what kind of a day it will be would save themselves much discomfort and possible illness, by thinking only of the thermometer and not of the date.

The Markets.

	Chicago.	New York	N. Orle'ns
Butter.—			
Fancy Cream'ry...	23 @ 24½	23 @ 25	26 @ 27
" Dairy.....	18 @ 21	12 @ 21	15 @ 16
Common.....	7 @ 12	10 @ 14	9
Grain.—			
Wheat No.2w'nt'r	1 00½	1 05¾	.....
Corn, "	50 @ 52½	56 @ 57	62 @ 64
Oats. "	42 @ 45	42 @ 47	47 @ 48
Live Stock.—			
Cattle, Extra.....	4 95@ 5 25	4 0@ 5 00	.....
" Shippers ..	2 75@ 4 75	3 40@ 3 85	2 25@ 2 75
" Stockers...	1 60@ 3 10	.....	.....
Hogs.....	3 90@ 4 50	4 10@ 4 60	4 00@ 5 00
Sheep,com.togood	3 00@ 5 50	4 00@ 5 50	2 25@ 2 75
" Lambs.....	4 50@ 6 75	5 50@ 7 25	.....
Provisions.—			
Lard.....	6 25	6 43	5 62½
Mess Pork.....	9 75@ 9 85	11 50@12 25	11 50@11 75
Seeds.—			
Flax, No. 1.....	1 46	.....	.....
Timothy.....	1 25	.....	.....
Clover.....	3 85@ 4 00	.....	.....
Wool.—	Chicago.	Boston.	
Fine, Ohio & Pa...	.....	.....	.....
" Western.....	.....	.....	.....
" Unwashed.	18 @ 22	.....	.....
Medium, Ohio & Pa	.....	.....	.....
" Western.....	30 @ 33	.....	.....
" Unwashed..	23 @ 25	.....	.....
Combing & Delaine	.....	.....	.....
Coarse & Black....	18 @ 19	.....	.....

FARM AND FIRESIDE.

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Current Comment.

IN view of the short supply of wheat in this country, there is much interest manifested in future prices and prospects. The present outlook for wheat is carefully considered in the following from *Bradstreet's:*

Neither does there appear to be much skepticism as to the present price of wheat being a fair one, many going so far as to believe that $1.05 for No. 2 red at New York will look cheap prior to July 1, 1891. Be that as it may, the price of wheat in the United States is not likely to go to ambitious figures, unless England and France feel a pinch, or the possibility of a pinch later in the season, and are compelled, or feel that they are compelled, to draw on the United States for what wheat may remain here in excess of home requirements. In the latter event, it requires no prophet to say that $2 per bushel might be a low price.

The question upon which the world's price of wheat is hanging just at present is whether Roumania, Russia, Italy and Australia have produced enough wheat to make up for the decreased yields in the United States and India, and the reduction of stocks of rye in Germany and elsewhere on the continent. Mr. H. Kains-Jackson has pointed this out clearly enough, and admits that there may be some further complications, of course, attendant on "unsettled conditions of exchauges, silver appreciation, tariff bills in America, and higher wages for labor throughout Europe." The latter qualifications in no wise simplify the problem, of course. But the insuperable difficulty in forming a just conclusiou as to the probable world's supply and demand is owing to the fact that little is as yet known of the size or quality of Russia's crop. Even from France come advices as to the size of the wheat harvest, which leave a noticeable margin for error. But the Liverpool *Corn Trade News* is confident that when the final outturn of the Russian crop is ascertained, the position of supply and demand for the remainder of the season will appear very strong.

If Russia does not prove able to supply the chief wheat importing nations of Europe with what they do not obtain from America, India and Australia, it would he sure to have an effect on prices here. Over a month ago the weekly exports of wheat and of flour as wheat from the United States began to fall away, notably from Atlantic coast ports. Since that time some wheat has gone abroad, it has been declared, "hy the necessities of the ocean carriers for freight or ballast," rates from New York to Liverpool haviug been nil for a time. Some wheat, it has been stated, has also gone abroad on consigument, to he sold for what it will fetch. But free shipments of late have heen only from the Pacific coast.

Bradstreet's estimates that the United States has only about 61,000,000 bushels available for export this year, states that one half of this was exported during the first third of the year, aud goes on to say:

Exports were checked here hy the price in home markets being forced up beyond a parity with those abroad. This was done, some will be surprised to learn, by the speculator, the dealer in futures; by the man who was far-sighted enough to discover that wheat was scarce, and would shortly be worth a great deal more money. So he "conspired" and put the price up where the foreigner would not pay it. Had he not done so, the probabilities are we might have been importing wheat, before the end of the year, at prices made by heartless foreigners.

It is not certain that $2 per bushel for wheat would be more than a very temporary benefit to this country. High prices would greatly stimulate the production of wheat in Russia, India and Australia, and would simply hasten the day, almost certain to come anyway, when those countries will supply all the wheat needed by western Europe. Europe is now the greatest wheat producing country in the world, and imports only enough to make up a comparatively small deficiency. This country must now face the probability that in the near future her market for breadstuffs in western Europe will be taken away from her by the competition of Russia and India. The United States cannot hope to retain that market unless she undersells India and Russia. How is it possible to do this? Wheat has not been a very profitable crop to the American farmer for several years past. He can find no profit in wheat cheaper than he has been raising. He can, therefore, make up his mind at once that the European market for his surplus breadstuffs is a very uncertain one, and will not do to depend on in the future.

THE great educational influence of the seed catalogue is not likely to be called in question. In mauy rural homes—unfortunately in too many—the annual seed catalogue is the only thing that might lay claim to the title of horticultural "book." While the gay pictures serve for the entertainment of visitors and for the amusement and instruction of children, the brief directions for the cultivation of the various vegetables and fruits are freely consulted, and in many cases lead the man, or whoever fills the position of "gardener for the family," to success in their first simple operations in vegetable or fruit growing. Many plain, simple-minded people accept the "seed book" as their great and unqestioned authority. But just because all this is true, the catalogue-makers, now that they are at work again prepariug their new edition, should take all pains to avoid glaring and misleading exaggerations, to make their instructions as plain, reliable and valuable as possible, and thus improve and increase the educational features of the catalogue crop to the greatest possible extent.

FROM bulletin No. 12, on the population of the United States, issued by the census office, we take the following:

The population of the United States, on June 1, 1890, as shown by the first count of persons and families, exclusive of white persons in Indian Territory, Indians on reservations and Alaska, was 62,480,540. These figures may be slightly changed hy later and more exact compilations, but such changes will not he material. In 1880 the population was 50,155,783. The absolute increase of the population in the ten years intervening was 12,324,757, and the percentage of increase was 24.57.

The following table shows the population of the several states as found by the census enumeration of the years 1880 and 1890:

STATES AND TERRITORIES.	POPULATION. 1890.	1880.
The United States	62,480,540	50,155,785
North Atlantic Div.	17,364,429	14,507,407
Maine	660,261	648,936
New Hampshire	375,827	346,991
Vermont	332,205	332,286
Massachusetts	2,233,407	1,783,085
Rhode Island	345,343	276,531
Connecticut	745,861	622,700
New York	5,981,934	5,082,871
New Jersey	1,440,017	1,131,116
Pennsylvania	5,248,574	4,292,891
South Atlantic Div.	8,836,759	7,597,197
West Virginia	760,448	618,457
Delaware	167,871	146,608
Maryland	1,040,431	934,943
Dist. of Columbia	229,796	177,624
Virginia	1,648,911	1,512,565
North Carolina	1,617,340	1,399,750
South Carolina	1,147,161	995,577
Georgia	1,834,366	1,542,180
Florida	390,435	269,493
Northern Central Div.	22,322,151	17,364,111
Ohio	3,666,719	3,198,062
Indiana	2,189,030	1,978,301
Illinois	3,818,536	3,077,871
Michigan	2,089,793	1,636,937
Wisconsin	1,683,697	1,315,497
Minnesota	1,300,017	780,773
Iowa	1,906,729	1,624,615
Missouri	2,677,080	2,168,380
North Dakota	182,425	36,909
South Dakota	327,848	98,268
Nebraska	1,056,793	452,402
Kansas	1,423,485	996,096
Southern Central Div.	10,948,253	8,919,371
Kentucky	1,855,436	1,648,690
Tennessee	1,763,723	1,542,359
Alabama	1,508,073	1,262,505
Mississippi	1,284,887	1,131,597
Louisana	1,116,828	939,946
Texas	2,232,220	1,591,749
Indian Territory	.....	.....
Oklahoma	61,701	.....
Arkansas	1,125,385	802,525
Western Div.	3,008,948	1,767,697
Montana	131,769	39,159
Wyoming	60,589	20,789
Colorado	410,975	194,327
New Mexico	144,862	119,565
Arizona	59,691	40,440
Utah	206,498	143,963
Nevada	44,327	62,266
Idaho	84,229	32,610
Alaska	.....	.....
Washington	349,516	75,110
Oregon	312,490	174,768
California	1,204,002	864,694

The following table gives the official figures on cities having over 200,000 population:

	1890.	1880.
New York	1,513,501	1,206,594
Chicago	1,098,576	503,304
Philadelphia	1,044,894	846,981
Brooklyn	804,377	566,689
St. Louis	460,357	350,552
Boston	446,507	362,535
Baltimore	433,547	332,190
San Fancisco	297,990	233,957
Cincinnati	296,309	255,708
Cleveland	261,546	160,142
Buffalo	254,457	155,137
New Orleans	241,995	216,140
Pittsburgh	238,473	156,380
Washington	229,796	147,306
Detroit	205,669	116,340
Milwaukee	204,150	115,578

WHAT was said in recent issues on the subject of transplanting onions reminds the writer of a method of transplanting potatoes, which he knows to be a success so far as raising extra early potatoes for home use is concerned. The object of the method is to gain time rather than to increase the yield. Since early potatoes next season will undoubtedly be a high price, many of our readers to whom it will probably be new may fiud good use for the method, which is a very simple oue. Several weeks before the usual time of planting early potatoes, select an early variety and prepare the seed in the usual way for planting. Spread them out thinly on a floor for the cuts to heal, which will be assisted by a spriukling of land plaster. Take shallow boxes, such as are used by gardeners for handling transplanted plants, put in the bottom a couple inches of loam, then a layer of the seed potatoes and cover them with an inch of soil. Keep the boxes, wateriug occasionally as needed, wherever the temperature is high enough to sprout the potatoes. Or they may be planted in cold frames instead of boxes. By the time the ground is warm enough for the first planting you will have fine potato plants six or eight inches high, which can be readily transplanted, and which will grow right along from the start and produce potatoes about ten days or two weeks sooner than the usual way. For the purpose of raising extra early potatoes for home use this plan is worth all the trouble. And, as the price of early potatoes in our markets is usually high until the home-grown ones are bronght in, the enterprising farm gardener might find it profitable.

REFERRING to a brief comment in a former issue, a correspondent is at a loss to understand how the principle of reciprocity can be applied to either the policy of protection or free trade. There should be no difficulty in understanding that. If the United States were to say to Germany, "Remove all the customs duties you impose on your imports from us, and we will remove all the duties on our imports from you," the principle would be applied to free trade. For if these two countries were to agree on this proposition, the result would be absolute free trade between them. Further, it is the ouly way by which this country can secure unrestricted trade with other countries. If we were to abolish our whole tariff system, and other countries retain theirs, our so-called free trade would be a very one-sided affair.

On the other hand, if the United states were to say to Brazil, "We will impose a duty on the coffee that we import from you unless you remove your duties on our flour and agricultural machinery," the principle is applied on the lines of the protective policy. The duties in this case are on imports that do not compete with the products of either country. Under a tariff for revenue only, duties are laid only on articles not produced in the country by which they are imported. Under a protective tariff such articles are placed on the free list, and duties levied on imports that enter iuto competition with the productions of the country. Reciprocity on such articles as are not produced by the country into which they are imported, is right in liue with the protective policy. Reciprocity, therefore, can be used either to secure true free trade or to benefit and streugthen protection.

NEBRASKA is rejoicing over a new and valuable industry. The beet sugar factory at Grand Island is reported to be a great success. It has been turning out sugar at the rate of thirty tons per day. The success of this, the first and experimental season, assures the future of the industry. The soil and climate of Nebraska are both adapted to the sugar beet. The cool climate, the nature of the soil, the spring moisture and the summer drought all favor the production of beets rich in sugar. The success in Nebraska will stimulate other states equally adapted to the growth of the sugar beet.

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Our Farm.

COMMENTS ON CURRENT AGRICULTURAL LITERATURE.

BY JOSEPH.

Strawberry Culture.—I have just received a copy of the "A. B. C. in Strawberry Culture," by T. B. Terry and A. I. Root, published by A. I. Root, Medina, Ohio. Price, 35 cents, or 40 cents by mail. Professedly, this book was written for the novice; but both expert and novice can read it with pleasure. I have long been impressed with the idea that our old way of writing agricultural and horticultural books—the mere statement of cold facts and naked directions for culture—should be improved. If I had the ability, the imagination, the inventive genius, I would, before this, have tried to clothe my writings and horticultural instructions in the form of a novel. With such ideas in my mind, this new strawberrry book could not help but strike me as coming near my ideal of what such a book, especially for the novice, should be. This new work is more than a statement of facts or a book of instructions. It reads like a romance. Both authors know how to write in a most pleasing, readable style, and to mix in a great deal of sound sense and valuable instructious. The book will be read, and do good, and I, for one, will willingly overlook what I might otherwise feel inclined to criticise—Mr. Root's habit of seasoning business matters with an overdose of mistaken Sunday-school sentiment.

As to varieties, Mr. Terry pricks some bubbles. Few berries have been boomed, by advertisements and otherwise, to the same extent recently as Monmouth, for earliest, and Gandy for latest. Probably few people will care to plant either of them very largely after reading "A. B. C. in Strawberry Culture." On the other hand, I was glad to note the good words spoken in behalf of the Haverland. "The Haverlands, with us, just lay in piles," says friend Terry, and the publisher adds, "We want to emphasize the remark that the berries just lay in piles. It was a refreshing contrast to look at the Haverlands, after we became disgusted with the poor fruiting of the Gandy. Why, some of our large, old plants of the Haverlands had fruit in piles not only on the south side, but on the north and east and west sides. Some writer, in speaking of a new strawberry, said that no mulching to keep the berries out of the dirt was required, for the plant bore so bountifully that the berries lay three or four tiers deep all around the plant, consequently, only the lower tier got into the dirt. All this has been *literally true* with those Haverlands. Unless I had seen them down on our rich creek bottom, with my own eyes, I should never have believed that any single strawberry plant could ripen such a quantity of fruit. I felt like saying to one of them, 'Why, you poor, dear, silly little plant, you can never ripen all this great mass of fruit, any way in the world.' But I tell you, they ripened up nobly. The first that turned red were so long and large that they compared quite fairly with the neighboring Jessies and Bubachs. Perhaps I should say that this ground that gives berries in piles has been very heavily manured for several years."

These statements are pretty strong, but I have seen the great masses of fruit on Haverlands in only fairly good soil, myself, and know from personal acquaintance with the variety, that so far as *quantity* of fruit is concerned, the Haverland at this day stands at the head of the list. Perhaps it is rather light-colored, and not quite as firm as some others, yet it is good enough for near market and home use. Among our great number of varieties, we had but one which approached or equalled the Haverland in productiveness. This is Burdette's Long John, and I hope Messrs. Terry and Root will try it as a fertilizer for the Haverland. These two varieties are just the ones which I think can be relied on to give a great abundance of good fruit. I consider them the best two on the list at this day. Haverland has an imperfect blossom; Long John is perfect, and the two will go well together. For my own use, I shall plant them, and none other, the coming spring.

Station Literature.—There are about forty state experiment stations, each with a number of specialists, such as chemist, botanist, entomologist, veterinary surgeon, horticulturist, agriculturist, etc. It seems that all these several hundred workers should give us, in the course of a whole year, a large amount of interesting and instructive facts and figures, based upon their various experiments in field, garden, orchard, stable and laboratory. Some of these stations are doing well, and apparently their full duty. Many others, however, give proof of their existence only by issuing an occasional bulletin, with nothing of importance in it. Evidently, some of the station officers do not earn their salt. Perhaps it might be well for the public and press to keep a little stricter watch than has been done heretofore, and urge the delinquent stations, by naming them if necessary, to a fulfillment of the promises that were held out to us when we were asked to petition congress members in behalf of the passage of the "Hatch bill."

It is also true that a large number of the bulletins issued are edited with gross carelessness or want of skill. The farmer does not care to wade through a whole lot of figures and details of operations, in order to pick out the results that might be of interest to him. The most important part of a bulletin is a comprehensive summary, and this should be given in plain language, so that all can understand it.

Milk and Cream.—The Cornell University Experiment Station, as reported in Bulletin XX., has made comparative tests of various methods of treating fresh milk for the purpose of securing rapid and complete creaming. The question to be settled was especially whether, in the absence of ice, cream raising by dilution (that is, by the addition of an equal quantity of water, either hot or cold, to fresh milk in deep cans) might be safely substituted for the ordinary one of setting the milk in deep cans in ice-water. The latter method gave the most satisfactory results in every case. The next best method was found to be, setting in shallow pans without the addition of water.

The station also has made a number of analyses of samples of milk, dipped from milk peddler's cans, to determine how much, if any, variation exists in the amount of fat (cream) served to the different patrons of a route by dipping; as it was claimed by some that the cream would quickly rise to the surface, and consequently the first patrons would be given milk richer in fat than the last patrons. The station analyses, however, do not show that such is the case. The conclusion drawn by the station officers is, that "where milk is peddled by dipping from the can with an ordinary dipper, and where no stirring is done except by the motion of the wagon and raising the dipper, substantial justice is done all the patrons, so far as the amount of fat apportioned to each is concerned."

CORN-HUSKING TABLE.

Mr. J. W. Mapps sends a description of a convenient attachment to the wagon for husking corn in the field, where it is necessary to drive the team from one shock to the other. A A are two pieces 2x6 inches, about 9 feet long, and B and D are 2x4 inches, 3 feet long. Bolt B and D to A A. C is a block 6x6 inches, 1 foot long, bolted to B in the center and fits under the reach of the wagon. E E are two iron rods that go through each end of D and hook over the top of the wagon-box. F is the platform for husking the corn on. H is a lever made of an old hay-rake tooth, that is bent to the right shape and will spring back to place. The twine is taken from ball, J, and reaches across platform to G. Throw fodder on platform and when husked, draw lever, H, over and hook it on G, which will press the fodder in a tight bundle, have a loop in the end of the twine, draw over and tie. Fig. 2 shows how this contrivance is attached to the wagon.

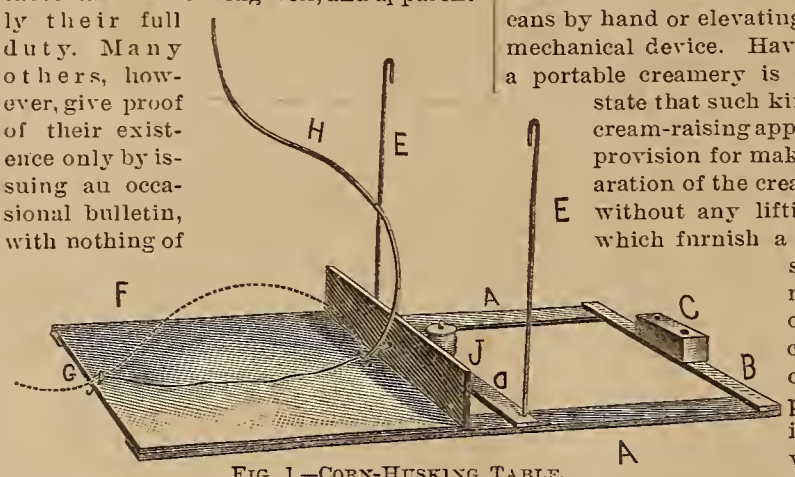


Fig. 1.—Corn-Husking Table.

WHAT IS A PORTABLE CREAMERY?

Before answering this question, will state that it is not a creamer. The latter is simply a box in which cans of milk can be set and surrounded by water for cream raising, and for which no provision is made for making the final separation of cream from milk without first lifting the cans by hand or elevating them by some mechanical device. Having stated what a portable creamery is not, I will now state that such kinds of improved cream-raising apparatus as include provision for making the final separation of the cream from the milk without any lifting of cans, and which furnish a refrigerator in a separate apartment from the one in which the cans are placed, can be classed as portable creameries in a general way. These kinds furnish conveniences that make them, in a small way, dairy-houses.

When and where they originated.

The first portable creamery put on the market was invented and made in Vermont, in 1878. The second one was invented and put on the market in 1879, in the same state. Though the first one of these was invented in the northern part of Vermont, both were manufactured in Poultney, and at the start both were made in the same shop.

An era marked.

The invention and introduction of the portable creamery marked an era in butter making. Progressive dairymen saw and appreciated at once the value of such an improvement, and with that class it was readily adopted. Its adoption by that class led the more conservative class of dairymen to take it up soon after.

It has come to stay.

There can be no question but the portable creamery has come to stay. This fact is becoming more apparent each year. Starting, as it did, in Vermont, its use the first year was mainly in New England and New York, though some portable creameries were sold in Pennsylvania in 1879, and a few in some of the western states.

Who has use for them?

Farmers and dairymen, mainly. But they are found very useful in hotels, restaurants, boarding-schools, hospitals, asylums, soldiers' homes and similar public institutions.

In a future letter I will give some facts relating to the care and management of portable creameries in use. F. W. Moseley.

SMALL FRUITS ON THE FARM.

On a small plot of ground enough fruit can be grown, if proper care is given, to supply a family of ordinary size three times a day the year through. I am aware that this statement may seem a rather broad one, but those who have a "little garden, well tilled," will bear me out in the assertion. It is surprising to those who have had no experience in this line, to find out how much can be grown on a very small piece of ground, if proper attention is given. It does not require such an amount as one often imagines it must, because the regular use of it on the table has a tendency to prevent as great indulgence in it as would naturally be the case were it used only as a delicacy brought out on extra occasions. Used regularly, it becomes a sort of appetizer, and really acts as a tonic of the best kind. Its pleasant acid tones up the system and whets the appetite for a keener appreciation of more solid food. It is a direct aid to digestion, and those who eat of it regularly are seldom troubled with those ailments which call for pills and physic. The fruit-eater is seldom bilious.

By all means set out plenty of small fruit. Have a row of currants, a bed of strawberries, raspberries along the fence, and grapes wherever a support can be arranged for them. If you have never tried your hand at small fruit culture, make up your mind to experiment in it, and the chances are, if you take care of the "venture" with which you start out, you will be so well pleased with your success that in a year or two you will "branch out" until you have all the fruit your family requires. It is just as easy to care for a garden of this kind as it is to properly cultivate a field of corn, but most farmers have got the idea into their heads that it is puttering work, and nothing will get this idea out of their heads except a trial, which will be sure to convince them that no other part of the farm pays so well, all things considered, as a good garden.—*Vick's Magazine.*

WHAT OUR SOILS ARE MADE OF.

BY JOSEPH (T. GREINER.)

In rewriting and rearranging my articles on "Agricultural Chemistry" for publication in book form, I came upon a subject not before treated by me; namely, the structure of our soils. As it may interest some of the readers of Farm and Fireside, I will give an extract of the chapter, as it will appear in my "Practical Farm Chemistry," under the title at the head of this article.

All soils have more or less organic matter, derived from the decay of animal and still more of vegetable substances. The proportion of such organic matter in naturally fertile soils varies between less than 1 and 70 per cent of its entire weight. In our best soils the organic matter ranges from 5 to 12 per cent, seldom more. Only in mucky and peaty soils does the amount of organic matter ever exceed that of the inorganic or earthy matter.

Classification of Soils.—The inorganic or earthy part of the soil consists principally of silica or silicious sand, alumina (as clay or slate) and lime (as carbonate or chalk). Clay, or pure clay, as seen from the farmer's standpoint, is a compound of about 40 per cent of alumina—a metalic earth, the oxide of the metal aluminum—and about 60 per cent of silica or sand. The great tenacity of the compound is due to the alumina. The sandy matter contained in it, being in chemical union with the other, cannot be separated from it by mere mechanical means, such as washing or boiling.

Soils are usually classified as follows:

1. Pure clay, or pipe clay—not often met with to any great extent.

2. Strong clay, or tile clay, consisting of pure clay and 5 to 15 per cent of silicious sand, which latter is easily separated from the clay by washing.

3. Clay loam, consisting of pure clay with 15 to 30 per cent of sand, separable by washing as before.

4. Loam, or ordinary loam, containing pure clay with 30 to 60 per cent of sand as before.

5. Sandy loam, containing 60 to 90 per cent of sand.

6. Sandy soil, containing upwards of 90 per cent of sand.

7. Calcareous soils, containing 5 to 20,

or more, per cent of carbonate of lime. According to the proportion of clay and sand contained in them, we call them calcareous clays, calcareous loams, or calcareous sands.

8. Vegetable moulds, such as rich, old garden soils, containing a very large per cent of decayed animal and vegetable substances, as the result of often-repeated, heavy applications of bulky manures; or peaty and mucky soils, containing 30 to 70 per cent of organic matter.

I must take this opportunity to protest against the common use of the misnomer "heavy," as applied to clay lands; for as a matter of fact, the larger the proportion of clay in any soil, the more tenacious, the stiffer and closer, but also the lighter in weight it is. One cubic foot of strong, clay loam, for instance, weighs 80 to 90 pounds, while one cubic foot of sandy soil weighs 110 pounds. The same bulk of peat or muck, however, weighs only from 30 to 50 pounds. Let us use the term "strong" or "stiff," rather than heavy, when speaking of soils with a comparatively large proportion of clay.

Even the most superficial examination will show to the intelligent farmer whether a given soil belongs to the class of sandy, clayey or mucky soils. Still, the finer distinctions may become a matter of doubt or dispute. The difference between sandy loam, ordinary loam and clay loam are not always readily recognized by outward appearances. It is not, however, a difficult task, even for the novice in such matters, to determine, by simple tests, the percentage of the principal substances contained in any given soil; at least, near enough for all practical purposes, and thus be enabled to correctly tell the class to which that particular soil belongs.

A Simple Soil Test.—I have just completed a soil analysis of this kind myself. The soil to be examined was what I supposed to be a clay loam, well provided with humus (organic matter). I happened to have a pair of sensitive laboratory scales on hand, but my supply of weights being limited to an aggregate of about 250 grains, I was compelled to take two grains as weight unit, although, for the sake of greater accuracy, I would have preferred a unit of ten grains.

At first I weighed off 200 grains of the soil, freshly taken up, moist but crumbly, spread this thinly on a sheet of clean paper, placing this upon the grate of a hot oven for an hour or more. When thoroughly dried, it was then again weighed, and gave 159 grains, the loss (41 grains, or 20½ per cent) representing the amount of moisture in the soil when first taken up.

In order to find the percentage of sand in the dry matter, another lot of fresh soil had in the meantime been dried in the same way as the first 200 grains. I now weighed off 200 grains of the dry soil, and thoroughly dissolved it in boiling water. More water was then added to make the mixture quite thin, and after a thorough stirring, the sand was given a chance to settle to the bottom of the vessel, when the muddy liquid on top was carefully poured off. Next, I added more water, stirring as before, and pouring off the liquid from the sand when settled. This process was repeated several times, until I had reason to believe that the sand in the vessel was pretty well freed from the clay and other matter. The residue of sand was then dried, put upon a stove-shovel, and this exposed to sufficient (red) heat to free it from any organic matter possibly left in it. The weight of this clear sand was then ascertained, and found to be 40 grains, or 20 per cent.

In order to get at the percentage of organic matter, another 200 grains of thoroughly dried soil was weighed off, placed upon a stove-shovel, and this upon a bed of live coals in the stove, until the whole had become red hot, and the humus, or organic matter, was all consumed by combustion. The residue was then allowed to cool, and its weight ascertained to be 182 grains. The loss, 18 grains, or 9 per cent, represents the organic matter.

The analysis might here be considered at an end, and sufficient for all practical purposes. But I also desired to ascertain the percentage of lime, and for that purpose put the 182 grains of soil, as freed from water and organic matter, into a pint of water, adding one half pint of muriatic acid, and stirring the whole together. This was left standing for several hours, until bubbles had ceased to rise from the bottom. The liquid part was then carefully poured off, the residue dried in a hot oven, and the weight again ascertained. This was found to be 176 grains, indicating a loss of six grains, which represents the amount of lime, and equals 3 per cent. Thus we have

Moisture in the fresh soil	20½	per cent.
Sand in the dry soil	20	" "
Organic matter in dry soil	9	" "
Lime in dry soil	3	" "

What lessons are to be learned from this? First, that this particular soil is a rather strong clay loam, which, however, might be improved in porosity, warmth and general manageability by addition of sandy matter. Second, that the soil is very liberally supplied with organic matter, and presumably in a fine state of fertility. Third, that lime is not wanting. Fourth, that we might expect fair returns from the judicious use of concentrated fertilizers on this soil.

The different classes of soils behave differently in various respects, especially in their relation to change of temperature, and in their capacities of absorbing and holding moisture. Sand both heats and cools off slower than loam, this slower than clay, and this slower than peat or muck. As a rule, dark-colored soils absorb heat quicker, and are consequently warmer in the day, but also cooler in the night, than light-colored ones.

Of all soils, pure sand has the least capacity for absorbing moisture from the air, as well as for holding water once taken up. This power increases in any soil with the proportion of clay, and still more with that of organic matter in it.

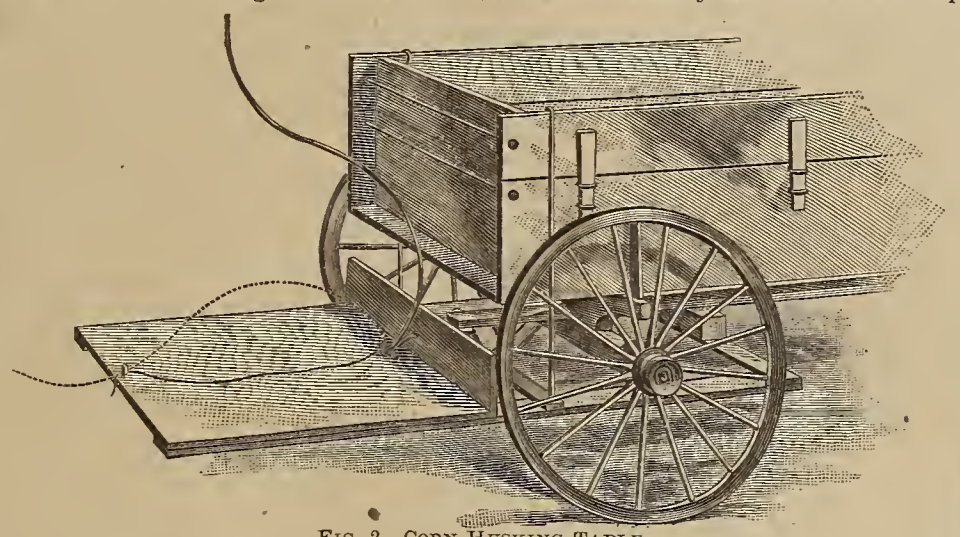


Fig. 2.—Corn-Husking Table.

Peat, or muck, absorbs and holds great quantities of moisture, and this sponge-like character, while too prominent to be entirely desirable in such soils themselves, renders them valuable as an addition to sandy soils for the purpose of increasing their absorptive and retentive capacities.

ORNAMENTAL TREE PLANTING.

It seems to me that some of the very prominent errors in the article in the issue for October 15th, should be pointed out.

Mr. S. gives a plan for a city lot 32 feet wide, and, as near as I can learn from the scale, which appears to be 16 feet to the inch in length and something more than that in width, the house occupies about 22 feet, leaving 10 feet of lawn at one side. The side path, 3 feet wide, divides this lawn into two equal portions, and in the three and one half feet space next the house he places a Magnolia speciosa (a not very common or easily obtained tree and far from the best of its class), that will, in 20 years, cover a piece of ground 30 feet in diameter. On the other side of this path he proposes to put pines and spruces mingled with herbaceous shrubs. Just how he proposes to mingle them and not totally lose the herbaceous stuff in a short time by the growth of the trees is beyond my ken. At the back of the group he proposes to put Norway spruces, but I fail to see how this giant evergreen can be placed in a bed that comes to a fine point, nor how it can be contained in a lawn but 3½ feet wide.

The same trouble is to be observed in the shrubbery between the front walk and the fence on the left. There is not room for the varieties mentioned, if they grow as such stuff naturally does.

Again, I do not understand the widening of the gravel at the gate and at the porch. Is the gate six feet wide and the front steps eight feet feet long, and why does the gravel path at the kitchen widen to the whole side of that room?

If Mr. S. would visit Tallmadge I could show apple orchards where the trees are planted 40 feet apart, and yet the branches meet. In the plan, five trees are suggested in thirty-two feet, and the little back yard has more than trees enough for the whole lot, and how are raspberries to thrive in a thicket of standard fruit trees 8 or 10 feet apart? The doctors might disagree about the propriety of putting a coleus bed in a surrounding of gravel, or a rose bed in the position noted, but there would be no disagreement among competent landscape gardeners about the impropriety of leading a walk through a ten-foot lawn in the way indicated. In all narrow lots the walk to the back should skirt the house closely and be parallel to it, leaving the lawn (narrow at the best) in one piece.

Leaving out of the question the advisability of planting evergreens in a narrow city lot, where they can only lead an unhealthy existence, I fail to see the need of planting them especially for shelter and protection. Generally, the neighboring houses and street trees furnish all the protection possible, and often more than is wanted. Lest some of your readers unfamiliar with the subject consider me captious and overcritical, let me fortify my position. I have just measured the longer branches of a Norway spruce in my yard, taken from the nursery and planted in its present position 23 years ago. They measure 17 feet. A Scotch pine of the same age covers a circle 25 feet across. I recently saw cut-leaved weeping birches of mature development in Fredonia, N. Y., and one tree would pretty near fill the front yard of Mr. S.'s plan. Shrubs like wiegela, Tartarian honeysuckle, golden spirea, syringa and snowball very soon reach a breadth of 4 feet, and with plenty of room and rich ground will often reach 10 feet in diameter. On the grounds of a gentleman in La Salle, N. Y., I saw, recently, syringas, snowballs, etc., planted in the spring of 1888 that were 3 feet across and 4 feet high. When planted they were like one or two-year currant bushes for size. Pines and spruces in the same grounds, planted at the same time, had pushed up leaders two feet long, in spite of a seven-weeks' mid-summer drouth.

When the Norway spruce before referred to was about 7 feet across, I planted on the north side some choice Chinese peonies, 3 feet from the end of the branches. In three years the spruce had overshadowed them and I was forced to remove them. In planting large grounds, groups of evergreens, where cultivated to promote growth, will admit of planting other trees and shrubs temporarily, to occupy the ground, and afterwards be removed to a permanent position elsewhere; but a small city lot does not require such a nursery, and especially not of trees only suited to large parks.

The smaller magnolias and rhododendrons are especially suited for such places and thrive better than the coniferæ. Among deciduous shrubs, the azaleas, some of the smaller spireas, the calacanthus and the tree peonies are desirable. The Yucca filamentosa and Daphne cneorum are also desirable. Among small trees, the shred-leaved alder, the weeping sophora, the weeping dogwood and the Prunus pissardi may be mentioned.

L. B. Pierce.

Summit county, Ohio.

WHAT IS IT?

"No, I do not believe in ghosts," said an old lady of great experience; "but I do believe in the ministration of spirits."

This is not the age, nor the country, in which the supernatural flourishes. Interest centers about the practical. Haunted houses are rented without great difficulty, if the landlord is willing to knock off a portion of the rent.

There are many, however, who will admit the exertion at times, of some peculiar influence, swaying our actions. We are led to do things we should not do of our own volition—the wisdom of which we do not appreciate until afterwards; then we wonder how we came to do them. We are forced to learn that worldly wisdom is not always that which guides into the wisest courses.

In this practical age results are what people are looking after. They believe in what they see; the "evidence of things not seen" is to be weighed in the future. When a man is sick he wants to get well; he cares little what medical method is employed if it cures. But if it does not cure he soon begins to doubt the skill of the physician, and inquire into his methods of medication. A happy thing it is, sometimes, if some influence induces investigation before it is too late.

W. O. Higgins, 65 Ferry Street, Fair Haven, Conn., writes, June 30, 1890: "One year ago I was taken with terrible pains in my side and back, suffering more than pen can describe. I am confident that no one suffered more and lived. I tried several physicians, who informed me I had a bad case of kidney and liver trouble and could not live. At this time a friend of mine, urged me to try Warner's Safe Cure; after using only four bottles of the Safe Cure and two boxes of Safe Pills, I am to-day a well and sound man, nearing my sixtieth year. I am foreman in the Fair Haven Clock Works, and will verify this statement at any time."

MORE BEET THAN CANE SUGAR.

It will probably surprise most readers to be told that considerably more than half (or 60½ per cent) of all the sugar now made in the world is obtained from beets; and only 39½ per cent from cane, sorghum, etc. Over three eighths, or 39 per cent, of the beet sugar is made in Germany. The total world's crop of the last season (1889–90) was over 6⅓ million tons (6,355,800 tons) of 2,000 pounds each; or nearly 12¾ thousand million pounds (12,711,600,000 pounds), divided thus:

World's Sugar Crop for 1889.

Beet sugar, 60½ per cent	7,700,000,000 pounds.
Cane sugar, 39½ per cent	5,011,600,000 pounds.
Total	12,711,600,000 pounds.

Of beet sugar, according to another authority, Germany produced 1,342,000 tons; France, 825,000 tons; Austria, 803,000 tons; Russia, 489,500 tons; Belgium, 189,200 tons; Holland and Denmark, 82,500 tons, and all other countries, 27,500. The United States has a wide belt of soil and climate quite as well adapted to beet sugar production as the above-named European nations. We use nearly one third of all the sugar made, but as yet make only a very small quantity comparatively, in a limited region, mainly in Louisiana, and buy all the rest.—*Orange Judd Farmer.*

WASTE LANDS FOR FRUIT AND FORESTS.

Professor Maynard calls attention to the fact that apple trees, remarkable for their thrift and vigor, are often found on land so rough and stony that it cannot be cultivated. The fruit produced upon such land is noted for its high color and rich flavor, and for long-keeping qualities. There are thousands upon thousands of acres of this kind of land, and much of it is almost worthless for any other purpose than forestry and the production of the large fruits, and, if properly cared for, it would, in a few years, give a large income for the investment. In planting such land, particular care must be given to the preparation of the soil directly around the tree, and to saving the material often found growing upon it, such as sedges, brush, etc., or obtained elsewhere to be used for mulch, to prevent the escape of the moisture that is rapidly carried away by the leaves or grasses and other plants. The advantages claimed for the turf system are, that the trees mature their wood much earlier in the autumn, and, consequently, are less liable to injury from cold; the roots are protected from injury from the extremes of heat and cold by the grass roots; the trees begin bearing much earlier and bear more regularly; the fruit is of better quality and keeps longer; the cost of land and cultivation is much less, while a satisfactory growth may be obtained by the use of a small amount of fertilizer applied to the surface.—*Exchange.*

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

A Wet Fall.—A season like the present, when rain is the rule and a clear day the exception, is most favorable for the development of cauliflowers, and gives us very nice, close heads of snowy whiteness. Last fall was wet, like the preseut, and under meteorological conditions like these, I find the crop grows almost spontaneously, without care or cultivatiou. All you need is to have live plants in fairly good soil. Even plauts that have given one crop early, and the stumps of which are left standing, have, under the influence of the continuous rains since August 20th, produced a secoud crop of one, sometimes more, smallish heads of especial delicacy and closeuess.

A reader of Farm and Fireside, Mr. M. Munte, of Indiana, writes me as follows: "In April I had set several hundred transplanted Henderson's Snowball cauliflower; also sowed a package of Early Dwarf Erfurt, received direct from Germany. On June 1st, the first unusually fine heads of Snowball were cut. The Early Erfurts were overtaken by the drouth, and soon looked wilted and on the verge of death. The Snowballs all came to perfection (nitrate of soda did it), were gathered, and the stumps left standing. When the rains set in the latter part of August, the Erfurts took a new start, and also nine tenths of the Snowball stumps sent up new shoots, or suckers, from one to three each, and at this time, October 11th, I have as fine a crop of Erfurts and Snowballs as any one could wish for at any time. Many of the heads measure from eight to ten iuches in diameter, aud are very compact and white as snow. I pride myself ou my skill in raisiug this vegetable, but I never met with such success before. My early June melons also made new vines, and now give me ripe fruit daily. Cucumbers the same; celery does splendidly. I can only account for this sudden and vigorous growth by the supposition that the late rains helped the fertilizers applied before the drouth, aud unused duriug the dry spell, to exert their influence."

All this shows the great value of water as a stimulant to plant growth, especially in the case of cauliflower and similar crops. Cabbages sown quite late directly where to remain, have also done wonders. With plenty of rain, aud perhaps with irrigation, a much smaller quantity of fertilizers will be required for the same effect than when soil and season is dry. Even with an abundance of plant foods in the soil, moisture is needed to dissolve them and make them available for the use of plants.

Some of the Europeau gardeuers select lands so low for cauliflower, that the open ditches between narrow, raised beds are constantly filled with water, up to a foot or eighteen iuches from the level of the beds. During a dry spell the plants are freely watered with water dipped up from the ditches, and slashed over the ground between the plants.

I still adhere to the practice of sowing cauliflower seed directly in open ground, and thin as required; but as good seed is always dear, I shall hereafter use it more sparingly, simply placing three or four seeds to each place where one plant is intended to be left. So I shall make the rows about two and a half to three feet apart, and plant the little pinches of seed about fifteen to eighteen inches apart. Usually, I also plaut a few dozen or hundred plauts of Snowball, Earliest Erfurt, etc., grown in hot-bed. This management has giveu me an uniuterrupted supply of fine "flowers" all through the season. The American-grown seed (obtained from Mr. Marsh, state of Washingtou) has again given good results. It will be offered by leading seedsmen next spring, and I hope at a much lower price than we have heretofore beeu able to buy good cauliflower seed.

Border Opportunities.—Some of our border cities, like Buffalo, N. Y., and Detroit, Mich., and the smaller towus, like Niagara Falls, Suspension Bridge, etc., have heretofore received a large share of their vegetables from Canada. The new tariff practically excludes Canadian imports of some of these products, especially peas, onions, cabbages, and iu times of average home production, of potatoes. The result will probably be a slight advance iu prices of such vegetables in the border markets; at least for a year or two, until these markets have found uew channels of a home supply. I am not a high-tariff man, believing that the farmer, when he undertakes to play the tariff game with the manufacturer, and especially with the combinations known as trusts, always will be the oue that is plucked, as he always *has* been. But we should try to profit by the opportunities that the change may offer. The grower near good markets, close to the border on this side, suddenly finds himself relieved of one half of his local competition, aud he should try to raise just the products which the tariff keeps out from the Canada side, priucipally ouions (on which the new tariff is forty cents per bushel), cabbages (tariff now three cents per head), green peas (tariff uow forty cents per bushel) and potatoes (tariff now twenty-five cents per bushel).

Price of Fertilizers.—The new tariff makes slight reductions on some of the farmer's raw materials of plaut food. Sulphate of potash, nitrate of potash, or saltpetre (crude), and other forms of crude potash, also nitrate of soda, are placed on the free list. To ascertain whether we could look for a price reduction, so far as the ingredients mentioned are coucerned, I wrote to a leading New York importer. The answer I received is somewhat of a disappointment to me. It appears that the English syndicate, who recently became sole owners of the potash salt mines at Leopoldshall, near Stassfurt, Prussia, by purchase, have learned something about managing such affairs from the example of the American coal barons. I am iuformed that for some tiue the syndicate has restricted the output, and that prices of potash salts, iustead of going down, will have a tendency to move in the other direction. Unfortunately, we are in the power of the syndicate, as they have no competitors. I do not know how it will be with nitrate of soda. I hope it will be cheaper, but whether or no, its effects for certain purposes are such that I must use it anyway. I can not do without it as a garden manure, and at present prices it is the cheapest source of nitrogen I have at my command.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

GRAPES AS AFFECTED BY CLIMATE AND SITUATION.

Mr. Rickett's grapes, although mauy of them, as grown and exhibited by himself, were of great beauty and excellence, have not proven generally successful, and the most of them, I think, can only be grown to perfection by special care or iu very favorable situations. The Jefferson has been with me one of the most successful, and amoug the best flavored, though sometimes rather tardy in ripening. John Snider, one of the oldest grape growers in southern Ohio, at Lancaster, gives the Jefferson the position of "the fiuest grape ou the American continent." But Secretary Williams, of New Jersey, finds the Jefferson unsatisfactory and of little or no value.

The Brighton grape is deservedly popular in many places, but it often fails in productiveness. This must always continue, for the cause is found in its imperfect blossom, with short filaments and reflexed stameus. Iu favorable seasons, with bright and mild weather duriug the period of inflorescence, the polleu seems sufficient to fertilize and produce perfect fruit. But if cold aud rainy weather prevails at this period the grapes fail to set, and few and imperfect clusters are the result. Some of the Roger's Hybrids and the newly introduced Moyer grape are in the samc class.

Most persons who plant a large uumber of different kinds of grapes come to the conclusion that we have too many varieties. This is doubtless true as applied to any one locality; but the very kinds that do not succeed in that particular may be both successful and valuable in other places which are suited to their special requirements. Occasionally when we have pleasant and sunny weather extending late into autumn without unseasonable frosts or cold rains, some of the grapes of southern origin, such as Catawba and Herbemont, and even our northern Clinton and Zoe, become rich and high-flavored with a sweetness and refreshing sprightliness which are only attained in our climate in exceptionally favorable seasons. The inference here is plain that in other places where such favorable conditions exist naturally, the same happy results will as naturally follow.

The point I wish to make is that success in grape culture requires that varieties should be selected which are especially adapted to the locality where they are grown; and that because a grape does not succeed in one section, it is by uo means certain that it may uot be both successful and valuable in another to which it is fitted naturally.

The area of adaptation is evidently much wider for some varieties than others. In our section of country the Labrusca type—including Concord, Worden, Moore's Early, Ives, Lady, Martha and Woodruff—will probably be found more generally successful than any other class; but there are, doubtless, in some portions of the South, other varieties which are better adapted to their soil and climate than any of these. The Delaware grape would probably be fouud adapted to as large an area as any other in cultivation, except for its unfortunate liability to mildew of the foliage; and I am not without hope that the use of the sulphate of copper remedies, may so far overcome this difficulty as to permit the successful growing of this valuable variety to an extent even beyond that of the Concord, by reason of its constitutional resistance to attacks of grape rot.

I regard as of the greatest importance the use of these recently discovered remedies against the various maladies which have been so prevalent and so discouraging to grape growers. I believe that their general adoption and general use will not only greatly enlarge the area of successful grape growing, but will also euable us to grow profitably, many of the finer and partially tender varieties in sections where it would be impossible without them.—*Geo. W. Campbell.*

BERRY GROWING.

The grower of such perishable articles as berries is subject to a nervous strain while the season lasts, and should, in the nature of things, be better remunerated than the stolid laborer or the producer of non-perishable products. Some fruit growers are so happily situated that they can employ women as pickers, and then there is no need of foreman or tickets, as each picker can keep her own accounts, and pick in separate crates, subject to inspection at noon or night.

The trouble with children is generally a lack of mature judgment, but some are tricky and dishonest. Most every extensive fruit grower is subject to strikes when the picking gets poor, and I have found it best to have a contract with their parents, subject to penalty if broken. This is enforced by withholding pay until the close of the season, with forfeiture of a portion if contract is broken.

I once visited a large berry growing firm, near Philadelphia, who had erected a cheap, two-story barrack of twelve rooms, where were housed their sixty pickers. They cooked for themselves on an old stove in the open air, and the escape from the hot city to the opeu fields and profitable employmeut was a rare picnic to them.—*Vick's Magazine.*

ROOT PRUNING.

With large trees, root pruniug should uot be completed the first year, but half a circle, as it were, dug around at one time, the remaining half dug another subsequent season. It is important that wheu the work is in hand the ball of roots should be undermined quite up to the trunk or maiu stem, as large tap-roots frequently take a direct downward course, and if these are not severed the work done will not have the desired effect. The space beneath the tree requires that the soil should be well trodden in, otherwise there is dauger of its shrinking, which, if the tree was unable to sink with it, would leave a cavity and seriously interfere with root formation. Should the soil be at all dry it must, as the filling proceeds, be well watered, this serving to fill up crevices more effectually and quickly than when it is allowed to sink naturally. Moreover, it tends to sustain the tree under its surgical treatment. It is a very good plan when trees are operated on at the roots, that the necessary pruning be done at the same time, so that the demands on the roots may be correspondingly decreased, and there is also less surface open to the wind forces.—*Vick's Magazine.*

PEACH CULTURE IN MINNESOTA.

The fact is demonstrated that peach culture is a success in Minnesota. But the question is asked, will it pay? The same question was asked us when we first began grape culture here, by laying down and covering—it paid. And not only in dollars and cents, but in the added home luxuries. And as with the grape so with the peach, as it adds dimes to the pocket, it will add dollars to home comforts, to home attractions and to the morals of the old and the young. The absence of home comforts without an effort to obtain them, is a deadener to filial affection, a breeder of discontented children, born with a desire that is not filled at home, a disgust of home and a desire to steal.—*Peter Gideon.*

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Pistillate Strawberries.—W. A. J., Mullins, Tenn. The Warfield and Cloud's Seedling strawberries are both of them pistillate varieties. The method of determining the difference between pistillate and staminate flowers will be illustrated in the near future.

To Destroy the Woolly Aphis.—E. A. L., Oakland, Oreg. Apply with a stiff brush a solution made of soft soap, to which has been added a teaspoonful of kerosene to the gallon. This should be well rubbed into the bark, and the earth near the base of the trunk should be drawn away and new earth put in its place, after washing the bark where drawn away.

Time to Prune Apple Trees.—J. S., West Berne, Ohio. Apple trees may be safely pruned from the time the leaves ripen in the fall until the sap commences to flow in the spring. I prefer to prune in January and February in the northern states. If pruned while the sap runs in the spring, the wood will often kill back. Wounds on trees heal over most quickly in June, and for this reason some have advocated this time for pruning, but at such a time the removal of foliage will check growth; consequently, it is not to be recommended.

Apple-Twig Borer.—G. M., Hay Springs, Neb., writes: "A black bug is destroying my apple trees. It is about a quarter of an inch in length. It works in the small limbs."

Reply:—Probably the insect to which you refer is the apple-twig borer (*Amphicerus bicandatus*). Unlike most borers which do their mischief in the larvæ state, this works in the beetle form, boring into the branches of apple, pear and cherry trees, just above a bud, and working downwards through the pith for one or two inches. The holes seem to be made for the purpose of obtaining food and also for concealing the beetles. They are made by both sexes alike, and the beetles are found in them, occasionally, in winter as well as summer. They work throughout the summer months, causing the twigs to wither and often to break off. This insect is seldom numerous enough to inflict any great damage, but sometimes young trees are considerably injured. Not much is known about the earlier stages of this insect; its larvæ is sometimes found feeding on grape canes, into which the beetle occasionally bores. If this insect becomes very numerous, it is recommended to cut off the bored twigs in June and July and burn them.

The Markets.

	Chicago.	New York	N. Orle'ns
Butter.—			
Fancy Cream'ry...	20 @ 25	16 @ 25	24 @ 28
" Dairy.....	19 @ 22	12 @ 21	18 @ 20
Common	6 @ 9	10	12
Grain.—			
Wheat No.2w'nt'r	1 02	1 10	.....
Corn, "	51½@ 53	60	63 @ 64
Oats, "	43 @ 45	49 @ 53	49 @ 50
Live Stock.—			
Cattle, Extra.....	5 10@ 5 35	5 00	.....
" Shippers...	2 75@ 5 00	2 75@ 4 60	2 25@ 2 75
" Stockers...	1 60@ 3 15	.....	.....
Hogs	3 75@ 4 20	4 05@ 4 70	4 00@ 5 00
Sheep,com.togood	3 40@ 5 60	4 00@ 5 75	2 25@ 2 75
" Lambs.....	4 25@ 6 60	5 00@ 7 00	.....
Provisions.—			
Lard.....	6 27½	6 15	5 62½
Mess Pork.....	11 50@11 75	11 50@12 25	12 00
Seeds.—			
Flax, No. 1.....	1 45	.....	.....
Timothy	1 10@ 1 30	.....	.....
Clover.....	4 05@ 4 30	.....	.....
Wool.—	Chicago.	Boston.	
Fine, Ohio & Pa...	.....	.....	.....
" Western.....	.....	.....	.....
" Unwashed..	18 @ 22	.....	.....
Medium,Ohio&Pa	.....	.....	.....
" Western.....	30 @ 33	.....	.....
" Unwashed..	23 @ 26	.....	.....
Combing&Delaine	.....	.....	.....
Coarse & Black....	18 @ 19	.....	.....

Our Farm.

RED RIVER BOTTOM.

THE general course of Red river is south-easterly. Its estimated length is 1,200 miles. Its principal sources are in the north-western corner of Texas, commonly known as the "Pan-haudle," and it drains a large portion of the Indian Territory, northern and eastern Texas, southern Arkansas and Louisiana.

All along its course, the lands are very fertile and the soil very deep. The deep, red, sandy soil along the upper waters of the Red river gives the water a muddy, dull reddish hue. Hence, the name of "Red" river. The lands along that portion of the river flowing through Louisiana are alluvial, being formed mainly of the silt that has for ages been washed down these turbid waters from its higher tributaries.

Fifty years ago these fertile bottoms were almost impenetrable jungles, and worth only about seventy-five cents per acre. Now the entire river front on both sides is a continuous clearing of large cotton plantations. Corn is grown some little, and the river lands, without manure, make from 40 to 60 bushels per acre. Cotton is *the* crop, however, on Red river, and there are probably no better cotton lands in the world than here.

Very little manure is used, and many of the oldest plantations that have been in continuous cultivation for two-score years, now show the need of it. The deep, mellow character of the alluvium renders it an admirable soil for resisting drouth, and with proper fertilization its yielding capacity would be immense.

Another drawback to the agricultural interests of Red river bottom is the liability to overflow. Like the great Mississippi, Red river needs better levees, and until they are built, this rich land can never reach the full stature of its possibilities. True, overflows do not occur every year, but one never knows when an inundation will occur. Last spring one of the greatest overflows ever known here came and retarded the planting of a large portion of the cotton crop from four to six weeks. Yet, despite very late planting and very little work, this late cotton will average half a bale per acre; and if frost does not come until late, the yield will exceed that in many cases.

The state government of Louisiana has made an appropriation for leveeing some of the worst places along Red river, and many planters will do a great deal of individual work in this direction this fall. Still, much more is needed than can be done with the means now at command. Nothing short of congressional aid can give full security against spring overflows.

Below Alexandria much sugar cane is grown, and all the lower portion of Louisiana is mostly devoted to cane growing.

The Red river bottom lands are finely adapted to nearly all garden vegetables and most of the fruits grown anywhere along the thirtieth to thirty-third degrees of south latitude. Pears, figs and some varieties of apples do remarkably well. Some varieties of sweet potatoes do finely, while others do not flourish.

It was once a prevailing opinion that the climate of Red river bottom was very unwholesome. In former years, when the whole face of the country was one vast jungle of vines and swamp forests, it was very unwholesome, indeed. Since these dense forests have been cleared away, however, and the sunlight and air have been permitted to penetrate and circulate, the health of the people on the river is about as good as upon the uplands. That is, those who live immediately upon the river front enjoy good health, as a rule; but those who live back from the river a mile or two, do not have nearly as good health. The lands lying back a mile or two from each bank of Red river are low and swampy, for the most part, and in consequence more or less malarious. Could these back-lying swamps be drained effectually, they would be rendered both salubrious and highly productive.

There seems to be an inexhaustible supply of fine, healthful chalybeate water underlying all these river lands. There being no rock in the soil, this water is easily accessible by driving iron pipes one and one half inches thick, from forty to fifty feet below the surface. Every residence is supplied with from one to several underground cisterns, also, in addition to a chalybeate well.

Altogether, Red river bottom is a magnificent agricultural country, and whenever it is properly protected by levees and the intensive method of farming adopted, there will not be a more productive and generally desirable section on the American continent. DICK NAYLOR.

Scottsville, Texas.

EXTRACTS FROM CORRESPONDENCE.

FROM MISSOURI.—Good, winter, hand-picked apples brought 65 cents, and about 120 car-loads were shipped from this station (Butler), about 100 cars from Rich Hill, between 40 and 50 car-loads from Rockville, and some 30 car-loads from Adrian, and enough are yet left in the county for home consumption. Potatoes are now commanding a price from 80 cents to $1 per bushel, on account of failure of crop in so many localities. Horses are selling at from $50 to $150, but good horses can be bought at from $80 to $100. The minerals in this district are coal, zinc, lead and tin. Coal is the most prominent. W. A. B.

Butler, Mo.

FROM SOUTH CAROLINA.—Laurens county lies in the north-western part of the state, in the heart of the famous Piedmont belt. It has a fertile soil which produces large crops of cotton, grain and all the varieties of sorghum. The surface is generally rolling or level. There are a great many water-courses in the county, which furnish abundant water power. We have good, freestone water and good health. The county is timbered with pine and the different varieties of oak. We have good railroad facilities, which increase the number of good markets. The county is settled by a kind and hospitable people, whose disposition is as genial as the climate they enjoy. W. B. C.

Tylersville, S. C.

FROM VIRGINIA.—The principal crops of Prince George county are wheat, oats, corn, cotton and peannts. Clover and all the grasses do well on low land. Some raise good crops on upland that is improved. We have plenty of marl, both green and shell, to be had by removing from two to four feet of dirt; it takes the place of lime, and is an excellent fertilizer. Land is worth from $5 to $15 per acre. We have two steamers from City Point to New York every week; two to Philadelphia, six to Norfolk, and five to Richmond. Large quantities of wood and railroad ties are shipped from here every week. We have a mild, healthful climate, with good breezes and good, soft water. Quite a number of settlers are coming in from Dakota, Nebraska and Ohio. M. S.

City Point, Va.

FROM KANSAS.—This part of the state had less rain last summer than any year since 1874, when we had a general drouth all over the state. Crops were light; corn was almost a total failure; wheat and oats yielded from eight to twenty-five bushels per acre. Farmers sold their corn last year at 15 cents per bushel, and some have to buy corn now at 40 cents to winter their stock, which makes times hard on those that were not able to hold their corn last year. There was a large acreage of wheat sown this fall, and that which was sown early looks fine. One man, with three good horses, can farm 140 acres without any help, except in harvest. This may appear rather large to eastern men, but by mixing crops it can be done. We do not plow our ground for corn; we plant with a lister, which is the most successful way here. We have a good crop of candidates for the offices to be filled. H. K.

Mayview, Kan.

Our Fireside.

THE DEAD PAST.

Why cherish a dream that is ended?
Why look down to the vista of years,
Bnt to snffer a long-buried sorrow
To open the wonnd with new tears?
It is over; forget it—as useless
(No matter how anxions we be)
To try to go back and recover
A pearl that is lost in the sea.

Why waste precions moments in thinking
Of scenes that were beautifnl then?
Why linger o'er graves that hold treasures,
They ne'er will return us again?
Why wish for onr youth and its gladness,
When from sorrow and care we were free?
When 'tis gone from onr grasp, gone forever,
As a pearl that is lost in the sea!

On Bohemia's Border.

BY DOROTHY LUNDT.

CHAPTER II.

DR. AINSWORTH had been quite candid, as, indeed, was his wout iu most of the affairs of life, when he told Helen Dowlas that he had had no plan or intent in presenting Archie Caird to her sister Lois. He had not thought it necessary to add, however, though Helen had surmised it quickly and shrewdly enough, that a certain possibility which struck him as very desirable and agreeable had occurred to him as he noted, that eveniug at the Ripleys', how very evidently and frankly attracted by Lois' gentle beauty and bright naivete, Caird had shown himself to be. And how much pleasure Lois, on her side, had taken in the entertainiug society of this well-bred, clear-eyed, good-hnmored yonug fellow, who was certainly ueither a vapid fop nor supercilious prig, nor any other of the undesirable types with which Helen, in her warniug little lectures, had peopled male Philistia.

"Nell prides herself on her Bohemian broadmindedness," Dr. Ainsworth had said to himself more than once; "but she has her limitations, like the rest of us, and one of them is that Lois' yearnings toward Philistine comfort and decorum, are signs of mental weakness that need close watching and tonic correction. But *I* can't see why Lois shonldn't have freedom to 'follow her leadings,' as the Quakers say."

And now that a smooth and sunny pathway might (the doctor put it speculatively, only) be opening throngh the interest and admiration of this bright and manly young fellow, before Lois' timid feet, it troubled the doctor not a whit if the pathway led into the heart of Philistia.

Accordingly, when, a day or two later, they chanced to come out together from a meeting of the Appalachian club, and Caird, as they lingered chatting in the doorway, led the talk, with a drolly open diplomacy, to the doctor's promise that he would sometime help him to another meeting with Miss Lois Dowlas, Dr. Ainsworth said at once, with careless cordiality:

"Why, if you still have it so much in mind, come over and dine with me at Vercelli's, and later I'll take you over to the Dowlas rooms, if yon like."

And Caird, making it very evident that he did like, they found themselves, a little after eight o'clock, faciug the March wind in a brisk walk across the common in the direction of Park street spire.

"I hope you realize, Caird, that it is to Bohemia, and well across the border, that I am taking you," Dr. Aiusworth was saying.

"Perhaps, then," said Archie, "I shall find out what and where Bohemia is. I've heard the phrases, 'Bohemia' and 'Bohemian,' 'Philistia' and 'Philistiue' all my life, without ever attachlug any very definite meaniug to them. But in a general way I've always supposed Bohemia was a very jolly quarter of society, composed of people with brains, who did pretty much what they pleased."

"That's not a half bad definitlon," commented his companion, with a smile. "Bohemia, as Swedenborg says of heaven, is 'not a place, but a state.' Bohemians, though, like all birds of a feather, flock together; and wherever you find talent, independence of thought, warmheartedness, unconventionality and appreciation of the humorous side of life, there you will find a corner of Bohemia. They are a jolly set, Bohemians, as you say; poor, mostly. A Bohemian with a bank account is a white blackbird; spending as they go, and going where they like, without regard to the frequency with which the world travels their chosen roads; keepiug feast-days and fast-days of as startling contrast as the church's own, though by no means from the same motives or at the same dates; sharing luck and ideas aud midnight suppers, and giving not a rap for precedent or tradition in any direction, they are the Romanys of the intellectual world, wandering where they will. Emancipation is the trade-mark of your true Bohemian, and a challenging 'why' is his echo to every dogmatism or conventional statement of any sort."

"I always supposed that his echo to any conventional statement was 'you lie, it isn't,'" interrupted Caird, who had been listening with the liveliest interest. This time the doctor laughed outright.

"That's a speech after Nell's own heart," he said to himself, "and she'd be tremendous friends with this boy, from the word go, if, instead of having ten thousand a year, he'd lately pawned his nmbrella to buy stamps enough to post a crude story to the *Century*." But aloud he said: "Yes, they are decidedly belligerent in Bohemia, when they fancy themselves called upon to accept a law simply because society has passed it."

"I don't mean to be prying," said Archie Caird, flushing a little, boyishly, as he tried to give form to a question which he had had much in mind of late, "but you have spoken several tlmes of the Misses Dowlas as belonging to Bohemia; and thongh I can see what you mean, with the elder one (she looked, the other night, a little as oue fancies a *petrolense* might look on at our little society jiggings about), there didn't seem anything of the sort about Miss Lois; she seemed to take as keen pleasure in the dancing and the pretty gowns and all the rest of it, as any society 'bud' at a 'coming-out' party; ouly there was a freshness and sincerlty about her that didu't beloug to any bud *I* ever saw," said the young fellow, heartily.

"Lois is a Bohemian by birth only," said the doctor a trifle reservedly, after a little pause. "Her mother came of the cadet branch of a well-known English family. I thlnk she always missed, in her later life, the orderly comforts of her earlier years, though she loved Alan Dowlas well enough to follow anywhere he led—to Bohemia or to heaven. Lois is very like her mother."

They were turulng the corner of Roscommon Place, and presently the doctor turned into the low and dark doorway of one of the old-fashloned buildings, whose lintels were covered thickly with tradesmen's signs.

"Why is *this?*" began Archie Cairn, and paused, suddenly aud awkwardly.

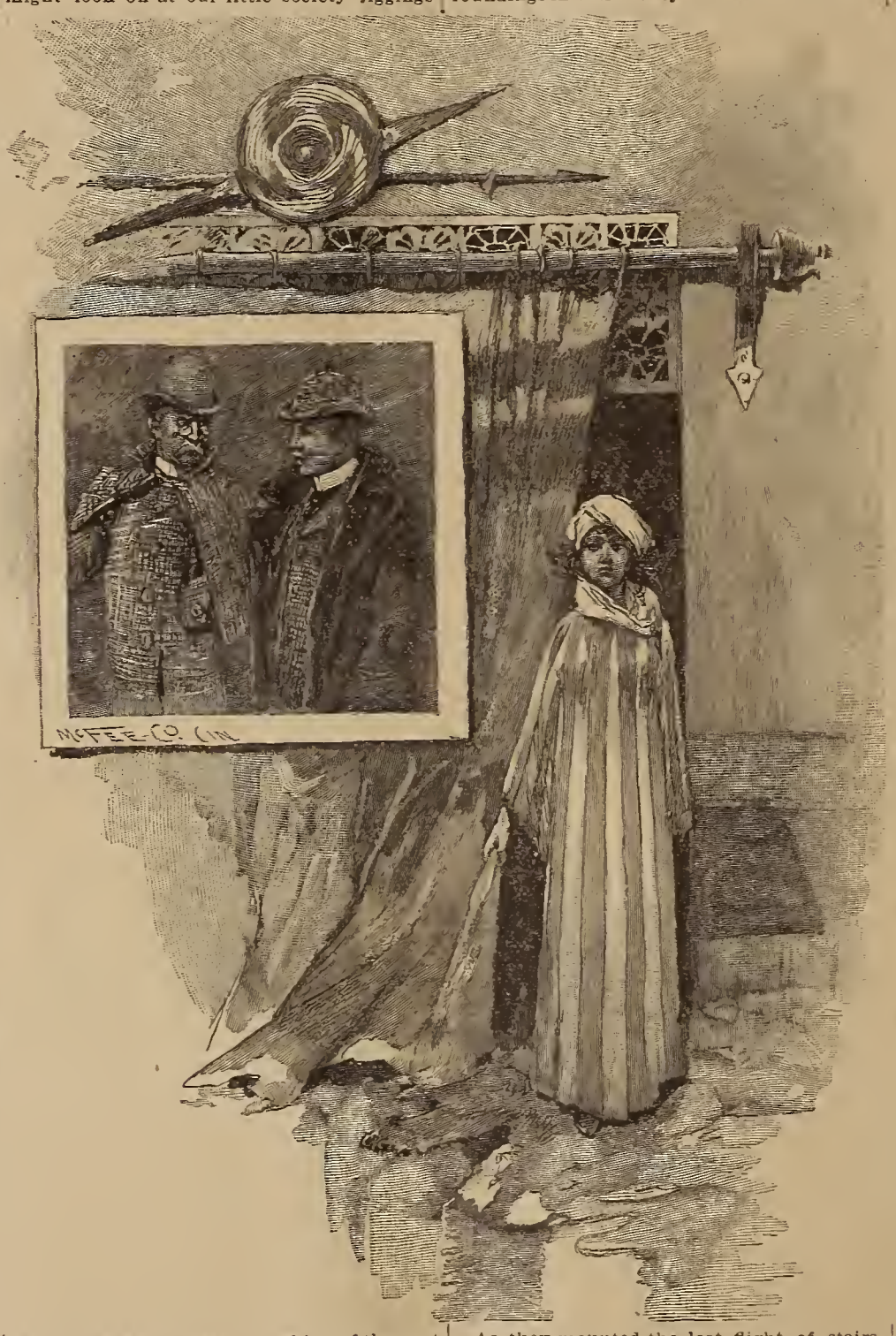
The doctor was leading the way upstairs, but he came to a full stop just under the single, smoky gas-burner.

"This is where the Misses Dowlas have their home," he said, and there was a certain crispness in his tone whlch brought the blood to Archie's forehead. "I have told you Bohemia is not the conrt end of the town. Shall we say good-night, here? They know nothing of your idea of calling, aud no manner of harm is done."

"Dr. Ainsworth," said the young fellow, with an impetuous anger that commended him more than the smoothest politeness in the world conld have done, to the man to whom he spoke, "I think it beastly unjust of you to speak to me like that, because I showed a perfectly natural amazement at a place like this being the home of such a girl as Lois Dowlas."

"Well, well!" said the doctor, quite good-humoredly, and he eveu moved down a step of the staircase to lay one hand on the lad's shoulder, "I confess I heard that exclamation of yours through Helen Dowlas' ears, for I have a bad conscience, and that's a fact, in bringing you into her domain from that world across the border which she distrusts so much. I beg your pardon. Is that satisfactory, you young fire-eater? Come, then." Aud as they went leisurely up, the doctor went on:

"This old house is all the home the girls have ever known. Alan Dowlas brought his wife here thirty-two years ago. Roscommon Place was not then what it is now. My father could remember when it had gardens where hollyhocks grew. Their rooms are just what they were then. To leave them would be like leaving all that is left the girls of their father and their mother—the atmosphere and surroundings in which they lived and worked."



As they mouuted the last flight of stairs, they came into the soft aud rich light of a swinging lamp of brass, with a shade of dull red, Venetiau glass. The heavy, old-fashioned outer door was draped above and around with folds of some brownish, Indian stuff, caught with heavy tassels, aud on its center panel was a knocker of bronze, carved with a griuning griffin's head. The doctor lifted it for two light, quick taps, and with the sound of a bolt instantly wlthdrawn, the door swuug open to his touch. They found themselves in a small aute-chamber, through whose open portieres Cairn looked with frauk curiosity and admlratlon iuto a room the like of which he had never seen. And yet, lnto just such rooms those who have the passwords of Bohemia may pass at will, from sceues as varied as the world is wide, for their onter doors open alike into the rush of New York and the mists of Londou; the brilliancy of Paris midnight streets, and the dewy gardens where the roses are white in the Venetian moonlight.

Neither then nor ever later did the young fellow find in the room's component parts, the secret of its beautiful homeliness and friendliness and comfort. He had a confused impression of light and color of Perslau silks and carved, dark woods; a fire blazing ou a tiled hearth; a sharply-sloping roof, all of glass at one end, from which soft, screening draperies being half withdrawn, he could catch a glimpse of the wild and star-set March sky.

The room was full of the indefiuable odors of Bohemia, smouldering oak wood, lingering pipe smoke, an outburued pastille, an indescribable savor as of the ghosts of many midnight feasts. A half dozen people were lounging about it, here and there; a rosy, old lady in a portentious cap sat knitting in the chimney corner. Helen was nowhere visible, but Caird's eyes were caught and held by the slight figure in a loose, titianesque gown of just the yellow of her lightly-gathered hair, who, with a guitar upon her lap, was striking, as they came in, a few low, minor, preluding chords.

They stood iu the shadow of the ante-chamber, and Caird laid a restraining hand upon the doctor's arm to hold him back until the song was done. And touching her guitar very lightly, Lois sang, in her sweet and clear, youug voice, and to a quaint and plaintive little air, this little song:

I know yon love me not;
I do not love you—
Only at dead of night
I smile a little, softly dreaming of yon,
Until the dawn is bright.

I love yon not; you love me not;
I know it.
Yet when the day is long
I hannt you like the magic of a poet,
And charm yon like a song.

Amid the frieudly murmur of applause that followed, they went in. Lois came forward to meet them, and her sensitive face was like a rose with a glow that was not of the firelight; nor did the fatigue of the long staircase wholly explain the equal color that reddened Archie Caird's.

It is a curious feature of Bohemia that there are no prelimiuaries of acquaintauceship there. In teu minutes Caird felt that the old studio had been his haunt from hoyhood, and that every one of the group scattered about it was an old aud intimate friend. There was nothing odd to him in hearing the question of Hamlet's madness discussed by that keeu-faced, stalwart man whom he had no difficulty in recognizing as Mark Royd, first among rising actors of the new school of eccentric tragedy, and big, bushy-haired Follinger, chief of dramatic staff of the *Dictator*, discussed with a fury of earnestness as if it were the one question of the day, to be settled then or never.

When the question of the permissibility of a lie, to a good end, was started by some disagreement of the doctor with Sercourt, who, as all the world knows, writes those amazing essays which distinctly prove that Nero was a moralist of the first order, Caird fonnd himself as much amnsed at excellent Mrs. MacCossatt's horror over the question being raised at all, as if he had not been taught at the knees of Philistia that truth was one with verbal exactitude. His instant, happy laugh rang responsive to Royd's worst puns; and when, in discussing a clergyman who had lately couched in vulgar diatribe an indiscriminate condemnation of the stage and all its supporters, Archie remarked that only "an ecclesiastical hoodlum" would be guilty of snch a sentiment, and the phrase was received with much applause, he felt himself au adopted son of Bohemia, and told himself that he never had had so good a time in his life.

On inquiring for Helen, he had been told that one of her occasional, prostrating headaches had sent her early to her room; aud to say the truth, he did not wholly regret the absence of what he felt would he her rather Lenten welcome to him. For a mau did not need to be gifted with phenomenal intuition to know whether or not he stood in Helen Dowlas' favor aud grace. He wished more than once, as the merry hour hurried too fast away, that he could be as snre of Lois' approval as he was of the sentimeut entertained for him by her sister aud guardian.

It was a sign of the young fellow's wholesome modesty that he was uot sure, and only dared to rejoice, from moment to moment, in the shy kindness toward him that spoke in the girl's every tone and gesture, and which more than once brightened Dr. Ainsworth's face as he watched them, and sharpened the keen and questioniug glauces that flashed, now and then, from Mark Royd's black eyes.

It was past the hour when Philistia closes her doors in decorous good-night, that Sercourt, whose possibilities in the line of omelette au Madere are Bohemia's boast, was prevailed upon to undertake the manufacture of one of those inimitable confections. A table was cleared by the summary process of sweeping off its load of hooks and photographs onto the nearest chair. From behind the screeuiug, velvet draperies of an old, Italian cabinet, the doctor, who seemed much at home in such matters, brought out eggs and a Canton bowl, black bottles and silver pepper-owls, while Mrs. MacCossatt, not without chronic remonstrauce at the utter disorderliness of such proceedings, looked up the sauce-pan and brightened the fire.

"My omelettes always grow to the sound of music, like ancient war-ships," said Sercourt, poising his spoon above the yellow froth that so artistically contrasted with the blue bowl's rim. "Royd, try that bit of a duet you were playing with Lois the other night, that Hungarian thing, you know, that sounds like a dagger-fight in a thunder-storm."

They searched out the music willingly enough, and its wild chords were filling the

room with their strange clang and call. Royd played with more courage than certainty, and even Archie, who was no musician, found his ears protesting against one particularly appalling discord, when a shawl-curtained door at the lower end of the room flew open, and there stalked in a surprising apparition, whose unusual height was accented by a trailing wrapper striped broadly and brilliantly with scarlet, and whose wildly-disordered hair was crowned by a fringed towel, evidently lately wrung from some drug-scented liquid, wound tightly about and about her brows, and secured by a tiny dagger.

"In the name of heaven, Mark," said Helen Dowlas, without greeting of any sort to the rest of the company, who, to do them justice, did not show the least discomposure in the world at her amazing advent among them—"if you must make night hideous with that roaring stuff, at hours when Christians are abed, do play what is before you, and sharp your D's when you come to them."

Without even a glance in her direction, Royd calmly repeated, with great precision of accent, the passage he had just concluded, and by following her suggestion, and playing sharps where before he had played naturals, the interests of harmony were materially bettered.

"Nell," he then said, turning about in his chair, 'I've heard you say that when you are writing, you always go back and cross your t's. I have the same peculiarity about sharping my D's. I always go back to do it after I have finished the passage." And then he shook hands with her and inquired after her headache, with as polite solicitude as if her coming in had been accomplished in the most conventional manner imaginable.

The exchange of greetings was general, after that, and Helen's acknowledgement of Archie was prompt and courteous enough, though he noticed, a little resentfully, that she did not offer him her hand in welcome, as Lois had done. Indeed, her coming had brought to Archie Caird, in some fashion he could not analyze or define, a sense that he was, after all, a guest in a household new to him, and that it had been a most ungracious abuse of an untried hospitality for him to linger until the clock stood on the stroke of midnight. The famous omelet lacked the flavor, to him, that its odor had promised a moment before. He felt himself suddenly an intruder, self-conscious and ill at ease.

It was a relief to him when, as soon as the little feast was ended, Sercourt and Follinger rose to go, and he made his adieu with theirs. Lois gave him her hand in farewell, with a rather shy but very gracious assurance that he would be welcome at the studio if it should please him to attempt, such a weary climb again; and Helen could do no less than politely echo that hospitable remark, though she did so with a majestic dignity quite surprising in a person turbaned with a fringed towel and habited in a gown like an auction flag.

The young fellow's mind was in a whirl as he walked homeward through the windy, March night.

"Jove, what eyes she had! And that simple, fresh, gentle, unselfconscious manner of hers! It was like the girls one read about in the old poems and romances, and so world-away, different from the wide-awake, armed-at-every-point, self-possession of the girls one met every day, and who were as much alike as peas in a pod. Fancy," he continued to himself, not taking account of where his thoughts were drifting, "fancy having some of the college set drop into one's drawing-room of an evening for a call, and being able to present to them a girl in a yellow gown, with eyes like a forest brook in the shadows, and a voice like the sound of its waters, and to say, 'Let me present you to my wife.'"

His thoughts surged backward like water that has met a rock. He drew a deep, sharp, sudden breath, and then he laughed to himself, but not very merrily.

"There's something else to fancy," said Archie Caird to himself, "and that is taking Aunt Harriet to call, and having her met at the top of that everlasting staircase on Roscommon Place, by Helen Dowlas in that rig she burst in upon us with to-night!"

Meanwhile, the little group he had left in the studio had said good-night to Lois, who, pleading sleepiness, had gone to her room with eyes whose wide-shining hardly justified her plea, followed by Mrs. MacCossatt, who never once since she laid her in her cradle, had failed to see "her baby" safely bestowed for the night. The other three, left to themselves, had drawn their chairs about the fire and fallen silent for a moment. The doctor and Helen were conscious of being a bit on the defensive, one toward the other, and neither cared to precipitate the battle they both felt was near.

"Nell," said Royd, for it was he who broke the silence, "that was a mighty dramatic entrance of yours to-night. I've always said that you were on the wrong side of the footlights, but I never was surer of it than when you made that Meg Merriler plunge in among us, in a costume Bedlam would take credit for."

"It's a pity your audience were so unbit," said the doctor, a little maliciously. "You forgot that Caird had assisted at too many Pi Eta initiations to take fright easily at a gruesome make-up, and I don't think he fully gathered the suggested idea that yours was the conventional costume of ladies in Bohemia."

"But he did gather the idea," said Helen, hotly, "that midnight was hardly a conventional hour for a total stranger to remain, on a first call, when the head of the family—"

"The head of the family ached, so to speak?" interrupted Royd, blandly. "And speaking of the head of the family, Nell, that was a subtle idea of yours that if the suggestion of lunacy didn't scare Caird off, that of kleptomania might."

"Eh?" said Helen, with blank uncomprehension.

"My dear Nell, never tell me it wasn't a stroke of diplomacy to adorn yourself with a towel stamped in large, black letters, 'Oak Valley Hotel, Vansted, Vermont,' directly above your classic brow."

She caught off her eccentric head gear, glanced at it, and laughed with a whole-hearted abandon that chased away every line of anxiety and hardness, and made the face beneath the waves of disordered hair the face of a girl of twenty.

"Oh, but luck was good to me," she cried, to bring about that magnificent effect without my planning. I give you my word I'd no idea the bandage I'd been using for my splitting head was that towel I *bought*, Mark, with coin of the realm, of the chambermaid of that old hotel, to wrap my wet fern-roots in last year. Oh, if Mr. Caird will but conclude the family is given to petty larceny, how safe we shall be from him!" she said.

"It is entirely mad and absurd for you to try to keep yourself safe from him, as you call it, Nell," cried the doctor, and he spoke with a deal of heat and earnestness. "Here is an honest and sunshiny young fellow, with nothing in the world against him but that he has a bank account—"

"But is that not enough to be against him?" she cried, all hot and eager in a moment. "Is it young men with bank accounts whom I want to be made free of our home—the home to which such as they would come just as they would come to a theatre or show, to enjoy novel sights and speeches and sensations, and to drop when they are weary of it, as they would leave an opera-box? It is a wholesome thing for my girl, is it not?" she went on, passionately, "to be posed as a part of our Bohemian show, and when her power of amusing is exhausted, to be dropped with the rest of it; and she taking the admiration and friendliness seriously, meanwhile, and getting home-sick glimpses, through his eyes, into the luxury and the fine, sheltered life which she seems—God knows why—to long for."

The doctor was on his feet, now. "Nell," he said, and there was a reproach in his voice that brought her to pause; "would I bring here into your home any man to whom it would not be as sacred as any household on earth?—any man who would misunderstand its unconventionality, or abuse its hospitality? I tell you that Archie Caird is as honest and simple-hearted a lad as ever lived in any condition of life, and he asks to come to you as he would ask entrance into any household where he found a beautiful and pure girl who charmed and interested him. Are you ready, with your warped, blind judgment of people you never mingle with, to blight what is now for Lois an innocent pleasure, and may be," said the doctor, speaking out his whole mind bravely and candidly, "may be a life-long blessedness and joy?"

There was a silence again for a space.

"He is right," Royd said, much more gravely than was his want to speak. "Nothing but your prejudice, Nell, could imagine Caird came here to-night for novelty and idle entertainment. One look of his toward Lois contradicts that. He interests her; but what harm is there in that? It will turn the girl's thoughts far more to him and to the life he represents," said Royd, astutely, "to interfere and end it all, arbitrarily, than to let it take its natural way, which will be, I dare say, just a boy and girl friendship, and no more."

She was conquered by their sensible reasoning, with which her own quick sense of justice pleaded agreement. She gave Max Ainsworth her word, before they parted that night, that no willful coldness or eccentric interfereuce of hers should stand between the new friends, who had become such against her will. "But the responsibility of it all is yours, Max; yours and not mine," she ended, wistfully and wearily.

It seemed that the hints of lunacy and petty larceny in the Dowlas family exercised no markedly deterrent effect on Archie Caird. After the tentative visit, a few days following his extraordinarily prolonged first call, when, to his relief, he found Miss Dowlas clothed and in not only her right mind, but in a tolerably friendly temper toward him, he fell, by degrees, in the next few months, into the attitude of as easily accepted an habitue of the old studio and its bright and simple life, as was Mark Royd or even the doctor himself.

Helen Dowlas, trough a certain deep-hearted, distrustful presentiment of the unwisdom of admitting, unchallenged, among them one whose traditions and ambitions were not those of Bohemia, never left her, was now reluctantly and slowly led to an admission that his coming brought nothing incongruous or unwelcome to their midst.

Once Mrs. MacCossatt had a birthday; and when, to the contributions for the royal banquet on that occasion, sent by all the fireside friends, Archie added innumerable crystal jars of rare and rich confections, which to Bohemia are but a name, Helen's ironical mention of this fact brought out a protest from the young fellow that won her to him as nothing hitherto had done.

"Miss Dowlas," he said, "I can't call on my brains to add brilliancy to your glorious times, because I never had so very much brains, you know; and if you won't let me call on my purse, I must stay away, with a pauper's shame."

There was something in the simple, downright honesty of that speech which went to Helen's heart. When the famous birthday punch came on that night, and Royd remarked, "We don't often indulge thus, my friends, but as one swallow does not make a summer, neither does one swallow make an inebriate," she touched glasses with Archie, with the kindliest look she had ever given him.

Yet her heart was not light as the days went on, and there kindled on Lois' face a light as of an unseen sun. It was no question any longer of interest or acquaintanceship. The look in Archie's eyes was the look which a man may not trust his eyes to give if his tongue has not the sweetest and sacredest words on earth ready to follow it.

There grew a sense of strain into the happy atmosphere, as April smiled itself into May, and May bloomed into June, and yet the words remained unsaid.

"Max," said Helen, once, without prelude, "are our stairs too steep for Mrs. Griswold to climb, or has Archie Caird never asked her to climb them?" And the doctor's face was grave, though he gave her a laughing answer.

There had been no talk of summer plans. Archie had mentioned a promise he had made months ago, to drive an old friend, "an historical bore," as he said, over the famous old route between Boston and Concord, that a forthcoming historical essay might be without flaw in its topography; but beyond this plan for a single day, they had heard him mention nothing of how his summer was to be disposed of. But one late June afternoon another plan took shape. Archie had been sitting by Lois' work-table for an hour of low-voiced chat, and as he rose to go, he crossed to Helen and stood before her, flushed with an uncommon shyness, and turning his hat about and about boyishly in his hands, he said:

"Miss Dowlas, my Cousin Carroll is going to do the most extraordinary thing in the history of sophomore cheek; he's going to give a tea on class-day. But because he's afraid of being assassinated if the seniors hear of it, there are to be no cards. He merely says that he means to give a cup of tea to his mother, Aunt Harriet, you know, who is not strong enough to 'do' the formal spreads. I have just asked Miss Lois if she will let me drive her out to Harvard that afternoon. You know it is all too fresh to me, for me not to think that the campus, on class-night, is simply the most beautiful sight in the world; and I have been promising myself, almost ever since I have known her, the pleasure of showing it to her. You will let me take her, Miss Dowlas?"

There was something in that low, earnest "you will let me take her, Miss Dowlas?" which pleaded for something far greater, far deeper than the simple favor Archie Caird had asked. Helen Dowlas' heart beat fast. But the eyes she raised to his were searching eyes, and she answered his question with another, asked so low that Lois, sitting at her table with down-bent head, could not catch its drift.

"Mr. Caird, have you mentioned to your aunt, Mrs. Griswold, your intent to—to—take Lois?"

He flushed to his curling, brown hair.

"No," he said, "I have not told her yet. I wanted to wait until——I was sure."

"And if she should not welcome Lois?" she said, still in the low, tense voice, and with the searching eyes.

"Do you think I would ask her to go where she would not meet a welcome?" asked Archie Caird.

That was a happy fortnight which preceded what they all spoke of as Lois' "first class-day." Everybody made all sorts of interested and impossible suggestions as to the gown, over whose manufacture Mrs. MacCossatt presided, a proud high-priestess. But in their hearts they said, "Lois' betrothal day," and they looked at her with tender eyes.

It may have been because dressmaking exigencies drew her so much away from the studio, that Archie came, in these days, seldomer than had been his wont; it may have been Helen's never-sleeping apprehension that made her fancy him, when he came, to be under a certain constraint, and something silent and ill at ease.

"Max," she said to the doctor, "he did not, after all, answer my question as to what it would mean to him if Mrs. Griswold had no welcome for Lois." And all the doctor's ridicule of her could not make her smile.

In the afternoon before class-day, the doctor was passing by Roscommon Place, and although he was not promised at the studio before evening, he stole a moment for a friendly run upstairs. On the threshold of the studio he paused, with a low whistle of amazement and admiration. The great table in the center of the room was literally heaped with roses, tossed on it from a huge box just opened upon the floor. Jacqueminots and Mermets, Niphetos and Marechal Neils, their soft and splendid color and riotous perfume seemed to fill all the room like summer made incarnate.

"Shades of Crœsus and Dives!" cried the doctor. "If this is what Mr. Caird sends today, what will he send to-mor——Nell!" he cried, with a sudden change of tone, and strode hurriedly over to where she stood; "Nell! Good God! What is the matter with you?"

She was standing rigidly erect, and in her eyes there was a terrible look of rage and helplessness and misery, which Max Ainsworth will not forget to the day of his death. She held out something toward him with a strange, slow, mechanical gesture, and as mechanically he took it from her hand.

"Read that," said Helen Dowlas. "Read that, and see what has come to us through you—you who knew the world outside our world so much better than I knew it; you who mocked at my presentiments and my prejudices. See what has come through you to me, and to the creature dearest to me on earth."

She had given him a gentleman's visiting card. Above the name, in his delicate line of engraving, a few words were written in pencil.

[*To be continued.*]

Our Household.

IF WE HAD THE TIME.

If I had the time to find a place,
And sit me down full face to face
With my better self, that stands no show
In my daily life that rushes so;
It might be then I would see my soul
Was stumbling still toward the shining goal;
I might be nerved by the thought sublime—
If I had the time.

If I had the time to let my heart
Sneak out and take in my life a part,
To look about and to stretch a hand
To comrade quartered in no-luck land;
Ah, God, if I might but just sit still,
And hear the note of the whip-poor-will,
I think that my wish with God's would rhyme—
If I had the time!

If I had the time to learn from you
How much for comfort my word could do;
And I told you then of my sudden will
To kiss your feet when I did you ill—
If the tears aback of the bravado
Could force their way and let you know—
Brothers, the souls of us all would chime—
If we had the time!

—*Unidentified.*

HOME TOPICS.

How to Cook a Steak.—There is no doubt that a steak properly broiled is the best steak, but it is not always convenient to have the fire in a proper condition for broiling, when it is time to cook the steak. There is another way which is almost as good as broiling. Have a hot fire, set an iron spider on the stove, and let it get very hot; lay in your steak, and put on the cover for a minute; then lift the cover, turn the steak, and cover it again. Continue to do this about every two minutes until you have turned it four or five times. Don't stick a fork into it, except into the fat portions, while it is cooking. Have a hot, buttered dish ready, lay the steak on it, season with salt and pepper, put bits of butter over the steak, and serve it immediately. Steak should never be cooked until everything else is ready for the meal.

Putting Away Clothes.—Many who are careful about putting away winter clothes in the spring are utterly careless in regard to putting away summer clothing. Instead of having wash dresses starched and ironed before putting them away, have them only washed and thoroughly dried; then put them away in a trunk or drawer until warm weather comes again. Light woolen dresses, as challies, etc., should be put away as carefully in the fall as woolen goods are for the summer. Failing to do this, many a woman has found her dress damaged by moths. If these dresses and those of light silk are hung in a closet, long, cambric bags should be made to hang them in.

It is a good plan to look over all garments, and make any needed repairs before putting them away, for it is a great comfort, when the first warm days of

Infant's Bed.

spring come, to have some suitable garments all ready for use.

Catching Chickens.—Every one who has ever tried it knows it is no easy task to catch a chicken if you want one during the day. If you know you will need it the night before, it can easily be taken from the roost and shut up, but sometimes this is forgotten, or company comes unexpectedly, and chickens must he caught at once. You take some corn, and go out and call them; they gather around you, but at the first movement you make, they scatter. If you fix your mind on one nice, large one, that one suddenly becomes particularly shy and wary. If you try driving them into a corner, and with the help of two or three children attempt to catch them in that way, it is surprising how they will elude you, slipping by, almost under your hand, and with a frightened cackle, soon distance all pursuers.

Rosa, the dusky maid who helps in my kitchen, has a way which never fails of securing the very chicken that she wants, and that with very little trouble. She took a slender fishing-pole, about seven feet long, and to the end of it tied a stout wire, bent into a hook, as shown in the illustration. When she wants to catch a chicken, she takes the hook and a little corn, calls the chickens, and as soon as they are busy eating, she sits down, slips the pole along on the ground until she gets the hook around the leg of the chicken, just above the foot, when he is fast, and she quickly pulls him in, slips him into a bag and hooks another. I have seen her catch four or five that way in a few minutes, and in an incredibly short time she will have them ready for cooking.

Now that chickens are getting too large for frying, Rosa ofteu cooks them as follows:

She cuts them up as if for frying, seasons with salt and pepper, rolls the pieces in flour and puts them in the frying-pan, in which she has ready some hot fat. As soon as they are brown on both sides, she ponrs in a teacupful of boiling water, covers the pan tightly and sets it on the back of the range, where it will simmer slowly until the chicken is tender.

Maida McL.

YULE-TIDE GIFTS.

Yes, yes, every one of us who found herself confronted by last Christmas and a long list of intentions and little or nothing tangible to fulfill them with, promised herself to "begin in good season another year."

But here we are, within a stone's throw of the dear old season, and our list is longer and we have even less done. There remains for us to gird ourselves with the determination to observe this coming gift-making season in the spirit of the day, remembering that the gift without the giver is bare, aud to set to work.

It is easy enough to decide upon Hilda's present, for is she not preparing for the advent of a wee stranger, and will not the haby want a bed? Not a rocking affair, but a Christian bed. The foundation may be mother-of-pearl or wrought brass—that is, if money flows into our purses unstrained, but the chances are that it does not. In which case, the foundation will be cut and fitted and varuished and polished; that is to say, made durable as well as pretty, by—well, by whichever member of the family is handy with tools. The bed will be an oval basket, and it can be fine or coarse, to fit circumstances. One of the prettiest possible draperies is white, dotted muslin, set off as shown in the illustration with two baby-blue ribbon bows on the foot of the bed and one on the canopy. This is an upright support and cross-bar, and may be a gilt rod or a smoothly turned rod of wood.

If the family home is such that the infant will be amid dainty surroundings, white and gold are a desirable combination, but if other things are not equal to this finery, or if Hilda must have the baby's bed in the sitting-room, where white will soon grow diugy, then a fine, pretty cretonne, say in pale blues, will be just the thing for draperies and tufted upholstery, and the turned-wood supports can all be painted a pale blue to correspond.

A work-basket to contain, not the family mending, but the trifles of fancy work one keeps in the sitting-room, is always an acceptable gift. Some of the prettiest new decorations are on the soft kids and ooze leathers used so much for dress slippers. These cost in the neighborhood of thirty cents per square foot in the shops, but any one in the neighborhood of manufactories could get odds and ends for much less. A golden-brown kid, worked with moss-green shades of embroidery silk for lapels, plain kid for lining, and moss-green and gold-brown ribbons, make a pretty basket. An ingenious maid, with some old, rough-and-ready straw hats, some bonnet wire and some metalic paints, has been known to improvise a wonderfully pretty basket, nsiug, of course, only the braids that were unbroken.

Ooze leathers are the newest materials for opera-glass cases. A monogram in gold thread, on a rush-green, undressed kid case is a pretty ornament. The drawing cord is not run between the outside and the lining, or a narrow band, faced on upon the inside as in the case of a plush bag, but run in and out of small eyelets punched through the kid, which may

Work-Basket.

be unlined or lined with satin, as preferred.

A gay little trifle to hang upon a gas-fixture near the toilet-table, is a suspension pin-cushion. Fill it with scented powder, and make and trim to suit the means at hand. The model shown is of light strawberry-colored satin and ribbons, with vandyked lace at each end. The cushion is ornamented with daisies in ribbon embroidery.

Bits of fancy handiwork were never meant to be made "out of whole cloth," but were invented for the express purpose of using up scraps of materials handsome enough in themselves to be worth working into permanent form.

Given, some square strawberry-boxes, some remnants of fancy silks with which to cover them, it would be worth while to buy some short ends of ribbon to decorate the corners, but to buy new silk and ribbons at the regular rates, never. These identical little work-baskets, card-baskets or generally useful little receptacles, are covered smoothly over the square bottom and four sides with silk or fancy ribbou, and the edges at the corners, neatly turned in, are overcast in fine stitches to the corresponding edges of the similar lining inside; then the four corners are catstitched together, apparently holding the sides in place. The top edge of the basket is covered with ribbon, folded over and gathered to make a ruching-like finish, the corners heing tied with narrow ribbons. The inside bottom of the basket has a layer of cotton wool under the silk or satin. The wool may be laid over a piece of pasteboard that just fits inside the basket, which is then covered with satin, the edges beiug smoothly pasted upon the underside of the cord; a drop of glue at the corners keeps this bottom, which is put in after the sides are done, iu place.

Dinah Sturgis.

OYSTERS.

We all welcome the season that brings around this favorite bivalve. Some one says they must not be eaten in a month that has not au "r" in it; so that shuts them out during July aud August. However, when it is a little cool, and there is a little snap in the air, they really taste better. That they are best eaten right from the shell, every one knows who has tried them that way. Cooked in their own liquor, in their shells, upon red-hot coals, is no doubt the best way. However, with too many of us the *next* best way will have to do.

Oysters Cold.—They should be quite fresh and large to be appetizing this way. Avoid too much condiments. Brown bread and butter and a little lemon juice over the oysters are sufficient. Epicures in oysters discountenance the use of either salt, pepper or vinegar when they are eaten raw.

Curried Oysters.—This will be new to many of you, and well worth trying. Put your oysters in a stew-pan, set over the fire for a few moments to harden; set aside and prepare the following: Dissolve two ounces of fresh butter in a stew-pan, mix smoothly with it a tablespoonful of curry powder; add a little more butter, if necessary, and a teaspoonful of flour. Then add a minced onion and stir gently until the onion is tender; add the oyster liquor and a tablespoonful of strained lemon juice; let this come to a boil, then put in the oysters. Iu a few minutes remove and serve on a hot dish with a border of boiled rice.

Curry Powder.—This can be made and bottled for use at any time. Put

6 ounces of coriander seed,
5 ounces of tumeric,
2 ounces of black pepper,
2 ounces of mustard seed,
½ ounce of cumin seed,
½ ounce of cinnamon,
1 ounce of small cardamoms

into a cool oveu over night. Pound them thoroughly in a marble mortar and rub them through a sieve. Keep in a well-corked bottle. It can be used, also, to flavor gravies, one tablespoonful to a cup of gravy.

Fricasseed Oysters.—Cut two ounces of ham into dice, and put them into a stew-pan with two ounces of fresh butter, a bunch of parsley, a sprig of thyme, a sliced onion, an inch of thin lemon rind and two cloves. Cover the pan and simmer for ten minutes. Pour over this half a pint of stock or gravy thickened with a spoouful of flour, and simmer for twenty minutes. Add two dozen oysters; when hot, draw aside to cool, then stir in gently the yelk of one egg beaten with a tablespoonful of cream. Serve hot, with the sauce strained over them, with a tablespoonful of lemon juice added.

Oyster Patties—Filling.—Cut two dozen oysters into quarters; thicken the liquid with a salt-spoon of flour; add half a cup of cream, season with salt. pepper and a little minced parsley. Let it simmer for a few minutes, then fill the patties. Cooked sweetbreads, minced veal, chicken or turkey, seasoned the same way, make a good filling.

Christie Irving.

THANKSGIVING DISHES FOR THE FARMERS' HOUSEHOLD.

Barbecued Shoat.—Take a fore quarter of fat shoat, make incisions hetween the ribs, and stuff with rich bread stuffing. Put in a pau with a pint of hoiling salt water, to which add two heads of garlic, a little salt, pepper and butter; let bake done. Season the gravy with a tablespoonful of currant jelly, mushroom, walnut and tomato catsup, then take up and lay in a dish. Serve with hrowu gravy and haked apples.

Chicken Pudding.—Beat ten eggs very light, add to them a quart of rich milk, a quarter of a pound of butter, salt and pepper to taste; stir iu flour to make a thin batter. Take four young chickens and cut up as for frying, put them in a saucepan, cover with salt and water, add a hunch of sweet herbs, and stew until done; take the chicken up, put in the batter, pour in a deep dish or pan, and bake. Serve with white sauce.

Bag for Opera-Glasses.

Patties (a side dish).—Take veal or pork, fat and lean, chop fine with a little cold, boiled ham, season with salt, pepper, grated nutmeg, minced thyme and parsley. Line some small patty-molds with paste, fill with the meat, add a little gravy, put lids on, set in the oven aud bake quickly.

Grandmother Pudding.—Take a pint of bread dough and let it rise; when

light, make into round balls the size of a goose egg; throw into a pot of boiling water, cover the pot and boil quickly. Serve hot with powdered sugar, butter and grated nutmeg.

Thanksgiving Tea Cakes.—Beat twelve eggs light, add a pound of sugar and a pound of flour; beat all together until very light. Bake in long pans four inches wide, with divisions four inches long. When done, sprinkle with sugar and cinnamon.

Hen's Nest.—Get five hen eggs, make a hole at one end, empty the shells, and fill them with warm blane mange; when cold, take off the shells. Pare the yellow rind of six lemons thin, boil in water until teuder, add sugar to make sirup, and cook until the peeling is preserved. Fill a glass dish with clear, calf's-foot jelly, stick the straws of lemon peel in the form of a nest in the jelly, and lay the eggs in it.

Pumpkin Pudding.—Take a quart of stewed pumpkin and rub it through a sieve; mix it with six well-beaten eggs, a quarter of a pound of butter, half a pint of new milk, a teaspoonful of ground ginger, half a grated nutmeg, with a pound of brown sugar. Pour in a pudding-dish and bake. Sorve with butter sauce. This pudding should be sufficiently firm to slice wheu baked.

Charlotte.—Stew tart apples and season with nutmeg. Soak thin slices of stale sponge-cake in melted butter, and while the butter is warm put it in the bottom of a pudding-dish and around the sides. Put the stewed apples in the center, lay buttered slices of cake over the top, set in the oven a few minutes, turn into a flat dish, sprinkle with sugar and set in the oven to glaze.

Farmers' Cream.—Take one teacup of currant or grape jelly, mix with one teacup of thick cream, beat together until stiff, pour in a mold and set on ice.

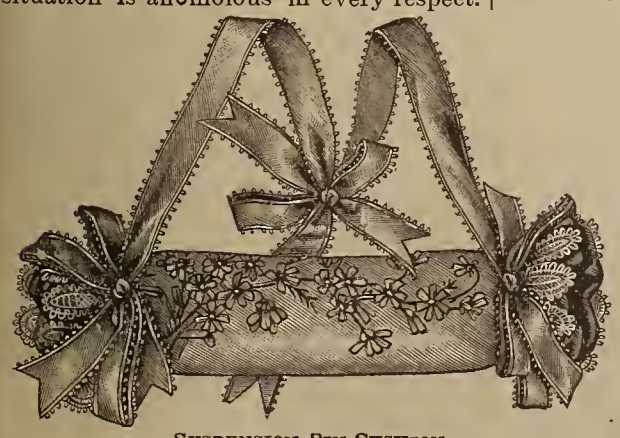
Aunt Ruth's Thanksgiving Cake.—One cupful of sugar, four tablespoonfuls of butter, one and one half cups of sifted flour, one tablespoonful of corn starch, one teaspoonful of soda, whites of two eggs and a cup of sour cream. Beat well, and sprinkle into the batter a cupful of walnut meats, chopped. Bake in a moderate oven.

Eliza R. Parker.

THE VALUE OF A VISIT.

To be valuable, a visit must be at the right time and iu the right place; when it fulfills these conditious, nothing can add more to the mutual welfare of the visited and the visitor. In the first place, it should be proposed and accepted on principles of purest friendship. No sham motive, such as kinship, a sense of obligation or prospective social advantage will serve as a genuine foundation for an enjoyable visit. An invitation should be given only because the giver longs for the society of her friend, and if the friend cannot accept in the same spirit, she had far better reply with some polite "I pray thee, excuse me."

Another very important requisite of a successful visit is that it be uot too loug. When a guest remains several months, her situation is anomolous in every respect.

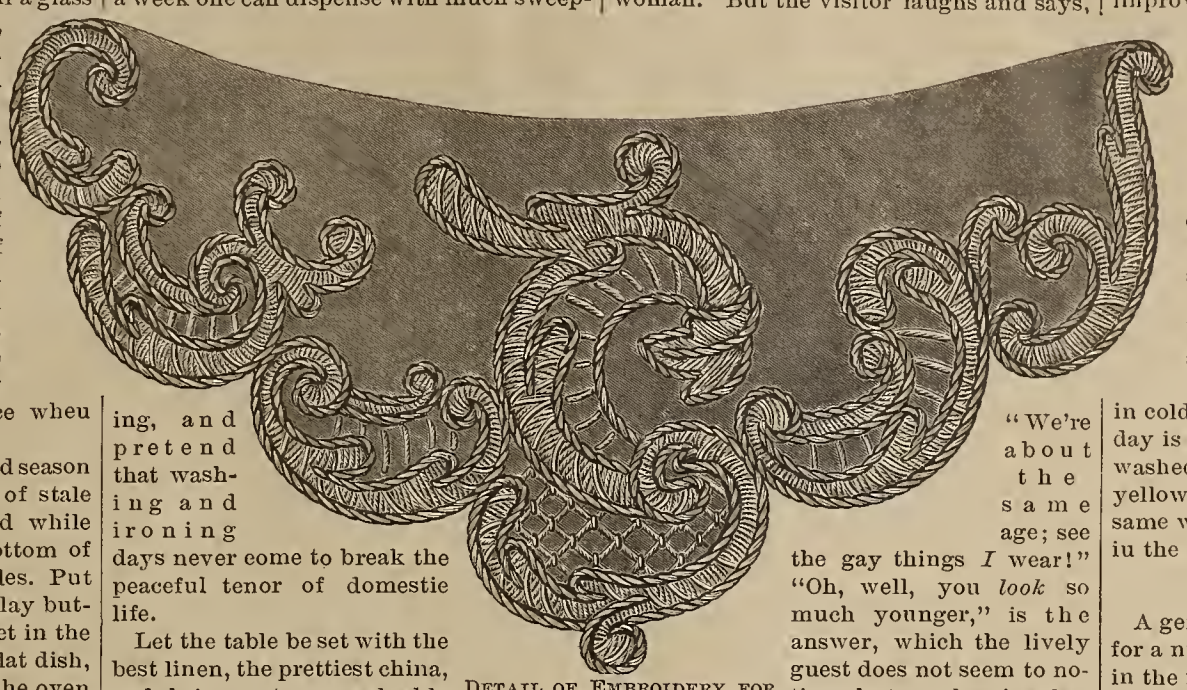


Suspension Pin-Cushion.

She ceases to be the honored stranger, and she cannot be "one of the family." A good motto is, "A short visit and a merry one." It is satisfactory at the beginning of a visit to have its extent definitely understood. When the invitation is sent it is very easy to say, "It will give me great pleasure to entertain you for a week;" or, if the time is not stated in the invitation, the acceptance can stato that the prospective visitor can be spared from her home duties for eight or ten days. This matter being mutually uuderstood, the one who entertains can consider the visit as a whole, and plan to get in it the greatest good for the greatest number.

Imagine two friends enjoying a visit for the first time after going to housekeeping. There would naturally be some pride, some wish to have everything appear to the best advantage, and this is right. It is rather an unsubstantial pleasure one has in the pretty things that are out of sight; but when they are brought out for occasional use, we realize their value.

In prospect of visitors, of course the house is put in order and so arranged that thero will need to be very little hard work done during the festive season. That is the reason the visit should be short, so that everything should be at its best. For a week one can dispense with much sweeping, and pretend that washing and ironing days never come to break the peaceful tenor of domestie life.



Detail of Embroidery for Work-Basket.

Let the table be set with the best linen, the prettiest china, and bring out your valuable spoons. When all is arranged you will feel so rich to think you own it, and your guest will likely exclaim over the beauties while she refreshes herself with the food, which is good enough if plain and well prepared, and you have not tired yourself to death in cooking it.

That idea that it is not good manners to make remarks about the furniture of each other's homes is entirely out of fashion, and a better style of admiring freely is quite the thing. Away down in the honest corner of our hearts we confess that it is always agreeable to hear a guest honestly commend our belongings.

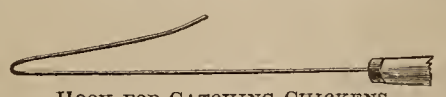
It is pleasant to invite our neighbors to meet the visitor, and it will add much to the liveliness of her visit and give her a clear idea of your daily life and friendships, but this need not add to the burden of your duties as hostess. If you have no servant, remember it is of first importance that you keep fresh and unwearied if you wish your spirits light, as they should be if you are really to *enjoy* the visit. So these little parties must not make hard work. If you have a few musical friends, ask them to sing. That is always delightful, with some instrumental music to increase the entertainment. As to refreshments, let it be a cherry party, a watermelon feast or a grape eating, according to the season. In the winter, one cake, with coffee and confections, is plenty for all need. If you have candies, enclose them in fancy tissue papers with a verse, quotation or original sentiment on a slip of paper inside, after the manner of the printed slips in candy-kisses. If you select these with good judgment they will cause much merriment, or perhaps fix in some mind a noble thought.

If there is a fine bit of scenery within reach, a day's picnicing is in order for summer entertainment, and in winter, an evening spent at some concert or lecture will give a desirable variety. The visitor, for the time being, is naturally a gayer, because a less careful person than her hostess, with the responsibilities of her family aud the addition of another person, so the visitor will do her duty by appreciating everything done for her. How the lively guest can throw a glow over the scene of her presence. Suppose she has some artistic talent, she brings her paints with her and says, "What would you like decorated?" Whereupon, out come bits of silk or satin, and in a day or two she manufactures a beautiful toilet cushion or a wall ornament, or she sketches a favorite view, and leaves it to remind her entertainers of the delightful time she spent with them, and make them wish for her again. She brings the old songs she used to sing, duets which she and her hostess sang when they were girls together. They try the dear old pieces, timidly at first, with excuses, some laughing, and remarks, "Oh, my voice is all gone." But the voices grow clearer and clearer till the song brings applause from all the rest of the family.

Then the visitor says to her friend, "I think you are dressing too soberly. You always looked so well in pink; haven't you a pink dress?" "Oh, I'm too old," says the other, who, with cares and children, has begun to feel herself an old woman. But the visitor laughs and says, "We're about the same age; see the gay things *I* wear!" "Oh, well, you *look* so much younger," is the answer, which the lively guest does not seem to notice; but on hearing her friend confess that she has a pink dress, urges her to get it out, to put it on, and tells her how becoming it is. Then there is suggestions of improvement in dressing the hair, and perhaps a wee touch of the powder-puff on the nose. Presto, what a change! "You are yourself again," says the guest. The transformed lady views herself in the glass, sees that she looks ten years younger, and immediately *feels* younger. Her children notice it, and say, "Mamma, how pretty you are!" while the husband looks his compliments if he does not say them.

The visit that most tries the bonds of friendship is one in which children participate. Lately, I heard two ladies give their experiences. The first was telling about her sister visiting her with a boy of four years. These were her words: "While Willie is here he bangs around and makes so much noise I think I can hardly wait till he goes home, but the first day after he is gone it is so quiet and lonesome that I sit down and cry." It is evident that although Willie is a noisy boy, he isn't bad, and his auntie ought to cultivate patience or get a boy of her own to try to keep quiet.

The second lady had a more serious tale to tell. A five-year-old girl had made miserable every one in the house. "Her parents didn't dare reprove her, and just slipped around on their tiptoes in fear of offending her!" It seemed too ridiculous, yet I had seen some such youngsters. The lady said, at one meal she first bit and bent a choice silver spoon, and then, taking a handful of raspberries, she deliberately rubbed them in the table-cloth—"My best damask," moaned the lady—and then scattered them on the floor. How the child's mother must have been mortified! Certainly that visit would have been



Hook for Catching Chickens.

valuable to the child as well as her parents if they had seen how seriously she needed training.

At the end of even the best visit the hostess returns to her regular duties willingly, and the visitor, in going to her own home, thinks it the dearest spot in the world. This is as it should be; but the influence of that week spent together enters into each life with mutual inspiration. What a compliment each may pay the other by remembering that visit as the date which began a new study, or the foundation of a cheerful habit!

To visit and to invite visits is a duty. Well managed, according to the rules herein laid down, this interchange of hospitality is one of the surest, as well as one of the pleasantest ways of keeping friendships in good repair.

Kate Kauffman.

HELPS AND HINTS FOR THE HOUSEHOLD.

In doing up laces, if they are rinsed in milk instead of starch, that will give the natural stiffness, making them like new. Powdered borax added to starch is a great improvement for white shades, muslin dresses, etc., as it prevents them from readily getting limp.

The following recipe for washing blankets is given by a reliable housekeeper: To one tubful of cold water (leaving space for blankets), add three ounces of washing-borax and one quart of soft soap. Dissolve the borax and soap before putting them in the tub. Stir well, then put in the blankets (three or four, if not large) at night and let them remain till morning, then rinse thoroughly in cold water and hang out. A good, clear day is always best for flannels. Blankets washed in this way never shrink or grow yellow. Bed-ticks may be washed in the same way; if much soiled, a little stirring iu the tub may be necessary.

ASTHMA.

A gentleman afflicted with this disease for a number of years found great relief in the following remedy:

Immerse stramonium or jimson weed leaves in a solution of nitre (nitrate of potassa) and dry them. Keep them in a tin box, and when wanted, put some of them in a tin cup, lay a hot coal of fire upon them and inhale the fumes arising from it. This can be done best by covering the head and shoulders with a shawl and holding the cup underneath, so as to keep the fumes confined. It is best to use it as soon as the least symptom of the disease shows itself. We hope this will meet the eye of the lady who wrote us about her little child and whose address got mislaid. Try it, and report effect to our office.

A lady writes that sufferers from asthma should get a muskrat skin and wear it over their lungs, with the fur side next to the body. It will bring certain relief.

Our Sunday Afternoon.

"FORBID THEM NOT."

THERE is no sweeter story told
In all the blessed book,
Than how the Lord within his arms
The little children took.

We love him for the tender touch
That made the leper whole,
And for the wondrous words that healed
The tired, sin-sick soul.

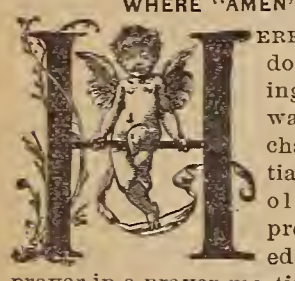
But closer to his loving self
Our human hearts are brought,
When for the little children's sake
Love's sweetest spell is wrought.

For their young eyes his sorrowing face
A smile of gladness wore,
A smile that for his little ones
It weareth evermore.

The voice that silenced priest and scribe,
For them grew low and sweet;
And still for them his gentle lips
The loving words repeat.

—*Sunday-School Times.*

WHERE "AMEN" FAILS.



HERE is a true anecdote, and one showing a very practical way of testing the character of Christian profession. An old Methodist preacher once offered the following prayer in a prayer-meeting: "Lord, help us to trust thee with our souls." "Amen" was responded by many voices. "Lord, help us to trust thee with our bodies." "Amen" was responded with as much warmth as ever. "Lord, help us to trust thee with our money;" but to this petition the "Amen" was not forthcoming. Is it not strange that when religion touches some men's pockets it cools their ardor at once, and seals their lips? We often hear men talk of the "peace of God in the heart," and to the phrase we raise no objection; but it has often occurred to us that if the "peace of God" could only get in some people's pockets, it would be a blessed thing.—*Christian Giver.*

PALESTINE—PAST AND PRESENT.

Palestine is still a land of corn, wine and oil, as of yore; and sheep are still fed on the same pastoral regions; the corn of its plains still yields a hundred-fold. I am unable to see that in any respect, either in climate or natural productions, can the land have changed—excepting that a decrease of population has led to decreased cultivation, and that goats and peasants have often wrought havoc among the trees. Palestine can hardly have been more healthy in Bible times than it is now. Plagues, famine, fever and leprosy are mentioned in the history of the Hebrews; and in the New Testament we find the poor stricken with eye-sore, fever and palsy quite as much as they now are. There are still "former and latter rains," and the rose of Sharon has not withered; the purple iris is royally robed; the imagery of the song of songs is still easy to apply.

Except in the disappearance of the lion and the wild bull—which are also represented on Assyrian bas-reliefs, yet no longer found in Assyria—there is no change in the fauna; the deer, the antelope, the fox, the wolf, the hyena and the jackal, the ostrich and the crocodile, still survive in the wilder parts of the land, with the great wild boars which delight in the marshes; the leopard still lurks in the jungle, and the coney in the rocks; the wild goat still leaps on the precipices, and the wild ass in the distant eastern deserts is not unknown. Considering how complete was the extermination of the fauna of Canon Triestram, it was certainly an unexpected stroke of good fortune to discover an unknown quadruped in Palestine; but the bones of the Yahmur deer, which was sent home from Carmel, we pronounced to beloug to the same species with the English roe-buck; and we thus recover in existence one of the species mentioned in the Pentateuch, and which furnished venison to King Solomon's table.—*Major Condor.*

THE VESTIBULED PULLMAN CAR LINE.

The Monon Route is the finest equipped line on the continent and affords choice of four daily trains from Chicago to the South via Indianapolis and Cincinnati, or via Louisville. For full information call on any ticket agent of the Monon Route, or address James Barker, Gen'l Pass. Agent, Chicago, Monon Block.

AN ILLUSTRATION FROM MYTHOLOGY.

The Greeks had a fable concerning the island of the sirens. They located it near the south-western coast of Italy. There were two or three female musicians upon it, whose strains enchanted all who came by, and when allured to land they were at once made victims. When Ulysses went by he filled the ears of his argouauts with wax and lashed himself to the mast. He heard the music and wished to land, but could not. The rest heard not, and so passed on. When Orpheus went by, the music of whose lyre enchanted not only beasts, but rocks and trees, he produced so much better music than the sirens that no one desired to land. They had better music on board. Ulysses is the moralist lashed to the post of duty by the thongs of a strong resolution. He hears the music of worldly temptation and wants to yield, but his resolution holds him. Orpheus is the Christian with better music in his soul. The love of Christ constraineth him. The first has a name to live while he is dead. The second has Christ formed in his heart, "the hope of glory." "For me to live is Christ."—*J. M. F., in Messiah's Herald.*

LOVING WORDS.

A loving word is always a safe word. It may or may not be a helpful word to the one who hears it; but it is sure to be a pleasant memory to the one who speaks it. Many a word spoken by us is afterwards regretted; but no word of affectionate appreciation, to which we have given utterance, finds a place among our sadly remembered expressions. Looking back over our intercourse with a dead friend or fellow-worker, we may, indeed, regret that we were ever betrayed into a harsh, or hasty, or unloving word of censure or criticism in that intercourse; and we may wish vainly that we had now the privilege of saying all the loving words that we might honestly have spoken while yet he was with us. But there will never come into our hearts at such a time, a single pang of regret over any word of impulsive or deliberate affection which passed our lips at any time.

We have reason to be on our guard in our speech in most directions; but we can be fearlessly free in our loving utterances. Apart from any question of the good we do to others by our words of love, we are personally the gainers, for now and for hereafter, by every such word which we speak explicitly; and we are sure to be the losers, now and by and by, from every such word which we ought to have spoken and failed to speak.

LITTLE THINGS.

What absurd little things people quarrel about! What trivial matters cause ill-feeling in families! The mutton being roasted too little or the beef too much; an opinion about the temperature of the house or the style of curtains that ought to be bought for the front windows; the definition of a word, or its pronunciation, are things that might be argued pleasantly about, but surely are not topics worth a quarrel when peace and good-will are of so much importance iu the home. A little ill-feeling is like a seed that may grow into a large tree, which will shadow the whole house. Many men aud women must look back with regret on the hasty word or the cold reproach which was the entering wedge that split the household in two, and yet how few make a point of uttering the soft word that turneth away wrath! Quarreling is one of the original sins, I suppose; for the babies sitting on the floor will fall out over their toys, and one will push down the block tower that the other has built with great pains; and there will be a "name called" and a "face made" and a slap given, and mamma will be called to settle a quarrel, and no truth can be got at, for each is right in his own estimation, and each has been wronged by the other. So it is through life. A reasonable quarrel about great matters may be settled, and the parties made friends again; but little tiffs about nothing are such foolish, intangible affairs that reason cannot overcome them.—*Lutheran Observer.*

As a penny held close to the eye will shut out the glorious light of the sun, so the habit of petty gossip, mean and poor as it is, will quite obscure all the light which intelligence, thought and warm sympathy would shed upon humanity.

Our Farm.

THE POULTRY YARD.

Condncted by P. H. Jacobs, Hammonton, New Jersey.

FEEDING A VARIETY.

A FLOCK of Brahmas or Leghorns, when confined, should be fed on a variety ratber than on quantity. It is impossible for any one to state *how much* a flock will consume, no matter what the number may be, as conditions alter circnmstances, and some flocks consequently eat more than others. A good bill of fare is as follows:

For the morning meal take two quarts ground oats, one quart corn meal and one quart fine bran. Add a tablespoonful of salt, the same of ground bones and half the quantity of red pepper. Mix thoronghly with milk, if possible, or hot water. At noon give nothing but grass, finely-chopped vegetables, or cut clover hay which has been steeped in water. At night feed whole wheat.

The next day, for a morning meal, take one quart of boiled potatoes, the same of turnips, and mix it stiffly with bran and meal, adding also the salt, boue and pepper with gronnd or chopped meat, if possible. At night feed whole corn. At noon, the green food. Feed only so much as will be eaten clean. When the hens begin to walk off, discontinue the feed. Never leave any to waste. Anything that serves as a change, in order to vary the diet, will be found very beneficial.

THE QUARTERS FOR WINTER.

The FARM AND FIRESIDE has presented, during the year, qnite a number of designs of ponltry-honses, and our readers should have made a selection from among the number before this time, as it is important that preparations for winter be made before the cold season arrives.

To procnre eggs in winter it is essential that the fowls be kept warm, for warmth is more essential than food during a period of cold weather. No matter how well a flock may be fed, fowls cannot lay unless they are kept nnder conditions of comfort that condnce to the production of eggs. Good quarters are also economical, for the more warmth the smaller the proportion of food required to snpport the birds.

In erecting bnildings, it should be kept in view that fowls mnst have a space for exercising and dusting, and also have plenty of light. There are periods during the winter when the hens can enjoy the outside yards, which is always beneficial, but at no time shonld they be subject to exposure to cold winds or north-east storms. See that all cracks and crevices are stopped, and that no cold draughts come in on the fowls at night.

RAIN STORMS AND POULTRY.

Diseases that affect fowls in winter are more prevalent during the continuance of rainy weather than dnring a cold period. Clear, cold weather, when the air is dry, seldom affects poultry unfavorably, and at such times there is nothing to prevent turning the hens ontside, giving them litter to scratch in and allowing them to keep warm by healthy exercise; but poultry of all kinds suffer from some one or more of the various ailments due to exposure to damp weather. Ronp is a disease that seldom puts in an appearance in dry weather. The dampness is also fatal to chicks dnring the winter. The best remedy is shelter, a warm, tight honse, and the fowls confined dnring damp days, or until the weather becomes clear.

HATCHING EARLY BROILERS.

Early broilers for market are hatched from November to March. If you wish to get the high prices you mnst get your broilers in market in April or May. There are twenty broiler farms at Hammonton, N. J., and all the work of hatching is done with incnbators. We do not claim that everyone can succeed, but all who wish to make broiler raising a success should begin in a small way and learn. If hens conld be made to sit in winter they conld do well raising broods, with care and attention, but the fact is, only a few heus become broody in winter, which is a difficulty in the way.

FEEDING GROUND GRAIN.

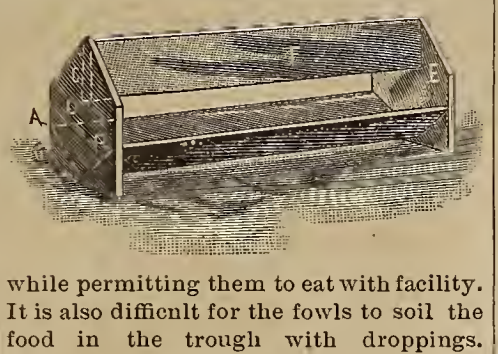
Ground grain will give just as good results when it is mixed with bulky food as it will when it is mixed with water and fed. In fact, it is claimed tbat by adding it to some bulky food (such as clover hay cnt fine, and then scalded), better results will be obtained from the use of ground grain, as the mixture of the whole is not so concentrated. It is trne, also, that hens can be as profitably fed on cut food and grain as can cows, only that the food for the hens should be cut exceedingly fine—not exceeding half an inch in length. Any kind of hay is accepted by ponltry, but clover seems most snitable. Ponltry will also eat ensilage if it is cut fine enongh. There is nothing superior for laying hens than cooked turnips or potatoes, to which ground grain is added. When grain is to be fed it will save time and labor to feed it unground, but there are also times when it is advantageous to allow ground grain, but it shonld always be given as an addition to cnt food. If all the cnt food is scalded before adding the grain, the entire mess will be improved and all classes of fowls will eat it readily.

MAKE YOUR OWN INCUBATOR.

Last year we offered plans for a home-made incubator to each reader. It is the same as is used at Hammonton, N. J. Write to the editor of the poultry department, P. H. Jacobs, Hammonton, N. J., and enclose two stamps for postage and stationery, and he will send you the plans free of charge. He has nothing for sale. All the parts are illustrated, and the incnbator can be made for about $10, to hold 300 eggs. Fnll directions for operating are also sent.

FEED-TROUGH.

A convenient feed-trough is shown in this issue, the design of which was sent by Mr. S. H. Merryman, Md., and which consists of a V-shaped trough (A B), with two ends (D E), and a board (C F) nailed to the ends, jnst far enough above the trough to prevent the fowls from passing across the trongh; the board thus preventing fowls from getting in the trough,



while permitting them to eat with facility. It is also difficnlt for the fowls to soil the food in the trough with droppings. Smaller sizes may be made for chicks, and the larger troughs may be of any size preferred. If lined with galvanized iron it makes an excellent trough for feeding milk, as they can drink without the necessity of crowding. The board which hangs over the trongh (C F) may be made to extend lower if preferred.

DUCKS IN THE FALL.

It is not desirable to have dncks lay at this season, as the eggs do not bring high prices, nor shonld ducklings be yet hatched. Any time after Christmas is the period for the dncks to begin. Avoid feeding dncks too heavily, or they may be made too fat. The cheapest and best food for ducks is a mixture of cooked tnrnips and bran, with a small allowance of gronnd meat added, as they require some animal food at least three times a week.

SCURVY LEGS.

Scnrvy legs (or scabby legs) will appear now more so than in the summer, but it is easily cnred and prevented. Fowls with scabby legs are very nnsightly, and should be treated at once. Simply apply melted lard on tbe legs once a week, for four or five weeks, and the scab will disappear, it being the work of a minnte parasite, which is destroyed by oil of any kind.

WHITEWASH AND LIGHT.

One of the advantages of whitewash is that it renders the interior of the poultry-honse light and cheerfnl, which indnces the hens to stay indoors on stormy days. Although whitewash is liberally used dnring the summer, to gnard against lice, yet it is equally as serviceable in winter in rendering the quarters comfortable and in partially serving as a disinfectant.

HIGH FENCES.

High fences are not required for the Brahmas and Cochins, as they have wings so short as to prevent them from flying over a fence four feet high. All the hens of the non-sitting breeds must be kept within bonnds by high fences. A cheap fence, but which can be made six feet high, can be constrncted of lath. Lath are usually four feet long. First nail a row of half laths to strips and above them nail a row of whole laths. Three strips, from posts eight feet apart, will answer, and if the strips are of 2x3 scantling the fence can be made strong enough to turn dogs or other small animals.

INQUIRIES ANSWERED.

Pekin Ducks.—C. D. C., Spring Arbor, Mich., writes: "Is the Pekin duck as hardy as other breeds?——Is the Black Java fowl equal to other breeds for hatching duck eggs?"

REPLY:—It is a hardy breed.——Yes.

Scrofula.—E. L. S., Ashland, Va., writes: "I had one hen to break out with hard bunches on her head and then under her wings."

REPLY:—The hen is scrofulous. It would be best to destroy her.

Symptoms of Chicken Pox.—J. R. G., Brownsville, Tenn., writes: "A breaking out of small scabs about the combs and eyes of my fowls has occurred. They were well previously."

REPLY:—The symptoms are of chicken pox. Annoint with a mixture of ten drops carbolic acid in a gill of castor oil, well shaken.

Lice.—P. E. T., Goodland, Ind., writes: "My fowls have pale combs, their feathers come out, and the house is full of lice. I took them out and wish to know what to do before I put them back."

REPLY:—Thoroughly clean the house, and apply kerosene to every part. Close it tightly and burn sulphur in it two or three times.

Probably the Large Lice.—A. B., Norwich, N. Y., writes: "Some of my fowls have died. I have not found any lice on them this summer. They eat at times, grow poor from two weeks to two months, and eat as long as they can get to it, and die."

REPLY:—No lice were found of the small mites, but the probability is that the large gray lice prey on them. Search closely on the skin of the heads and necks.

Canker or Roup.—J. L. D., Kymudga, Ala., writes: "My chickens are troubled with yellow blisters, that are coming all over their combs and wattles, extending into the mouth and on their face, and closes up their eyes."

REPLY:—It may be canker or roup, due to exposure, or the effects may be from some parasitic disease. Keep them dry and warm, and annoint heads once a day with a mixture of one part spirits turpentine and four parts sweet oil.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of Farm and Fireside, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Books Wanted.—V. R. M., Mt. Ephriam, Ohio. Usually, any book wanted can be obtained by ordering it through a book-seller in your nearest town. Or, you can write direct to any large book firm. Try Robert Clark & Co., Cincinnati, Ohio.

Sunflower Seed.—C. D. C., Spring Arbor, Mich., asks if sunflower seed is good feed for sheep and horses. Let some one who has had experience in feeding it to sheep or horses please answer. It makes excellent food for poultry, but we have never heard of it being used for feeding farm stock.

To Tan and Color Sheep Skins with the Wool On.—M. D. P., Waterville, Col. Try the following recipes, which are taken from the *Connecticut Farmer* and the *Shoe and Leather Reporter:* "To tan sheep pelts with the wool on, wash the skin in warm water, remove all the fleshy matter and clean the wool thoroughly with soft soap and water. Having thus freed it of all fatty matter, apply to the flesh side the following mixture: Take half a pound each of fine salt and powdered alum and half an ounce of borax. Dissolve these in a quart of hot water, and after cooling the mixture to a degree that the hand may be held in it, add rye meal to make it into a paste. After spreading it on the fleshy side of the pelt—and the quantity named is what will be needed for one pelt—fold the pelt lengthwise and let it remain in an airy place for two weeks, after which remove the paste, wash and dry. When nearly dry, scrape with a knife, which should be crescent-shaped, and the softness of the pelt will depend very much upon the amount of working that is bestowed upon it. If the skin is to be used for a mat, the following plan is to be recommended: With a strong lather made with hot water—but used when cold—wash the fresh skin, being careful to get out all the dirt from the wool. It is better to plunge the skin right into the lather. After doing so, wash the skin clean in cold water. Now dissolve a pound each of salt and alum in two gallons of hot water. Put this into some sort of a tub in which the skin can be placed, and have the mixture cover it. After twelve hours' soaking, take it out and hang it upon a pole to drain. When it has been well drained, stretch it upon a board to dry, and stretch it several times during the process of drying. Before it is quite dry, sprinkle on the flesh side one ounce each of powdered alum and saltpetre, rubbed in well. If the wool is then found to be firm on the skin, it can be folded up and let remain two or three days, or until dry, turning the skin over from day to day. Then scrape the flesh side with a blunt knife and rub with pumice stone.——To color, use aniline of any shade you desire. Dissolve one pound of aniline in two gallons of water; strain before using; then float the skins in a dye-box, wool down. See that they lie flat, and let them remain till the color or shade you desire comes; then take them out and run them through clear, cold water and hang up in a hot room to dry. For plain white, wash the skins well after tanning as described above. If not white enough, hang up in a small room and bleach with powdered sulphur. Set in a pail in the center of room, burning. Be careful to have no escape of the sulphur fumes, and have the room air-tight."

VETERINARY.

Conducted by Dr. H. J. Detmers.

Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of Farm and Fireside, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 35 King Avenue, Columbus, Ohio.

Luxation of the Patella.—W. M., Salem, Ohio. Your colt, it seems, suffers from a partial luxation of the patella (being stifled). In regard to treatment, I refer you to the answers given to several similar questions in recent numbers of this paper.

Probably Periodical Ophthalmia.—J. C., Iran, Ill., writes: "My mare's eyes get weak and water, and a scum comes over them about every two months. What must I do for her?"

Answer:—Your mare seems to be affected with periodical ophthalmia, a disease in regard to which numerous questions have been asked and answered in recent numbers of this paper. Look them up.

Gangrene.—M. E. C., Hampton, Neb. I cannot tell you what caused the inflammatory swelling, but the sloughing was caused by gangrene. Your treatment is all right; continue it until a healing has been effected. The best prevention of swine plague or so-called hog cholera consists in keeping the animals to be protected, isolated and away from infected places. At the same time it is advisable to avoid all operations that draw blood, and if wounds are caused by accident, to dress them with a five-per-cent solution of carbolic acid.

A Soft Swelling on the Inside of the Knee.—H. R., Gratis, Ohio, writes: "I have a colt that is now two years old. When he was a suckling colt some little boys chased him over a fence and he strained his left hind knee. It made him lame for about two weeks. He has not been lame since, but it left a puff on the inside of the knee, which is soft to the pressure of the hand."

Answer:—Puffs or galls on the hind knee are usually very obstinate. You may try daily applications of a mixture of tincture of iodine and tincture of cantharides, equal parts. But as the iodine stains the hands—temporarily, at least—you may, when rubbing it in, cover your hand with a piece of bladder, or put on a rubber glove. The applications have to be continued for some time, say two to four weeks.

What Is It?—L. G. asks: "What can I do for my horse's tail? There is a large lump the size of a hen's egg, like a wen, growing on the under side about the middle of the tail. The horse is a valuable one. Shall I see a surgeon about it?"

Answer:—If your horse is gray or white, and the large "lump" under the tail black, it is a melanotic tumor, and is best left alone. If your horse is not a gray, and the "lump" not black, I cannot tell you what it is, and have to advise you to call on a veterinarian to examine and to remove it.

Lameness.—J. E. M., East Peoria, Illinois, writes: "We have a horse that is lame in the left hind leg. He has been lame for over two months. He can't bear to step on his foot, and he rests the end of his foot on the ground when he walks or when he stands. We have tried every treatment that we have heard of."

Answer:—The simple statement that your horse is very lame in the left hind leg, and does not bear any weight upon the foot, is entirely insufficient to make a diagnosis as to the seat and nature of the lameness. There are too many possibilities. I have no doubt you have some reliable veterinarian in Peoria. Let him examine your horse, and do not rely on "hoss doctors."

A Sick Heifer.—J. C. H., Wesley, Pa., writes: "We have a yearling heifer that was in good condition when we turned her out to pasture in the spring. In the course of a few weeks we took the other young cattle out of the pasture and left her in by herself. She fell away, and in a few weeks was nothing but a skeleton. We then turned her in with the other cattle, but she has not gained in flesh. She has good pasture and a good appetite, but does not chew her cud."

Answer:—You fail to state what you want to know. If you wish to know what ails your heifer and what to do for her, you will have to give a description of the symptoms. The statement that she is emaciated and does not chew her cud, is insufficient. It leaves too many possibilities.

Very Wormy.—W. F. A., Salisbury, Md., writes: "I have a mare, ten years old, that is very wormy. I have soaked her feed in coal oil for two days at a time but with no avail. Others recommended linseed oil. I drenched her first with a pint, and as that seemed to take no effect, I then drenched her with a quart, and the result was the same. It failed to even loosen her bowels. Several times she has been down like a horse with colic, but I think the worms are all the trouble. The mare has a ravenous appetite and eats enough to keep two horses in good condition, but remains thin and will not gain flesh as heretofore."

Answer:—You say the mare is "very wormy," but you fail to give any facts upon which such a diagnosis can be based. The attacks of colic may have an entirely different cause, and the not gaining flesh may possibly be due to the fact that the mare eats more food than she is able to digest. The only sure indication of the presence of intestinal worms is a discharge of them with the excrements. Still, I do not say that your mare is not troubled with worms. If you have proof of it, which you did not deem worth while to communicate, you may give her on two successive mornings on an empty stomach a pill composed of tartar emetic, three drachms, powdered licorice root and powdered marshmallow root, each two drachms and water just enough to make a stiff dough or pill-mass. After the medicine has been given, the animal should not be fed within five or six hours. You may congratulate yourself that you did not succeed in killing your mare by drenching her twice with linseed oil, which, particularly at the second drench, very often goes into the lungs.

Galled Withers—Curb.—C. M. D., Marietta, Ohio, writes: "When working one of my young horses last summer, in the mowing machine, his neck became sore, and one morning we found a lump half as large as a hen's egg a little to one side of the top of his neck. We bathed it in hot salt and vinegar, worked the horse with a sweat-pad under the collar, bathed again at night, and the following morning the lump had disappeared, and there remained only a slight feverishness. About ten days afterward I was called away one day at noon, and upon returning, twenty-four hours after, found a large, puffy swelling on the side of the horse's neck, just forward of the shoulder. A veterinarian prescribed a solution of some preparation of sulphur and of lead, to be used as a wash. He remarked, after giving it, that the prescription was even better for a sore than for a swelling, and also that the swelling *might* have to be lanced. We used the wash as directed, but with no effect that I could see. However, after a week or ten days' rest the swelling subsided. I have worked the horse ever since, but his neck is still slightly sore, and occasionally a small, hard lump can be felt on top of the neck after a hard day's work in the drill or roller. The horse is a very nervous one, and at times makes a terrible fuss when one attempts to touch his neck or put on a collar. What would you advise to do with a puffy swelling like the one described above? Is the horse's blood out of order? What is the best remedy for ordinary sore neck or sore shoulder?——Do you consider a curb curable a year after it is first seen? I have a four-year-old colt which was curbed a year ago. I applied, at that time, biniodide of mercury and other blisters, but failed to remove them."

Answer:—The first soreness and swelling undoubtedly was caused by bruising—too severe and too long continued pressure—and would have disappeared if the animal had had sufficient rest, even if no other treatment had been applied. As it is now, repeated pressure and bruising have produced new exudates, and the old ones, not absorbed, have become more or less solid, and cannot be absorbed unless they are first dissolved. I therefore would advise you either to exempt the horse from work, or to use a breast-collar, so that nothing may press upon the sore place, and then, in order to promote dissolution and absorption, to apply, say once a week, a little oil of cantharides, prepared by heating one part of cantharides and four parts of oil for an hour in a water bath, and then straining it through a piece of muslin or flannel. If the morbid changes should have too far progressed, and if abscess formations should have begun, the same treatment will in that case not effect an absorption, but will hasten the ripening of the abscess, which, too, is a gain. If an abscess is formed, it invariably must be opened at the lowest part, even though it should break somewhere else, and then a simple antiseptic treatment will seldom fail to effect a healing. If, however, the abscess should prove to be complicated or deep-seated, it will be best to leave the treatment to a competent veterinarian.——As to the curb of your colt, the best advice I can give you is to feed liberally, especially oats, and to use the animal only for very light work—no horse-back riding and no pulling loads up hill—or to give voluntary exercise, and the curb will gradually disappear.

Nail in the Foot.—G. J. D., Hope, Ind., writes: "I have a horse that run a nail in his right hind foot in the edge of the frog, about half way from the heel to the toe. The nail entered about one half of an inch deep. He was treated as follows: The accident happened nine weeks ago. For the first two days turpentine was applied. His leg swelled some. A veterinarian was called and he directed to apply a poultice for forty-eight hours of wheat bran and vinegar, and a wash of some salts and vinegar. In about a week or ten days he could walk without limping much, but soon began to get worse, only letting the toe rest on the ground. The veterinarian then cut in the wound and got out a small quantity of matter and gave a different kind of liniment to apply. In two weeks he could scarcely walk at all. I then called in a blacksmith, who said the hoof had contracted from improper treatment, and a poultice of flaxseed meal was applied for four days, when he was shod and the hoof spread two weeks ago. The poultice has been kept on ever since and a large quantity of matter was discharged, at first very thick and yellow, but now it is somewhat thin and watery; it runs freely and is somewhat lighter in color than two weeks ago. He lets his foot rest on the toe, but does not use it in walking. He frequently hoists his leg with a quick jerk as if in great pain, and then quietly lets it down again. He eats heartily and otherwise appears well."

Answer:—When this reaches you, your horse either has recovered or become an almost worthless cripple. I will therefore give you, for future use, a few hints in regard to the treatment of such cases. At first, of course, the nail must be removed, and then it must be ascertained whether the nail is entire, or whether the point is broken and yet in the wound. In the latter case, the point, too, must be removed. After this has been done, it is well to sufficiently thin the horn around the hole, so as to give room for the swelling that will set in, and to enlarge the hole somewhat so that the exudates may be discharged. If the nail is clean and new, and has been pulled out immediately, the wound may be dressed with a five-per-cent solution of carbolic acid, a good bandage that will not allow any dirt to enter may be applied, and all will be well. In a few days the horse can be shod again, and will be fit for work. If, however, the nail is old and rusty, or if it is not immediately removed, it is always advisable to use flaxseed poultices, to be renewed at least twice a day, for two or three days, or until the lameness has disappeared. After that, an antiseptic dressing (a five-per-cent solution of carbolic acid) and a good, protecting bandage has to be applied. The dressing, too, should be renewed twice a day until the wound has healed. If the horse cannot be kept on a dry and clean floor in the stable, but has to work, the same may be shod with a shoe which is provided with a removable cover of sheet iron, which permits a dressing of the wound, and still affords sufficient protection. Such a shoe can be made in a very simple way. It either has a removable toe-calk, or removable heel-calks. If the former, then a little space (a slit), just wide enough to admit the thickness of sheet iron, must be left between the arms of the shoe and the calk, where the latter is turned over on the anvil. The plate of sheet iron must be large enough to cover the whole lower surface of the foot between the nails, but must be long enough in front so as to be flush with the toe, when the posterior part is shoved into the slit between the heel-calks and the arms of the shoe. Corresponding to the female screw in the toe of the shoe, the plate of sheet iron must have a hole, and then can be fastened in front by the removable toe-calk. I know very well that a simple drawing would explain it much better than my description, which necessarily must be brief, but I hope it will be understood, and it will be easily seen that such a cover not only affords protection, but can be removed and be replaced in a very short time. The only tool needed is a monkey-wrench to loosen and to fasten the removable toe-calk.

Our Miscellany.

Hackman—"What's th' trouble?"

Mrs. Mosenbaum (who has just landed)—"I shday me no more in this mean country; I go me pack to Warsaw! Dot gustom-house insbector gif mein husband a piuch ohf snuff, unt he had a schueeze a diamont ring unt two gold vatches out ohf he's mouth."—*Judge.*

PRESIDENT OLDWORTHY—"Well, daughter, how did thee enjoy my lecture?"

Gladys Oldworthy—"Oh, very much indeed! Some of your freshmen were telling the funniest stories you ever heard all through the evening."—*Harper's Bazar.*

ALVAN CLARK is now constructing a telescope for a Los Angeles observatory that will bring the moon within an apparent distauce of one huudred miles from the observer. It is expected that wheu this telescope is fiuished, thc question whether there are any inhabitants on the moon will be definitely settled, aud also whether the supposed iuhabitants of the planet Mars are sigualling to us by meaus of certain lights which astronomers have noticed on that planet.

DRINKING A FARM.

My homeless friend with the chromatic nose, while you are stirring up the sugar in a teu cent glass of gin, let me give you a fact to wash down with it. You say you have longed for years for the free, independent life of the farmer, but have never beeu able to get enough money together to buy a farm. But this is just where you are mistaken. For several years you have been drinking a good improved farm at the rate of 100 square feet at a gulp. If you doubt this statement, figure it out for yourself.

An acre of land contains 43,560 square feet. Estimating for convenience the land at $43.56 per acre, you will see that it brings the land to just one mill per square foot, one cent for ten square feet. Now pour down the firey dose, and imagine you are swallowing a strawberry patch. Call in five of your friends and have them help you gulp down the 500-foot garden. Get ou a prolouged spree some day, and see how long a time it requires to swallow a pasture large enough to feed a cow. Put down that glass of gin; there's dirt in it—100 feet of good, rich dirt, worth $43.56 per acre.—*Burdette.*

PURE AND IMPURE, ACCORDING TO USE.

Things becomo tainted or impure by the uses to which they are put. Whether our lives realizc the highest and best depends upon the use we make of them. It is said that Æsop was once ordered by his master to prepare the best possible dinner for his guests. He secured a supply of tongue and served them in a variety of ways. Xanthus, his master was angry. Said he, "Did I not order you to prepare the best possible dinner?" "Is there anything better," said Æsop. "Is not the tongue the organ of truth and the promulgator of science. By it governments are founded, justice administered, the sorrowful comforted, the wayward persuaded, and the dying consoled."

"Well," said Xanthus, "to-morrow this same company shall dine with me again. To-day you have given me the best thing; to-morrow provide for us the worst." Æsop again set before the guests tougue, for, said he, "It is the instrument of strife and contentiou, the source of division and war. It is the organ of error, of lies, of calumny and blasphemy."

ONE teaspoonful of ammonia to a teacupful of water will clean gold or silver jewelry; a few drops of clear aqua ammonia poured on the underside of diamonds will clean them immediately, making them very brilliant.

THE best thing out to-day that all ages enjoy, is the New Parlor Game with the patent Rubber Tipped Projectile. No home is complete without it. Elastic Tip Co., Boston, Mass., are headquarters, and are mailing it for 75 cents.

WHEN you see a boy with beautiful, long, yellow curls there is very little doubt as to who is the head of the family.—*Indianapolis Journal.*

ATTENTION is called to the advertisement of the Edw. Harrison Mill Co., New Haven, Ct., of Burr Stone Grinding Mills. They claim to make the largest variety of any builders in the world and have these mills in operation everywhere. Each mill is guaranteed to perform satisfactory work, and their low prices enable a farmer of small meaus to procure a first-class mill. Write them for catalogue.

THERE are 13,000 kinds of postage stamps in the world.

HAVE YOU CATARRH?

There is one remedy you can try without danger of humbug. Send to H. G. Colmau, Chemist, Kalamazoo, Mich., for trial package of his Catarrh Cure. His only mode of advertisiug is by giving it away. Postage 4 cents. Judge for yourself. Mention this paper.

Smiles.

SONG OF THE OYSTER.

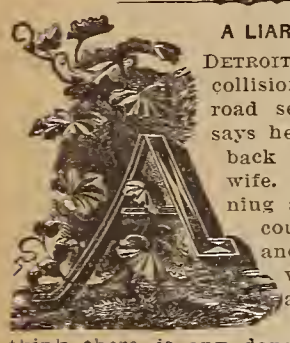
My busy days have now begun,
I hardly rest a minute;
But when church social soup is served,
As usual, I'm not in it.
—*Westborough Tribune.*

PAYMENT BY PROXY.

She was a maiden demure;
He was a brazen clerk;
She asked the price of lace;
He answered with a smirk:

"The price, you see, dou't count
In such a case as this;
I'll gladly give a yard
In exchange—for a kiss."

"I'll take four yards," she said,
Then added, to his sorrow,
"And have my dear mamma
Bring in the pay to-morrow."



A LIAR FROM DETROIT.

DETROITER, who was in a collision on the B. & O. road several weeks ago, says he was sitting just back of a farmer and his wife. The train was running so fast that the couple were nervous, and by and by the woman turned about and inquired: "Mister, do you think there is any danger?"

"No, ma'am; not in the least," he replied.

Five minutes later, the speed having perhaps increased a little, the woman again turned with:

"Mister, where are you from?"

"Detroit, ma'am."

"And there is no danger?"

"None whatever."

Ten seconds later came a grand crash, and the coach reared up and fell over. As it went, with everybody shouting and screaming, the voice of the woman was heard above everything, crying:

"Oh, William! What a liar that man from Detroit has turned out to be!"—*Detroit Free Press.*

WRITES IT DOWN IN A BOOK.

Charles Mathews, one day previous to the period of his publicly proclaimed dire bankruptcy, invited a friend to dine with him. The walnuts were washed down by some rare East India sherry.

"That's delicious wine," his friend exclaimed, "it must have cost you a lot of money."

"It didn't cost me anything that I know of," the flighty comedian answered, with a shrug.

"You had it given to you, then," the friend suggested.

"Oh, no," said Mathews, "I bought it from Ellis, in Bond street."

"But he will charge you something for it," the friend exclaimed, in astonishment.

"I believe he does write something down in a book," Charles retorted, gravely; "let's have another glass, my boy."—*Argonaut.*

A SERIOUS QUESTION.

Mrs. Wellesley Girton—"Why are you so dejected, Miranda? You have every reason to be elated after having taken the senior prize in classics; and your essay on deductive philosophy won the admiration of all the faculty. So well equipped a girl should——"

Miranda Girton—"That's just the trouble. How—how can I find a husband who is able to sew buttons on, and cook, and mind the—the—oh!" [Weeps.]

KIND-HEARTED BRIDGET.

Cooking-school girl—"Bridget, what did you do with that cake I baked yesterday? Mr. Finefello is here, and I want to give him some."

Bridget—"Wull, mum, I'll get it fur ye if ye say so; but sure it isn't me wud be discouragin' a noice young mon like that!"—*New York Weekly.*

A MEAN INSINUATION.

Mrs. Cumso—"I noticed to-day that the young man who boards across the street flirts with our hired girl."

Mr. Cumso (sweetly)—"Why, I didn't think you capable of so much jealousy."—*New York Herald.*

LITTLE BITS.

Tramp—"Say, mum, your dog bit me."

Lady—"Well, never mind, I'll wash his mouth out."—*Good News.*

He (singing softly)—"Oh, would I were a bird!"

She (absent minded)—"Oh, would I were a gun!"—*Harper's Bazar.*

Customer—"Seems to me that razor is rather dull."

Barber—"Monght be, sah. It was to a pahty las' night, sah."—*New York Weekly.*

"Ya-as," said the Anglomaniac, the fahls of Niagawa would be twuly gwand, don't you know, but for one dwawback."

"What is that?"

"They ah hahf Amewican, ah."

Gentleman (dining)—"Will you bring me some radishes, please?"

Waiter—"I beg pardon, sir. They are not now in the market. But—ah—we can serve yer 'ighness with the 'orseradish."—*Drake's Magazine.*

Barrowit (in Chinese laundry)—"Why do you say Fliday, John, when you mean Friday?"

Chinaman—"I slay Fliday 'cause I mean Fliday; not like Melican man, who slay Fliday and come to pay me week afteh next."—*Texas Siftings.*

A girl near this city on being asked why she did not marry, replied: "I have considerable money of my own. I have a parrot that swears, a monkey that chews and a stove that smokes, so you can plainly see that I am not in need of a husband very badly."—*Burlington (Vt.) Independent.*

Miss Bleeks—"Who was that man who bowed as he passed by?"

Miss Kleeks—"It was my brother."

Miss Bleeks—"Why, I didn't know you had a brother."

Miss Kleeks—"He only proposed to me last week."—*Minneapolis Journal.*

Hackman—"What's th' trouble?"

Mrs. Mosenbaum (who has just landed)—"I shday me no more in this mean country; I go me pack to Warsaw! Dot gustom-house insbector gif mein husband a pinch ohf snuff, unt he had a schneeze a diamont ring unt two gold vatches out ohf he's mouth."—*Judge.*

A very little girl in the infant class of one of our city Sunday-schools came home Sunday and told her mother that the teacher had taught them a new song. On expressing a wish to hear it the mother was much astonished at the following sentence, which was all the child could remember: "I'm a little greenhorn among a half a cheese." The words which had been misunderstood, were these: "I'm a little gleaner among the harvest-sheaves."—*Sunshine.*

"I am sorry for you, Walty," the kind-hearted surgeon said, "but the thumb will have to come off."

"My hand won't be of much account, will it, doctor?" inquired Walty, tearfully.

"You will have four fingers left, but you will not be able to grasp anything firmly."

"I can't help papa pull plantains out of the front yard nor weed the garden for mamma, either, can I?"

"I am afraid not, my boy."

"Woop-la! Cnt 'er off, doc."—*Chicago Tribune.*

Selections.

COTTON SEED.

Was there ever such a history as that of the cotton seed, now one of our staple products? For seventy years despised as a nuisance, and burned and dumped as garbage, then discovered to be the very food for which the soil was hungering, and reluctantly admitted to the rank of utilities, shortly afterward found to be nutritious food for beasts, and thereupon treated with something like respect. Once admitted to the circle of farm industries, it was found to hold thirty-five gallons of pure oil to the ton, worth, in its crude state, $14 to the ton, or $40,000,000 for the whole crop of seed. But then a system was devised for refining the oil up to the value of one dollar a gallon, and the frugal Italian placed a cask of it at the root of every olive tree, and then defied the borean blasts of the Alps. And then experience showed that the ton of cotton seed was a better fertilizer and a better stock food when robbed of its thirty-five gallons of oil than before, that the hulls of the seed made the best of fuel for feeding the oil-mill engine, the ashes of the hulls scooped from the engine's draft had the highest commercial value as potash, and that the "refuse" of the whole made the best and purest soap stock, to carry to the toilet the perfumes of Lubin or Colgate.—*National Soap Review.*

HONEY BEER.

From the *Australasian Bee Journal* we clip the following receipe for a refreshing and wholesome beer, which in California, where honey is so plentiful and cheap, could be made by every farmer at a very low price, and so the *Bee Journal* says, is a good drink to "swear off with."

"In five gallons of cold water mix half a pound of hops and two ounces of ginger, the latter well bruised with a hammer; add twelve pounds of good extracted honey already melted with as much boiling water as is requisite for that purpose; stir well with a stick, and put the boiler or boilers on a good fire, stirring occasionally till the liquor boils; let it boil briskly for about an hour, or until the hops cease to swim on the surface; take the vessel off the fire, and let it stand for about six hours until nearly cold, when the hops and sediment will have settled near the bottom. Strain the liquor through some good straining material (so-called "butter-muslin" folded in four thicknesses answers well) into glazed earthenware vessels, and let these stand near the kitchen fireplace during the process of fermentation, which will commence within twenty-four to forty-eight hours, according to the ruling temperature, or continue for from ten to twelve days, according to the season of the year. The vessels should be secured from dust by means of tin covers pierced with holes to admit free access of air. Skim off the frothy scum, and stir the contents with a stick once a day, to promote active fermentation, and when this has nearly ceased—that is, when the liquor, after being stirred, forms only a light froth on the surface, which soon subsides of itself—it will be fit for bottling. Strain carefully into perfectly clear bottles, by means of a tub dish in which is placed a fresh straining cloth (four folds of butter-muslin); cork securely with sound corks well driven in and tied down with twine or bottling wire. Keep in a dry, cool place. The beer may be used three or four days after bottling, but better if kept standing for a week or two, and if the corking has been properly attended to, will only improve by several weeks' keeping."

It might be added that the "glazed earthenware vessels" mentioned are not absolutely necessary; a keg with the head out covered with scrim, to keep out flies and dust, answers the purpose very well. This beer can also be made to use on draught, by allowing it to ferment in the ordinary way of making sugar beer in a proper keg, and then bunging it down at the proper stage, when it will be fit for use in a week or two. However, the strained and bottled brew will be the brightest and most palatable beverage.

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Current Comment.

IN the political revolution that took place in the elections this fall, the farmers have won a signal and astonishing victory. The first question that arises is, can they do anything with it? Let us look first at Congress. President L. L. Polk, of the National Farmers' Alliance, claims that thirty-eight straight-out Alliance candidates were elected, and that twelve or fifteen others elected are pledged to their support.

Granting that the Alliance can control fifty-three votes, it still comes far short of holding the balance of power in Congress. The Democrats have a large working majority over any combination possible to be made against them. So, while the farmers have elected an unusual number of candidates of their choice to Congress, affairs are in such a shape that their victory may yield them no fruit, and they must not be disappointed or discouraged if it does not. Some things advocated by the Alliance, such as the sub-treasury warehouse scheme, are in extreme opposition to the principles of both the Republican and Democratic parties. Therefore, so long as the Alliance does not hold the balance of power between them, it cannot expect anything from either, and will get nothing.

However, if the Alliance pursues a wise course it will remain in politics as a most important factor in future elections and legislation. It is possible for the Alliance to win the electoral votes of a number of states at the next presidential election.

In some of the state elections the farmers' victories are, apparently, more substantial than in the congressional. In South Carolina, Georgia, Tennessee and Texas the Alliance controlled the Democratic conventions and nominated and elected its candidates for governor. In Georgia and South Carolina it can name the United States senator. The three farmer members elected to the Illinois legislature will control the selection of a United States senator. In Kansas the farmers elect five out of seven congressmen against both old parties. In Nebraska the Alliance and Democratic combine elect three congressmen and governor. In Minnesota, South Dakota, Michigan and other northern states the independent movement of the farmers has made its power felt disastrously to the dominatiug party.

The leaders of the farmers' political organizations, North and South, encouraged by the results of the election, are planning for the formation of a national party for 1892. The following from the *Farmers' Advocate* indicates the temper and purposes of the new political movement:

We shall at once commence to marshal the hosts of the people for the conflict of 1892. In this great work there are many prejudices to be overcome. Sectional lines must be abolished. Interests which are identical must be brought together, and the combined forces of the agricultural and laboring classes must be consolidated against the forces of the corporations, monopolies, trusts, syndicates and moneyed aristocrats, who have for years feasted upon the substance of the people. When we say these forces are to be marshalled against the oppressors of the people, we do not mean that the injustice which has characterized the corporate power of America is to be returned in kind. The people simply ask for justice — that alone — and that, by the Eterual, they will have. The coming contest, therefore, will not take place between the northern and southern sections of our country. The interests of the people of the West and South are identical, and their political forces must be consolidated against the power of corporate greed.

We may as well publish the fact now as permit our people to postpone the day of recognition. The professional politicians of both parties, both North and South, who have devoted their lives so arduously to the promotion of corporate interests, recognize that this union of the two sections is the great danger that threatens the power of monopoly, and they therefore constantly aim to keep alive the prejudices that have estranged them only to prey upon them and to maintain political supremacy hy their alienation. It has been and is the holy mission of the Farmers' Alliance to snbdue the serious prejudices.

It is full time for the nation to become united. Let the hosts of the army in blue who faced shot and shell declare whether they did so to maintain and perpetuate a more perfect union, or to divide the nation into sections. If the former, let us see to it that those who fell did not perish in vain. Let us see to it that those of our comrades who survive may live to see the country redeemed and its liberty restored. Down with all sectional lines! Away with all sectional prejudices! Let the fires of patriotism that still burn in the hearts of the people consume the prejudices of the past. Let one flag float over us and one spirit so perfectly pervade our hearts, that we shall be able and willing to stand shoulder to shoulder in the great army that must make lasting conquest of the hosts of corporate greed that are fattening upon the stolen substance of the people.

BULLETIN No. 27, Division of Chemistry, Department of Agriculture, gives an account of the history of the beet sugar industry in Europe and the United States. The widely published accounts of the successful experiments this year at Grand Island, Nebraska, have excited an unusual amount of interest in this industry. And this bulletin, containing much useful information on the subject, appears at an opportune time. It is illustrated with cuts of the varieties of beets and of the machinery used in the cultivation of beets and in the manufacture of sugar from them, and contains a map showing what portions of this country are adapted to beet culture.

From the bulletin we take the following remarks on the industry in general:

"In so far as the manufacture of sugar from the matured beet is concerned, we are able to start at the present time, with the accumulated knowledge and experience of three quarters of a century of investigation. So perfect have the processes of manufacture become that nearly all of the sugar which is stored in the beet can be secured in merchantable form, and by comparatively inexpensive methods. By the term inexpensive, however, it must be understood that the actual processes of manufacture are denoted, and not the cost of machinery. The various processes for the extraction of the sugar from the beet, the best methods of clarifying the juice and of evaporating it, and for separating the sugar from the molasses, are thoroughly well understood and are no longer legitimate subjects for public experiment. The great problem in this country is the agricultural one. The selection of suitable soil, the finding of the proper climatic conditions, and instruction in the method of planting, cultivating and harvesting the beets, are all matters of vital importance. Without a careful study of these subjects, and without the proper knowledge thereof, it will be a hopeless task to introduce successfully the beet sugar industry into this country.

* * * * *

It has been found in general that the coast valleys of California, and probably large areas near the coast in Oregon and Washington, and parts of the Dakotas and Nebraska, localities in Minnesota, Iowa, Wisconsin and Michigan, parts of Northern Illinois, Indiana, Ohio and New York, present favorable conditions for sugar-beet culture, but in the localities thus broadly intimated there are certain restricted areas most suitable to the sugar beet, and it is only these restricted areas to which we must look for success. The fact that in one locality, for instance in Nebraska, good sugar beets can be produced, would be no warrant whatever for assuming that all parts of that state were equally suitable for this purpose, and this remark may be applied to every one of the states mentioned above.

* * * * *

If the sugar-beet industry is to succeed in this country, this success must come from sharp competition with the same industry in older countries, where its conditions are better understood and where the localities suited to it have been selected by long and often costly experience. It must also compete with the sugar-cane industry, both of this country and of tropical countries, and for this reason we can only expect it to survive in those localities where soil and climatic conditions, proximity of fuel, cheapness of labor, and other favorable environments are found.

It is hoped that the mistakes which have so long threatened the sorghum-sugar industry with destruction may be avoided with the sugar beet. Calm judgment and sober reason must not give way to enthusiasm and extravagant expectations. All conditions of success must be carefully studied; all difficulties in the way of success must be intimately investigated and allowed for, and ample capital, coupled with judicious perseverance, must be enlisted in its behalf."

DOUBTLESS many of our readers are not satisfied with the profits derived from the farm crops they have been raising. We desire to call their special attention to "Joseph's" article in this issue on growing field beans. Concisely and plainly he tells how to grow a profitable crop. Of course it will not do for every farmer to abandon his staple crops and rush into the business of raising beans. But it will be well for all, if some who have superior advantages of soil and climate for growing beans do so. They will not only do better for themselves, but they will also give those who continue raising corn, wheat, oats, etc., a little better chance. Diversification of farm crops should go on until they are equalized.

Another crop that could be profitably substituted by some farmers for wheat or corn, is barley. In the nine months ending with September, there were imported into this country nearly seven million bushels of barley. The total yearly imports are, of course, a small amount compared with the total production of grain in this country, but not so insignificant as to be unworthy of attention. Every bushel of barley consumed in this country could and should be raised here. Every farmer who will substitute barley for wheat or corn, will do something to relieve the close competition between the growers of those crops and help equalize agricultural protection. Barley is an excellent substitute for corn as food for stock. On the Pacific coast not only does the grain entirely fill the place of corn for stock food, but barley, cut green, is extensively used as hay in place of grasses or clover. Many eastern farmers might profitably substitute barley for corn in the same way. Such changes are small, but important in their effects.

THE mails being now entirely closed to lotteries, even to newspapers advertising them, and properly so, they must carry on their business through the express companies. Recently the United States and the Adams Express Companies adopted the regulations of the Post-office Department in regard to the lottery business. If the other companies will follow their good example and thus supplement the United States anti-lottery legislation, such swindling concerns as the Louisiana Lottery will soon be crushed out of existence. There is no doubt that, in answer to public opinion emphatically expressed, all the other express companies could be readily persuaded to refuse lottery business. It is a matter of sound business policy with them to keep the good-will of the public.

So the people have it in their power to close out the lottery business in short order, by insisting on the express companies having nothing more to do with it.

Public opinion has been aroused against it and now is the time to finish the work.

A CALL has been issued by the Southern Inter-State Immigration Bureau for a second convention, to be held in Asheville, North Carolina, December 17, 1890. The purpose of the Bureau and convention is to harmoniously unite all the Southern states in the work of making known their vast and varied resources and attracting immigration and capital. The Bureau is extensively advertising the resources of the South through the Northern press, and is earnestly endeavoring to reach capitalists and the very best class of home-seekers. May it meet with abundant success in its noble work of adding to the prosperity of the South. Mr. F. B. Chilton, Austin, Texas, is the general manager of the Bureau.

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SUGGESTIONS FROM THE EXPERIMENT STATION.

BY JOSEPH (TUISCO GREINER).

SPECIAL FERTILIZERS FOR GREENHOUSE CROPS.—Prof. S. T. Maynard, of the Massachusetts Hatch Experiment Station (Amherst), reports in Bulletin 10 the results of a series of experiments made with a view of determining what special fertilizer will do the best when applied to crops under glass. In the test with carnations for cut flowers, the soil was made rich with stable manure and fine-ground bone, and the following special fertilizer; namely, muriate of potash, sulphate of ammonia, nitrate of soda, sulphate of potash, bone black, applied in liquid form by dissolving one tablespoonful in a two-gallon can of water. Ordinary liquid manure was also applied in comparison with the others. The results were very much in favor of bone black and sulphate of potash, the former, of all applications made, giving by far the greatest number of blossoms. Ordinary liquid manure gave fewer blossoms than any of the chemicals applied. In tests made with combinations of two each of these fertilizers (equal weight), the sulphate of potash with sulphate of ammonia gave the best results, closely followed by the same form of potash combined with bone black (dissolved). On the whole, the application of sulphate of ammonia has proved most satisfactory, but bone black also shows a marked effect in increasing the number of blossoms. Of the potash salts, the sulphates give better results than the muriate. Further tests will be needed, however, before these conclusions can be definitely accepted as true.

Quite interesting were the experiments with lettuce, of which three successive crops were grown, and treated with the same fertilizers in liquid form. In the first trial, sulphate of ammonia did best. In the second crop, the sulphate of ammonia seemed to have lost its force, while the bone black gave the best results, with sulphate of potash second. The crop treated with nitrate of soda in both cases gave the poorest results, and had the most mildew, which may, perhaps, be accounted for by the fact that nitrate of soda has the power of absorbing moisture from the atmosphere, and the increased amount of moisture in contact with the leaves may have caused a more rapid development of mildew. In the third test, sulphate of ammonia again gave the most satisfactory results. This outcome is important, especially to me. I have always been a firm friend and advocate of nitrate of soda, and seldom failed to obtain most excellent results from its use, so that I am slow to accept the conclusion that this salt could not be employed with advantage in forcing lettuce, etc. Yet Prof. Maynard's experiments point strongly to sulphate of ammonia as the safer fertilizer, and we will have to make further investigations.

The same fertilizers were also tried on tomato plants. Bone black gave the best results, followed by sulphate of potash next, and sulphate of ammonia third.

PROTECTION OF PEACH BUDS.—Prof. Maynard (so he states in the bulletin mentioned) finds himself baffled in his earnest efforts to discover something to protect the peach buds from the effects of the cold. The *tree* can be grown successfully in all parts of Massachusetts. The problem only is how to get the *fruit*. Large peach trees can easily be loosened at the roots, and laid down on the ground for winter protection; but Prof. Maynard has even by this method failed to save the buds. This statement contains a disappointment for me, for I felt sure that tender buds could be preserved and carried safely through the coldest winter by laying down the tree, and perhaps slightly covering the top. Mr. Henry Paffard, at Niagara-on-the-Lake, Canada, thus treats his big fig trees, in open ground, and has them bear fruit year after year, and Mr. Peter M. Gideon, of Minnesota, claims to grow peaches by the same method of treating the trees. In Mr. Gideon's locality the thermometer occasionally drops down to 50 degrees below zero. If he can succeed in protecting the peach buds from injury by the winter's cold, I should think it would be an easy enough task to do the same thing in Massachusetts. It cannot be that Mr. Gideon has indulged merely in fine-spun theories?

COST OF MILK.—To compare the effect of "new process linseed meal" with that of "old process linseed oil-cake meal" on the quantity and quality of milk produced, and on the cost of feed consumed—that was the evident purpose of some feeding experiments with milch cows, made at the Massachusetts State Experiment Station, as reported in Bulletin No. 38. The general result is somewhat undecided, and the conclusion is arrived at that the two substances, at market prices below stated, and under otherwise corresponding circumstances, and when used in equal-weight parts, may serve in place of each other without materially affecting the financial side of the operation one way or the other. The new process linseed meal gives a little less milk, but a richer manure than the other. The adopted valuation of the different fodder articles is based on their local market price per 2,000 pounds at Amherst, which is as follows: Corn meal, $19; wheat bran, $17.50; old process linseed meal, $27; new process linseed meal, $26; hay and rowen, $15.

Incidentally, we learn that these meals have the following fertilizing constituents and value:

	New Process.	Old Process.
Nitrogen	6.25 per cent.	5.33 per cent.
Phosphoric acid	1.42 "	1.64 "
Potassium oxide	1.16 "	1.16 "
Valuation per ton	$24	$21.50

And I would call especial attention to the great fertilizing value of the "new process." The following are some of the daily fodder rations and combinations, and their estimated cost; namely,

Corn meal	3.25 pounds.
Wheat bran	3.25 "
Old process linseed meal	3.25 "
Hay	18.50 "
Total cost	24.18 cents.
Net cost	14.06 "
Manurial value obtainable	10.12 "

Or,

Corn meal	3.25 pounds.
Wheat bran	3.25 "
New process linseed meal	3.25 "
Rowen	20.75 "
Total cost of this ration	25.72 cents.
Net cost	13.05 "
Manurial value obtainable	12.67 "

(I mention these as samples of rational feeding.)

With such prices and rations, and fairly good cows, the total cost of one quart of milk will vary between 1.37 cents and 3.59 cents, the average in the test case (five cows for about seven months) being about 2½ cents. Over one cent of this should be deducted for increase of value of the manure obtainable, so that the net cost of the milk per quart is less than 1½ cents.

ROADS AND ROAD MAKING.—Many of the country roads of the South are terribly poor, and generally much worse than we find them at the more densely populated North, although even here they are often poor enough. Practical instructions on making and maintaining roads will certainly not come amiss, even if a little out of season. Yet, it seems to me hardly necessary for the Alabama Station (Auburn), or any other, to publish as bulletin, "a paper compiled largely from standard (foreign) works, with which all professional engineers are doubtless familiar," for the purpose of proving at length the facts that good common roads have advantages over poor ones; that long roads are more expensive than short ones; and that a horse can draw more on a level road than up hill. Any farmer knows this. Practical suggestions is what we expect to get from our experiment stations. The best form of the upper surface of the roadway (its cross-section), says the bulletin named, is that of two inclined planes meeting in the center of the road, and having their angles slightly rounded by a curve. The inclinations of the planes should be greatest where the surface is rough, and least where it is smoothest and hardest. On a steep hillside the surface should be a single slope, inclining inwards to the face of the hill. A ditch on the side next to the hill receives the surface water, which should be carried, at proper intervals, under the road to its outside. This form is also advantageous when the road curves rapidly around the hill, as it counteracts the dangerous centrifugal force of the vehicle.

The following additional suggestions may prove of benefit: For the ordinary dirt roads of this country, if the soil be a loose sand, a coating of six inches of clay carted upon it will be the most effective and cheapest way of improving it, if the clay can be procured within a moderate distance. Only one half of the width need be covered with clay, thus forming a road for the summer travel, leaving the other sandy portion untouched to serve for travel in the rainy season. If the soil be an adhesive clay, the application of sand in a similar manner will produce equally beneficial results. On a steep hill, these improvements will be particularly valuable. In repairing these roads the earth should be as gravelly as possible and free from vegetable earth. Sod or turf, though at first tough, soon decays and forms the softest mud in wet weather.

RAISING MUTTON LAMBS FROM MERINO EWES.

On the Atlantic slope the Merino is no longer pre-eminent except in limited areas—of which the most notable is Vermont—for the production of wool and mutton there is an entirely subordinate industry, owing to the fact that it is a region very much superior to others which are devoted more largely to wool growing in the requisites which are necessary to success in mixed farming; and this fact makes it creditable to sheep that they retain as permanent a foothold as they do there.

The breeds of sheep there are perhaps not as well defined or as highly improved in general as they are in the West; there lingers a greater proportion of the old native American stock, described by Youatt as being a sort of mongrel scrub Leicester, mixed with the Southdown and Cotswold.

The limited product of grain and the inferior adaptation of the soil to the growing of it in the East, cause the farmer in that section to give it sparingly to his sheep. They endeavor to winter their stock or breeding flocks without grain, on clover, hay, chaff, pea, bean, wheat and oat straw, thus making them serve as scavengers or consumers of refuse products. This for the reason that there is a cash market for nearly everything, even to rye and wheat straw.

A prominent object with them is the growing of early mutton lambs for the market. They buy ewes shipped in from the West, generally those which have passed their prime—rangy, good-sized, open-wooled grade Merinoes—on which they cross a Southdown, or a Cotswold, or a Shropshire ram, two years old or upwards.

The earliest lambs are dropped from January 15th to February 15th; the ewes are well sheltered and fed to improve their condition, so that they generally wean fine, strong lambs. When the latter are a few weeks old they are allowed access to a separate compartment, and where they receive wheat, bran, meal and ground oats in troughs. They generally bring $4.50 to $5 a head, when they will weigh 30 or 40 pounds gross, sometimes as high as $10, according to Mr. Henry Stewart, when they are very fine.

If not too aged, the ewes are retained for one year's further service; if they are, they are fattened for the fall market. A Southdown ram is generally preferred on account of the neatness and compactness of his lambs and their early maturity. They are not so large as those of the Cotswold or Shropshire breeds, but they are thought to fatten better and have larger hams in proportion to total weight of carcass.

The Merino's share in this often very profitable business is a very humble one, yet it seems likely to be an enduring one, because, while the crossing with the Merino does not impair the quality of the mutton, the Merino ewe brought from the West offers the cheapest medium through which this mutton can be produced. A ewe too old to do further service as a breeder in the vast flocks of the plains, is still in most cases capable of doing one or two year's excellent work in a small, well-fed flock, and she can be transported a thousand miles and sold to the New York or the New Jersey farmer for less money than it would cost him to raise either a Down or a Merino on his own farm.—*Sheep-Breeder and Wool-Grower.*

RICH AND POOR MILK.

Any one who has attended a dairy convention, or who carefully follows the dairy literature of the day, must have come to realize that milk testing is the leading question before our dairymen. The rank injustice of paying for milk or dividing money between patrons on the pounds-delivered basis has been tolerated only because it could not be avoided. When the system of paying for milk upon weight is new in a community, it works fairly well for a short time, but soon patrons learn to take advantage, and the result is that as time goes on more and more milk is required to make a pound of butter or cheese. Of course, there are always a few who water or skim; these are occasionally caught and fined or expelled, but the difficulty does not end here, for there are other ways of getting ahead. The greatest trouble has been through buying and breeding cows which produce the greatest number of pounds of milk without any regard whatever to the quality. Between the cows giving thin milk and the patrons who skim or water, dairymen producing good milk and factorymen have had a hard time of it. Factorymen have come to realize that their best friends among the patrons have been the poorest paid. Going from bad to worse, matters have come to a point where, unless some more equitable system is adopted, we must expect the factory system to drag out a miserable existence, if it is not driven to the wall. Is it any wonder, then, that intelligent factorymen have come to the conclusion that milk must be paid for on merit only?—*Prof. Henry in Breeder's Gazette.*

THE PEACH.

The cultivated peach is supposed to have descended from a small, native tree of Persia, or at least south-central Asia, bearing an acrid, poisonous fruit, scarcely if ever eatable.

The almond is considered a selected offshoot from the peach, and both bred from time immemorial, the peach in the line of its goodness of pulp, and the almond in the line of goodness of its kernel or seed, for food or luxuries for man.

The peach has been selected from seedlings, since long before the dawn of man's history, in the line of its delicious pulp, or, as we call it, its fruit alone, without any reference whatever to the health, vigor or hardiness of the tree. This breeding constantly in one line alone has resulted in the whole race or stock becoming enfeebled and diseased. This feebleness and liability of tree, foliage and fruit to diseases, such as the yellows, rot of the fruit, curl of the leaf and the inability to withstand cold and climatic changes, seems to increase, rendering this, the easiest of all the fruits for the pioneers of this country to grow, the hardest now to fruit successfully. Even here in California, where both climate and soil seem

wellnigh perfectly suited to it in every way, each and every year shows a new disease in foliage, tree or fruit. None have turned up as yet fatal or even serious to its profitable growth, but if my whole dependence was in California peaches, I would be in constant dread of being knocked out by some insidious disease. The whole race of fine peaches is a mass of disease and weaklings. Nor is this to be wondered at if we consider how they have been bred in the one direct line for countless generations. No race, either animal or vegetable, can withstand such breeding. The pear is fully as bad to-day. Yet we know that the wild pear of Europe, and especially of eastern Europe and western Asia, is one of the hardiest and healthiest of trees. About the same facts are shown by the apple; but the peach, having naturally the more delicate constitution, has been the first to wholly fail, for the finer varieties of it have failed completely over a great portion of North America, and in sections where only a few years ago it was king of all fruits for profit and ease of production, it cannot now be grown with any success at all.

The argument that any species or race bred constantly in one special line will eventually break down and become delicate and debilitated, might be elaborated much farther. Yet, we think all will take the fact as granted that the peach, as we now have it in cultivation, is on the swift down grade of obliteration as a valuable fruit.

Then what is the remedy? This is a hard question to answer fully, but I think a chapter from my experience may throw some light on the question.

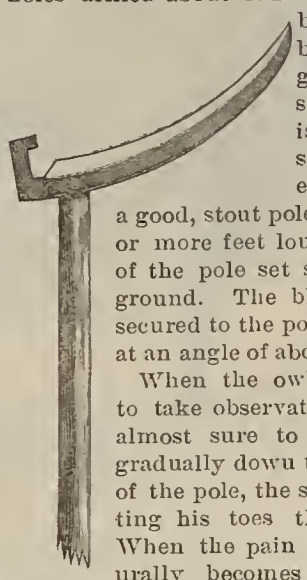
In 1836 a man came from Hamilton, Ohio, and settled as our nearest neighbor, in the north-central part of Illinois. He brought with him quite a number of peach seeds of the very best in quality to be found in that part of Ohio, and probably these were from the best seedling trees to be found there at that early day, and more than likely, this stock had progressed westward with the people through many generations of strong, vigorous seedlings, but, mind you, undoubtedly selected, as usual with the peach, for goodness of fruit alone. Being a careful gardener, he planted the seeds and grew to bearing age many fine trees, 50 to 75, perhaps, and had for years a remarkably fine lot of seedling peaches. These trees withstood from time to time 16° to 24° below zero, the latter cold snap killing a great many trees, perhaps one third, and injuring many more. For the first eighteen years of their life in Illinois, we all had peaches (seedlings) in plenty; they fruited three years out of five. The first general killing of these seedling peaches happened in 1855–6, when the mercury sank to 26° below zero. In 1859–60 the cold reached 28°, and nearly every peach tree in the country was killed, top and root. The next spring I noticed that three of the trees on our neighbor's place were alive, one of which did not seem to be materially injured, and showed about a dozen blossoms, and the next autumn matured six peaches, quite good ones. I saved the seeds, and from them grew five trees. After this we had severe winters right along. I soon found that one of my seedling peaches was hardier than the others and its parent. It bloomed freely after 26° below zero, and matured fruit, the fruit not being quite so large as the parent, but a little better in quality. I again planted the seeds and from these obtained one that seemed still hardier. Not knowing how cold we were going to have it in Illinois, and fearing to lose them, and knowing that 26° to 30° below zero usually killed peach roots, I budded both on European plum roots. Having occasion to move my nursery, the old trees were left behind, and the young ones on plum roots planted where they grew finely. Then, when of good bearing age, there came a very dry autumn, followed by a winter 31° below zero, which killed the roots from under my peach trees and every European plum root in the nursery. And, notwithstanding this severe cold, both varieties of my peaches were red with bloom when spring opened, and would have given quite a crop of fruit, but, alas, the roots were dead and the older trees were destroyed when I moved, and the whole race was lost.

Thereafter, so long as I remained in Illinois, I was casting about in every direction for a new start of hardy peaches. At last I found it, and its history is more strange and valuable than this one, and I will give it in my next. These facts can be readily substantiated by numerous living witnesses. D. B. WIER.

A NOVEL OWL-TRAP.

Uncle Tatum Fullilove, of Do Soto parish, La., has in his yard, near his poultry-house, a rather novel but effectual owl-trap. It is made as follows:

An old scythe-blade is procured, two holes drilled about four inches from the butt, and the blade then ground very sharp. The blade is then securely spiked or screwed to the end of a good, stout pole some twenty or more feet long, and the base of the pole set securely in the ground. The blade should be secured to the pole so as to stand at an angle of about 45 degrees.



When the owl lights upon it to take observations (as he is almost sure to do), he slides gradually down towards the top of the pole, the sharp blade cutting his toes the meanwhile. When the pain is felt, he naturally becomes alarmed, and spreads his wings to fly. In the effort he makes to rise, a still deeper cut is inflicted upon the tendons of his feet, and he departs either a hopeless cripple or an entirely disabled owl, whose occupation as a poultry thief is at an end.

The same trap may often serve to disable hawks, as they, like owls, usually select some high perch from which to take observations before making an attack.

Scottsville, Texas. DICK NAYLOR.

SOME IMPORTANT POTATO QUESTIONS.

J. R. F., of Ladiesburg, Frederick county, Md., a potato grower, asks for information on various points in potato culture, which I will attempt to answer.

1. "What advantages are to be gained by raising potatoes from true seed (seed balls)? Early Roses fail to yield as they did at first." The aim we have in view when raising potato seedlings is the production of new varieties having greater vigor, greater productiveness, better quality, etc., than the older sorts that are constantly deteriorating (running out) in consequence of our peculiar methods of propagation, especially of close cutting of tubers, and of careless selection of seed (tubers).

2. "Do potatoes lose their vitality by the continued planting of tubers?" They certainly do, if we persist in dwarfing our plants year after year, by cutting the seed tubers; but there is no evidence that they would, as long as carefully selected, sound, whole tubers are planted. With the same care in the production of "pedigree" seed tubers that is exercised in the production of pedigree onion seed, pedigree cabbage seed, etc., by skillful and conscientious seed growers, I am quite certain we would not only prevent our potato varieties from running out, but even be enabled to improve them in productiveness and vigor.

3. "If tubers grown from seed balls this year are planted next year, will they be likely to produce a more perfect crop than will tubers of older varieties?" That is by no means certain. Some may, others will not. It takes a good many seedlings to give us one variety as good as the best older sort, one that is better than any other in cultivation being a great rarity.

4. "Do all varieties produce seed balls?" I have seen only a few scattering seed balls this year on some late-planted Garnet Chili potatoes. Years ago, all varieties produced seed freely. Now our present sorts seem to have lost the original vigor of the race, have become weakened by our arbitrary treatment, and with me have for years refused to perfect their seed balls. Or does the responsibility for this, at least in part, rest with soil and climate? In some portions of the country all varieties yet produce true seed quite freely.

5. "Where can tubers recently grown from seed be obtained?" We should keep trying the new varieties as they are introduced by seedsmen, of course on a somewhat small scale at first, and more extensively only as we or our neighbors find them to be just what we want, and as the tubers get cheap enough for extensive planting. These new introductions are usually the best of the tubers most recently produced from true seed.

6. "In order to produce a very early crop, would it be advisable to use nitrate of soda, and how much per acre?" My way of producing an early crop was outlined in issue of October 1st. Nitrate of soda has given me next to no effect on potatoes this year, and I now believe that, under average circumstances, such application will not benefit the crop sufficiently, either as to earliness or as to yield, to pay first cost of the nitrate.

7. "What is the cause of scab and how avoided?" We are not much nearer a solution of this problem than we were many years ago. Worm bites may in some cases be the primary cause. I find that excess of alkali in the soil is quite sure to bring on scab. As a preventive, I would select new, clean, rich soil, avoid rank stable manure and give good cultivation. JOSEPH.

THE CULINARY GRAPE.

The Culinary, of Ohio, for which so much was claimed in the way of retaining its shape when cooked, is the most foxy grape I ever tasted; in fact, it seems to be merely a form of the native Vitis labrusca, and in every respect is very poor, if not entirely worthless. It greatly resembles Dracut Amber and Northern Muscadine, having the same color, with a very tough skin. It showed no superiority even when boiled.—*H. E. Vandeman, Association of American Nurserymen.*

NEW ENGLAND IS ALL RIGHT.

There are some things in this world that I am heartily sick of, and one of them is the stuff that is published about the unprofitableness of farming in New England in general, and in the hill towns in particular. From the drift of these wails about the "decadence of the hill towns," the number of "abandoned farms," "western competition," and all that, one would think that a farmer could no longer get a decent living from a New Englaud farm; that New England, so far as farming is concerned, is played out, worn out, used up; that the majority of the farming population of the hill towns either died or "moved out West" some time ago, and the rest had better do one or the other immediately, as the only escape from starvation or the poor-house.

The strangest, the most exasperating part of it all is that a good many, perhaps a majority, of the hill-town farmers believe all that rot, and rehearse and rehash it over among themselves until those who can pull up stakes and go West, while those who can't get away grumble and growl, lament and wail from one year's end to the next; and when they hear of a New Englander who has been tolerably successful "out West," they heave sighs that closely resemble the workings of a volcano just before an eruption, and say: "Lucky thing for him that he went West; a man has some chance out there. If I'd a' gone when he did, I'd a' been as well off as he is now; but there ain't any chance here for a farmer to get ahead. The land is all run out, and the western farmers can raise everything so much cheaper than we can that we can't compete with them, and it ain't any use to try!" Oh, I have heard it all over and over again, until I am that tired and sick and mad that I feel like taking a club and going forth as a sort of "home missionary," and laboring to convince these misguided farmers that the United States flag floats over worse places for a farmer to get a living in than New England; but as missionary work of that kind is not practicable just now, I take up my old pen to plead the cause of New England hill-town farms.

Not long ago I read somewhere that the trouble with the New England farmer, whose farms were growing up to brush and buildings sinking into a state of dilapidation, was "old age, lack of enterprise, or a surplus of laziness." To this true statement I will add that the chief reason why there are so many "abandoned farms" in New England lies in the fact that so many of the young men raised on those farms went West; and for their going, western land agents and western railroads are chiefly responsible. These agents and railroad men steadily, persistently and everlastingly "boom" the West; always put all the advantages of soil and climate forward, and all the disadvantages in the background, or somewhere else where they don't show, or else so gloss them over that they seem something to be desired. I don't know as I blame these men and railroads for doing their level best *for themselves;* but if New England were as well boomed as the West has been, she couldn't hold the people that would flock to her hills and valleys.

Another cause that has operated to drain these towns of young and middle-aged farmers, may be found in the stories of the average New Englander who went West years ago, and by an amount of hard work and privation that would scare the western fever out of the head of the New England farmer if he could hear of it, secured a competence, and has come back East to visit his old friends and brag about the West. One would suppose that he would tell both sides of the story, but he won't. Of all the conceited, insufferable, intolerable, mendacious mortals on the earth, this average New Englander, who has been wholly or partly successful in the West, is the worst. He never tells but one side of the story. To hear him talk, you would, if you didn't know any better (and most of his audience don't), think that thousands of acres of corn and wheat, vast herds of fat cattle all ready for the butcher, mowers, two-horse sulky plows, self-binding reapers, and all the improved agricultural implements of modern times, spring up spontaneously out of the "fertile soil," and all the tenderfoot from the East has to do is to gather them in. The sons of the men that this romancer from the far West played with years ago swallow it all, and as a result, many of them "go West to grow up with the country," or be blown away by a tornado, frozen to death in a blizzard, or burned out by a prairie fire, just as it happens.

Now, I haven't a thing against the West. I like it, because some of the happiest years of my life were passed there, and it will always be "home" to me. But my love for my western home does not blind me to the fact that any farm in New England which was ever worth working at all, is to-day ready to yield a good living, and more, too, to any man who knows how to manage it and is not afraid of hard work; and that, too, without any more of the hard work and not so many of the privations as fall to the lot of the homesteader in the far West.

Writing from Colorado, a sensible eastern farmer says: "The poor man cannot build reservoirs for irrigating, and many must work by the day to live this winter. It is so in western Kansas and Nebraska. The rich are all right anywhere, but the poor man has a better show in the eastern states than he has here."

The fact is, eastern farmers generally overlook the advantages and opportunities which they have right at home, and which the homesteader in the West cannot have until after years of toil and privation. The hill-town farmers are not awake and alive to their opportunities for money-making. There is a mine of wealth at their very doors, if they will but work it. Their farms are the best places on earth for poultry raising, and they are within reach of good, year-round markets for eggs and poultry of all kinds, and yet they sit down, whine about "tariffs" and "western competition," while our cities and manufacturing villages are calling for the fresh eggs, and the chickens and the turkeys that could be raised on the "worn-out" soil of New England. Think of fresh eggs selling, as they did in Boston last winter, for anywhere from 40 to 60 cents a dozen, while farmers back within three hours ride (by rail) of Boston were sitting around the stove in the country store lamenting because the New England farmer could not compete with the West in raising corn, wheat and hogs. Looks well, does it not?

"If ye be men," brace up! Get some hens and go to work. Fresh eggs and prime poultry are staple articles, always in demand at paying prices; and the returns begin to come in soon after you get started, and keep on coming if you manage right. There is not a farm in all New England where anywhere from $100 to $1,000 worth of poultry and eggs cannot be raised yearly, and two thirds of it can be made clear profit. If you don't believe it, try it, and you will be convinced by the logic of facts—and *dollars.*

And you young man, and middle-aged man, and elderly man who live in the city and want to live on a farm, and have a few hundred or a thousand or two dollars to put in a farm, and you young man who went West a few years ago, and have worked harder ever since than you ever did before, and haven't got ahead in worldly goods; and you who want the best location for a poultry farm, go East—even unto the hill towns—and see what chances New England has to offer. Many of the "abandoned farms" back in the lovely hill towns have good buildings on them, and can be bought for a "song," almost. You won't find the "fertile soil" of the West, and you won't have the chance to "grow up with the country," as you would out there; but you won't be "a thousand miles from anywhere." You will be within reach of good schools, churches, good markets, and right among good neighbors—very substantial advantages, as you will find. And if you want to raise poultry (and you will when you look into the possibilities of the business), you will find that you are right in "the best location."

Yes, New England is all right for anything, but most especially for poultry raising.—*Fanny Field, in Farm-Poultry.*

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

HEWITT'S BROODER.

Mr. E. S. Hewitt, of Wisconsin, has had in use a brooder of his own design which he presents for the benefit of our readers. To make it so plain that any one can make it, we give quite a number of illustrations, which take up considerable space, but which, however, is necessary, the value conferred by presenting our readers with the brooder in detail, we trust, compensating them for the space appropriated.

Mr. Hewitt thus describes the brooder: "It is no cheap box contrivance. My claims in its favor are that the system of smoke-pipes inside the water-tank will give the greatest amount of heat with the least oil, and there is a constant supply of moisture. The sand floor does not become too warm, thus causing leg weakness, and the chicks will sit under the brooding-board with their bodies in a temperature of 100 degrees, with their heads sticking out from under it enjoying the air at 85 degrees, and there is no crowding, no sweating, no bowel disease, no excessive thirst, no overheating and no chilling. There is no cold corner nor hot end, and all parts are uniform.

"The inside should be covered with muslin and painted, and the nearer airtight the brooder is made, the better work it will do. I never use the brooders together, but use each one separately, and in the coldest weather I have never had to use anything larger than a No. 2 burner on my lamp."

The brooder is made like a trunk, and is 48 inches long, 24 inches wide and 12 inches deep, outside.

Fig. 1 shows the back view of the brooder, with the lamp-box, the platform being dropped, glass being represented by G G G G, etc.

Fig. 2 shows the brooder open for cleaning, D being the smoke-pipe, and the other letters explained below.

Fig. 3 is a front view of brooder, the platform (or little yard) being raised up, and is a flat-top brooder, for indoors.

Fig. 4 is the same, but has a shed top, being an outdoor brooder.

Fig. 5 is the bottom, showing the trough for water-tank, the trough being in the center, being 4 inches deep and 6 inches wide, the ends, K K, being of tin.

Fig. 6 shows the position of the smoke-pipe, D D, inside the water-tank.

Fig. 7 is the water-tank, made of galvanized iron. It is 46 inches long, 4 inches deep and 5 inches wide. Two inches from each end, on the top, are one-inch pipes, A A, each 4 inches long, for filling the tank and supplying moisture to the brooder.

Fig. 8. The smoke-pipe is 46½ inches long and 1 inch in diameter, and is connected at the center with a 2-inch pipe, C, 4 inches long. The smoke-pipe is of galvanized iron, and is soldered inside the water-tank at B B and C. Before the ends of the tank are put on, the smoke-pipe is placed on the inside, with lamp-pipe, C, extending down through a 2-inch hole in the center of the underside of the tank, as shown in Fig. 6.

Fig. 9 is the brooding-board. It is 40 inches long, 6 inches wide and 1 inch thick, with the underside covered *thickly* with cut flannel. Make an inch hole 8 inches from each end, M M, put the thermometer, N, in the center of the board, with the bulb on the underside, and pack around it with cotton, so that the thermometer will fit tight. The ventilators, V V, are 1 inch in diameter and 24 inches long. Slide them down through 1-inch holes in the top of the brooder and through the holes in each end of the brooding-board, so that when the cover of the brooder is raised the brooding-board will be lifted with it, as shown in Fig. 2.

Fig. 10, the sand-tray, is made of half-inch lumber, and is 46 inches long, 22 inches wide and 2 inches deep, with pipes, A A, 1¼ inches in diameter, 3 inches long and placed 2 inches from each end, through which the water-pipes, A A, on the tank, Fig. 7, will run. The fresh-air pipes, E E E, are 1½ inches in diameter and 2 inches long, through which heat is carried from the tank to the brooding-board. The tray should be raised from the bottom of the brooder one inch by sliding the brooding-board up or down the ventilators, as it can be adjusted for chicks of any size. The sand-tray must be filled nearly full. When the thermometer records 100 degrees the brooder proper (except under the brooding-board) will be 85 degrees.

There is no patent on this brooder, it being published for the benefit of those who may wish to make them for their own use.

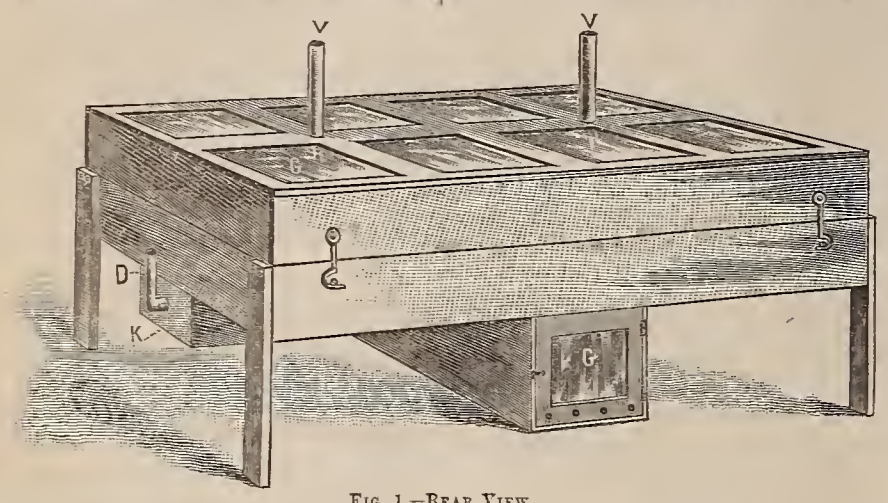


Fig. 1.—Rear View.

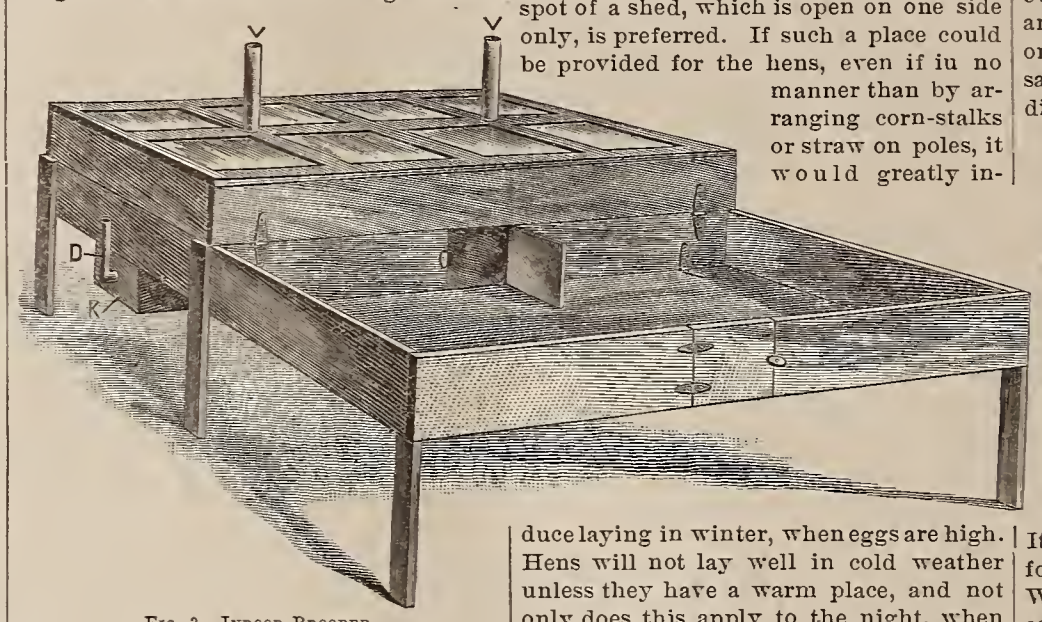


Fig. 3.—Indoor Brooder.

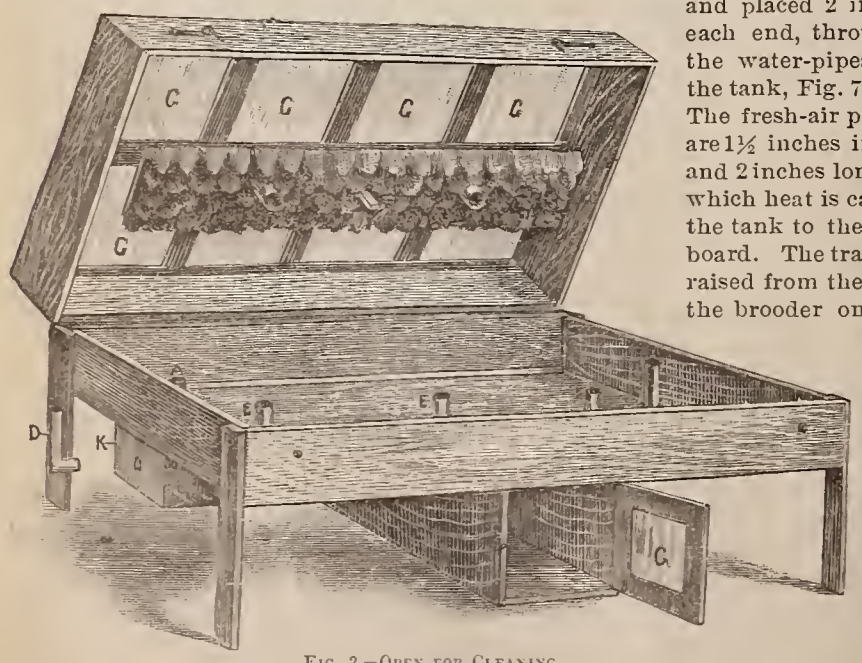


Fig. 2.—Open for Cleaning.

SELL OFF THE GEESE.

Geese are now well up in price, and it would not be a mistake to sell the surplus. Keep the old geese for raising the goslings, and pair them, as they thrive better in properly mated flocks. Fatten the younger ones, kill and dress them, and ship in light boxes. Geese that are not intended to be retained for breeding become expensive in winter, as but little can be then picked up, and they are very voracious. In summer, however, it costs but little to keep geese. The flock should always be reduced to the minimum on the approach of winter.

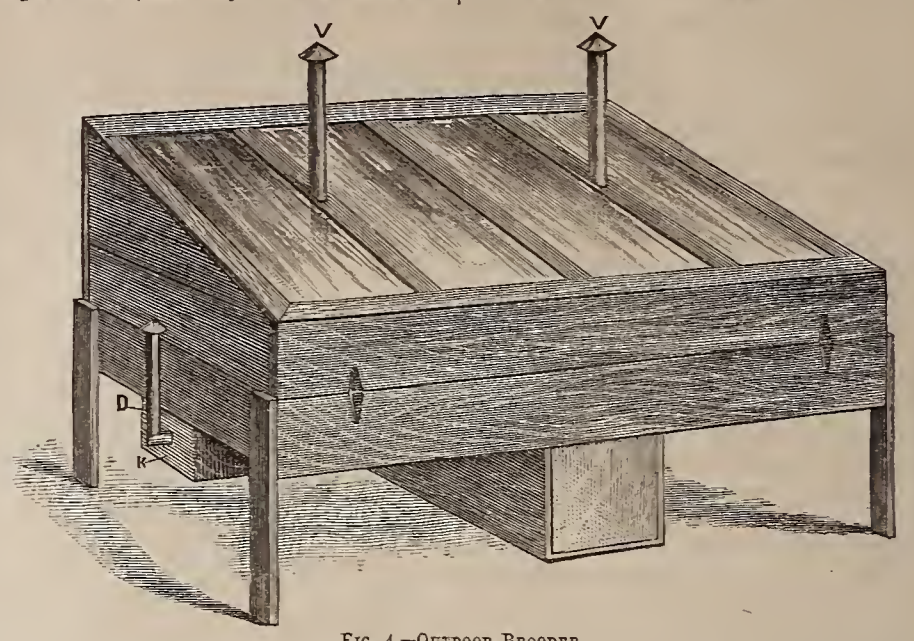


Fig. 4.—Outdoor Brooder.

SUNLIGHT IN WINTER.

The hens will always seek the warmth of the sun on a cold day, and especially if there is a high wind, as they are easily affected by cold draughts. The sunny spot of a shed, which is open on one side only, is preferred. If such a place could be provided for the hens, even if in no manner than by arranging corn-stalks or straw on poles, it would greatly induce laying in winter, when eggs are high. Hens will not lay well in cold weather unless they have a warm place, and not only does this apply to the night, when they are on the roost, but during the day also. An open shed, and the warmth of the sun pouring down on the hens, will induce them to dust and scratch, exercising themselves briskly, which in turn promotes the appetite and aids digestion. To keep hens in a cold poultry-house, where the sunlight gets in only during a portion of the day, while the hens are chilled until the sun returns the following day, is to call for a large amount of food in order to promote bodily warmth, while the number of eggs secured will be small, but with plenty of light and warmth there will be health and a regular supply of eggs.

HOW TO DRESS DUCKS FOR MARKET.

Ducks are killed by hanging them head downward, the feet caught in a loop of cord, and stuck in the roof of the mouth. While dying, the feathers are quickly pulled, as many being plucked as possible before the duck is dead. It is then passed to an assistant, who proceeds to pluck the soft feathers and pin-feathers, until the carcass is clean. This is a very tedious operation, and some kill the duck, strip away the heavy feathers and wrap it in a large towel that has been dipped in boiling water, allowing it to so remain for half an hour, when the feathers will easily come out. Beginners, however, should experiment with one duck in that manner, as there is a little practice required to learn just the right time to remove the cloth, etc. When all the feathers are off, and the carcass has been dry-picked of all the pin-feathers, it is then dropped into ice-cold water in order to remove the animal heat, and when cold the carcasses are hung up to drain and dry. They are then packed in clean boxes or barrels and shipped by express.

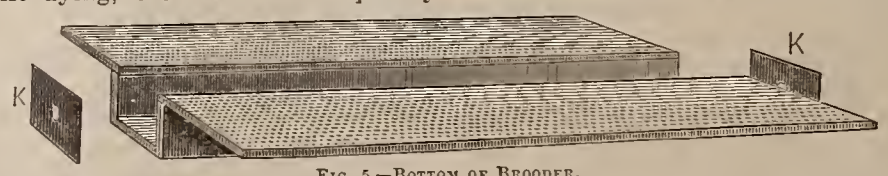


Fig. 5.—Bottom of Brooder.

SALT NECESSARY FOR POULTRY.

The food should be seasoned with salt the same as is done for animals at times, as salt is necessary for poultry, also. It is well known that salt has killed fowls, but only when it has been given to excess, such as allowing the hens to help themselves from a lot of brine from the fish-barrel, or from the rock salt placed where stock can use it. The fact that fowls will eat lumps of rock salt is alone sufficient evidence that they require that substance, and it should be given in their food. It is one of the ingredients of the eggs, and salt is a substance required to properly digest the food.

TUMORS AND SKIN AFFECTIONS.

Tumors, warts, sores and affections of the skin are as peculiar to fowls as to human individuals, and come from the same causes, being also as difficult to cure. There are those who attempt to make cures of such cases, which is wrong, as such fowls should be destroyed.

Scrofula is liable to exist as a disease in a flock, and to permit such birds to exist is to incur a liability of having the disease transmitted to succeeding generations, as well as to become contagious. It is cheaper and better to procure other fowls, first destroying those in the yards. When tumors appear, they indicate a diseased condition of the fowls, which places them outside of the uses of the farmer.

GIVING MILK TO FOWLS.

When you use skimmed milk or buttermilk, do not fill the vessels so that a portion will remain, but give only as much as the fowls will use at once, cleaning the vessels after the milk is used. What is better, mix the milk with ground grain in place of water, but always use that which is wholesome, and such as you would use for yourself.

LAMENESS IN POULTRY.

During the winter, lameness will often occur, and the following are some of the causes; namely, roosts too high, overfeeding, male very heavy, frosted feet, rheumatism from damp quarters, rapid growth in young fowls and lice in the summer. As a rule, very fat hens that are compelled to jump off a high roost, or that are thrown off, are liable to the difficulty. On the first appearance of lameness, the male should be removed from the flock.

WINTER CLEANING.

Although it is necessary to spade up the yards in summer in order to turn under the filth, this cannot easily be done in winter when the ground is hard and frozen, but it is important that the accumulations of the yard be removed, however,

in order to render the yards habitable. If poultry be given a free range, there will be but little cleaning to be done, except under the roosts; but where the hens are confined, the yards should be scraped over with a hoe and the scrapings added to the

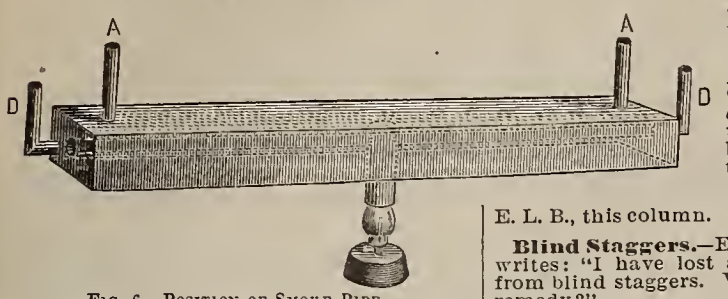


FIG. 6.—POSITION OF SMOKE-PIPE.

manure heap, in order to lessen the risk of disease as well as to enable the fowls to avoid the eating of filth with their food.

CEASING TO LAY.

Should the supply of eggs begin to fall off, it means that your hens are too fat, or they desire a change of food. Substituting one kind of food for another will often show a wonderful effect, because the food given may be lacking in some constituent element essential to the production of eggs. Change the food frequently. There is nothing so good as a variety.

THE TURKEY SEASON.

From the middle of November until January, and especially at Thanksgiving and Christmas, turkeys are in great demand. Last year the supply was not sufficient, and those having them for sale

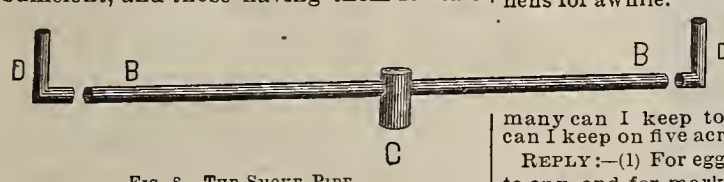


FIG. 8.—THE SMOKE-PIPE.

will probably secure good prices this season. The best way to make a profit on turkeys is to fatten them well, thus not only adding to the weight but also to the price. Two cents more per pound on a turkey will pay all the expressage and commissions.

CHARCOAL, OR ITS SUBSTITUTE.

Pure charcoal, or the charred wood from the stove, when fresh, is an excellent aid in arresting bowel complaints, and is both simple and harmless. Where the hens have not had a variety, parched grain, nearly burnt, affords an agreeable change and serves nearly the same purpose as charcoal. Oats, corn, wheat, or even bran, will be readily eaten by hens when they have been regularly fed on a sameness of diet, and such food will greatly aid in arresting diarrhœa, or other bowel disorders.

NON-SITTERS THAT INCUBATE.

Very frequently it will be noticed that a hen of the Leghorn (or other non-sitting) breed becomes broody, and persists in hatching a few chicks. As a rule, this happens only when such hens are fat.

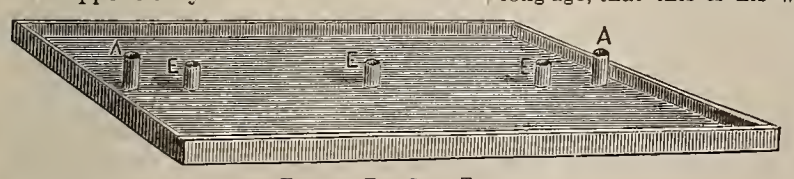


FIG. 10.—THE SAND-TRAY.

As long as they do not become very fat, they will seldom offer to sit, but all hens will begin to incubate when they become fat, and hence, when you find your hens clucking, and showing a desire to remain on the nest, it indicates that you have been feeding them well, and that they are not in good laying condition. To test this matter, examine all broody hens, and our opinion is that you will be convinced that the feeding has something to do with the inclination to sit.

INQUIRIES ANSWERED.

Probably Cholera.—Miss E. W., Sunnyside, Pa., writes: "My chickens, botb old aud young, are dying. Can you give the cause?"

REPLY:—As you give no symptoms, we suppose it is cholera. Add a teaspoonful of liquid carbolic acid to one aud a half quarts of water, and give no other water to drink.

Fowls too Fat.—M. A. B., Dot, Wash., writes: "My fowls seem to suddenly lose the use of their limbs, tumble over, but recover. What is tbe cause?"

REPLY:—See reply to E. L. B., this column.

Blind Staggers.—E. L. B., Clark's Gap, Va., writes: "I have lost a number of chickens from blind staggers. What is the cause and remedy?"

REPLY:—Due to high feeding, causing undue pressure of blood to the brain. Reduce the grain food.

Sore Head.—A. W. H., Paris, Texas, writes: "I have lost quite a number of chickens with sore head, or warts. Please give a remedy."

REPLY:—Probably due to a parasite, and is not uncommon in the Soutb. Anoint once a day with a mixture of one part cedar oil, one part spirits of turpentine and three parts sweet oil.

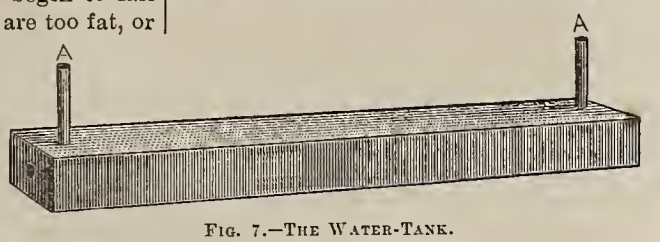


FIG. 7.—THE WATER-TANK.

Result of High Feeding.—Mrs. E. V. J., Geneva, Neb., writes: "My fowls die with an uuknown disease. Tbey become lame and soou die."

REPLY:—They are probably fat and the roost is higb. Remove tbe male from the hens for awhile.

The Best Breed.—Mrs. A. M. P., Oregon City, Oregou, writes: (1) "Whicb breed is best for profit? (2) How many can I keep together? (3) How many can I keep on five acres of land?"

REPLY:—(1) For eggs, the Leghorns are equal to any, and for market, the Plymoutb Rocks or Wyandottes. (2) Ahout twenty-five are sufficient. (3) An acre is estimated to accommodate about 100 fowls.

Ducks in Winter.—J. R. G., Brownsville, Tenn., writes: (1) "Is it advisable to allow ducks to stay out at night in winter, or sbould they be sheltered? (2) I am compelled to keep my fowls in a yard wbere tbere is no grass? How should tbey be fed, and how often should bran be fed? (3) How sbould a pig be fed, also?"

REPLY:—(1) In your climate, an open shed, covered on tbe floor with straw will answer.

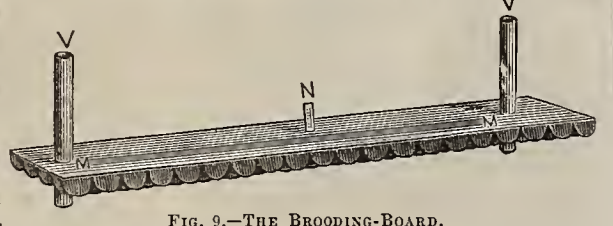


FIG. 9.—THE BROODING-BOARD.

(2) Simply feed a variety, giving cut clover, cabbage, or any bulky food, allowing bran once a day. Be careful not to get hens too fat. (3) The pig should be fed anytbing it will eat, especially scalded, chopped clover, with a bran mash twice a day.

CORRESPONDENCE.

MOISTURE IN THE NEST.—I would like to add my mite to tbe paper. There are some inquiries concerning chicks dying iu the shells. This is no invention of mine, but I intend to try it. An old gentleman told me, not long ago, that this is his way of remedying that evil: First, he puts a piece of sod in the box for the hen to sit iu, and then puts tbe eggs on top of it, next some shavings around them, and also sprinkles the eggs three or four times a week with lukewarm water. That and the sod helps to rot the shell, and be never knew it to fail. JENNIE K.

A REMARKABLE OFFER.

For several years a well known Boston business house has made persons keeping poultry, *few or many*, remarkable offers of premiums payable in gold, some as high as fifty dollars to the first and not less than five dollars to any winner of a premium. Tbe best thing about those offers, was that the premiums have always been promptly paid as agreed, in gold coin. Fifty dollar premiums do not "grow on every bush," as tbe old saying is, and we bave no douht to many who competed for them, the amount received came in handy to belp pay tbe necessary bills of a hard winter, or if not, buy some luxury that the family absolutely needed, but otberwise could not afford. The same firm, I. S. Johnson & Co., 22 Custom Honse St., Boston, Mass., authorize us to state that tbey have prepared an offer of similar premiums tbis year, witb one very important improvement and that is, so that the first winner stands a fair chance with others of getting one hundred and fifty dollars in gold premiums. Why! that is as good as fifty dollars per month for the tbree winter months. It's worth tryIng for any way. Johnson & Co. will send full particulars free to any person sending them their address on a postal card. These premium offers are made in connection with the use of Sheridan's Condition Powders to make hens lay.

Do not fail to mention this paper when you write to advertisers.

Our Fireside.

RUE.

She planted in her garden bed
The quaintest blossoms, gold and red;
  And then she planted rue.
So every year the little maid
Among her nodding neighbors played,
  And passing fair she grew.

Ah! that was very long ago;
The fashions change in flowers, you know,
  As well as frocks, and fret
Us till we hide them far apart;
So 'tis not strange that in her *heart*
  She's planted rue—regret.

—*Harper's Weekly.*

On Bohemia's Border.

BY DOROTHY LUNDT.

CHAPTER III.

He was so bewildered and so shocked by her passionate, accusing words, and yet more by her haggard, miserable face, that there came a sort of dizziness upon him, and he could not clearly see, for the moment, what was the penciled message on the card he had taken from her. But as his eyes cleared and his hand steadied itself, he saw that the curt communication said merely this: "Sincerest regrets that a sudden start for Europe makes our proposed trip impossible." "P. P. C." was scribbled below, in a corner of the card, and the engraved name read, as the doctor had known it would read, "Mr. Archester Caird."

He passed his hand across his forehead after he had laid back the card on the table's edge. He felt as if some evil dream had fallen upon him, there in full, every-day daylight, and as if there could be nothing to do but to wait and wake. But there stood Helen Dowlas before him, with her set, white face, and her eyes, that at once challenged and pleaded with him for help and for counsel. And he pulled himself together with a mighty effort, to recall the reason and good sense that had been scattered to the winds by this strange and utterly implacable thing.

He brought a chair and would have forced Helen to seat herself; but she waved it impatiently aside, and began to pace up and down, hurriedly and nervously; and after a moment or two she paused before him, as he stood with one hand behind him on the table's edge, and said: "Well?" Only that, and he answered her as if she had said many things.

"I don't understand it, Nell. It is all so sudden and—so perfectly impossible. Was that every word that came—that card and its message?"

"Every word." She moved toward the table and lifted an envelope which had lain under the mound of roses. "The card was in this envelope, and sealed. You see that the envelope has no address whatever; of course, the florist's tag on the box made sure it was for Lois. This envelope was inside the cover of the box. You see," and she held it up before him, "it has a stamp upon it. It was cruel carelessness for him not to have put the card into another envelope, after he had changed his mind."

"Changed his mind?" The doctor repeated the words automatically, and staring at the envelope, on whose blank surface there was an uncancelled postage stamp.

"Yes, yes, can't you see?" she said, with angry impatience. "He put a stamp on it; he meant to send the card by mail, and then it occurred to him," paraphrasing, with a bitter laugh, Archie's humble and honest little plea on Mrs. McCossatt's birthday, "that if he couldn't 'call upon his heart' in this unpleasant emergency, he could at least 'call upon his purse,' and soften the brutality of it all in flowers. And he carried out the idea with a princely lavishness, did he not?" she cried, scornfully, and pointed to the sweet and shining heap of roses, whose fragile petals, as they lay there uncared for, were shrinking in the intense June heat. "But was it not cruel to send that stamped envelope, that Lois might not fail to see what his first thought had been? When it would have taken but just a moment, merely, to have changed the card to another envelope? I find that insulting little carelessness harder to forgive than all the rest," cried Helen Dowlas.

"But it is not as it seems to be," Max Ainsworth said, and the sound of his own words seemed to reassure him, as if another had spoken them. "It is all some horrible blunder. There is something behind it all that we do not know. Caird is no such coward and cad as to leave Lois like this, after all that has been between them; when we all know, and he meant us to know that his invitation to Harvard to-morrow meant her presentation to his world, under Mrs. Griswold's chaperonage, as his betrothed wife! It is all a wretched mistake. If he has gone to Europe, it is because a matter of life and death called him there. I will know how it is; I will see his cousin Carroll."

"You'll *not*," she blazed out upon him. "Max Ainsworth, I have earned the right, in following your 'better judgment' to the shipwreck of my girl's happiness, to dictate to you now! You shall not add contempt for us to his family's triumph over us. They shall not say that we are so persistent in our pursuit of him that we set you to beg him back to us, after he has thrown us off like that," and she held up the card before him in her angry, trembling hand. "If he had had more to say to Lois, could he not have said it? If he had been called to Europe, as you say, on a matter of life and death, how long would it have taken to write it so, and to say, 'Wait for me, Lois, I love you?' Is Archester Caird a fool, that he should not have sent such a message, instead of this curt, cool, final leave-taking, so formal, so slighting—" Her voice broke, in her anger and her pain, and it was only after a pause that she went on. "Oh, it is all clear enough, Max. It only went so much, so miserably farther than I thought it would go before the end. He had never mentioned Lois to his Aunt Harriet. She doubtless knew he was amusing himself in Bohemia, and what harm in that? But when he came to tell her that he had asked a girl who lived in an attic on Roscommon Place, a girl who, with her sister, works every day to earn her living, whose friends are actors and painters, and all such

shady, unfashionable creatures—that he had asked such a girl as this to meet his friends, under the protection and approval of his nearest kinswoman—then Mrs. Griswold felt that matters were getting absurdly serious, and it was quite time for drastic interference. At such a stage of things, explanations were awkward and gradual withdrawal impossible, and a summer journey to Europe the easiest way out of the complications into which these Bohemian adventuresses had led her poor, stupid boy."

"But is Archie Caird a puppet, that he should put his honor in pawn to such a scheme as this? And do you mean me to believe that his love for Lois was so poor a thing—"

She held up before him the card, with those few, cold words, in the handwriting which both recognized beyond a doubt as Archie Caird's, and the doctor's words died on his lips. It was all so monstrous, so cruel and cowardly and impossible, and yet was true.

He would not have it so. But the morrow brought no letter of explanation, as the doctor, catching at that straw of hope, had prophesied, and in the morrow's journal, among the names of the Boston passengers on the steamship *Kaiser*, sailing from New York on the previous day, was the name of Archester Caird. What other thing was there to think or say, but that Helen's intuition had been right, his judgment wrong, and the lad he had dreamed would open for Lois the door to happiness, had closed on her the door of life.

The door of life. For that, to the eyes that watched her, as the summer burned itself onward from week to week, grew to be the unworded fear of their lives. She was very quiet, and in the main, very cheerful; not her sister, not even Janet McCossatt, whose great, heart-broken, patient love followed the girl through her almost every hour, waking or sleeping, had ever seen her weep. She had tended the roses which had come to her that June day, bringing to her the death-warrant of her innocent happiness; the roses which Helen, in her passion, would have flung out upon the dust-heap, until their last faded petal had dropped and died.

She gave herself to her work, neglected a little, through those bright, spring days, with an eager devotion she had never shown before, and it was Helen's closest hope that ambition might cast out from Lois' heart the sorrow of love. But when Royd, with many drolleries of congratulation, brought her that famous critique from the *Dictator*, which, in reviewing her exquisite little series of etchings, which she had named "The Sea-Fog's Secret," had called her "the girl Durer," she only smiled a little, wearily; and they saw that the praise was no more to her than is an autumn leaf flung in a sinking stream.

She never stole from the duties or the interests of the household life, one hour for selfish brooding or sorrow. She met, with a very sweet and sincere and earnest fortitude, all the thousand efforts of the fireside friends to lure her to forgetfulness of the pain which none of them, in their chivalrous tenderness, would seem to know was hers to bear. In Bohemia much is known where little is said, and no one asked explanation of Lois' pale and wistful face, before setting themselves to bring back its color again.

"Matter with her?" said Polly Shearman once, in answer to some explanatory suggestion of Royd's. "Matter? My dear friend, I sometimes used to glance in my mirror during the vicissitudes of my own lost youth, and when a girl has Lois' look, I don't need explanations."

Polly was fond, at twenty-five, of sentimentally referring to her lost youth. She was taking a summer rest just then, after coining unlimited ducats for her fortunate manager, by her delicious acting as the little German princess, in "Heidelburg Days." She practically made her home in the old studio, from the moment she discovered how sorely sunshine was needed there; and in the sunshine she had the secret of, it seemed that the grimmest cloud must melt.

So Mark Royd said; but Mark's sentiments toward Polly were no secret in Bohemia, and everyone expected an invitation to the wedding, when they could succeed in finding a place in the same dramatic company for a season or two.

"It isn't Cupid, it's the manager who regulates engagements in our profession," said practical Polly. And so the wedding day was still unset, and Polly brought her sunny face day by day to the shadowy old studio, and with her endless droll stories of misadventures "on the road" and her quaint philosophizing, kept alive something, at least, of mirth in the atmosphere that seemed to grow shadowier every day.

For they could not disguise to themselves, these frank and staunch friends, what was coming to Lois. It was Janet McCossatt who first gave words to what was in all their hearts. Lois had been coaxed out by wise Polly one hot, July dusk, to watch the moon rise over the Public Garden, and "play Italy, as we used to dear," as she wheedlingly said. As her soft, slow step died away upon the stairs, Janet gave a sort of a cry, as if of a pent-up sorrow that would no longer down; and had burst into a very passion of sobbing and wailing.

"For 'tis 'er mother I see before me, every day. 'Er mother before 'er, that wasted like a lily in the sun; because 'er 'eart's desire was gone, and she starved without it as common folk starve without food! She's going as 'er mother went, my baby, and you none of you can keep her!" Janet cried, and then fled away from them all, her apron over her head, as they sat dumb and wretched, beside the fireless hearth.

Helen lifted her heavy eyes—she looked like a woman of forty in those days, poor Helen. It seemed as if her very life poured out toward Lois, only to lie uselessly, like spilt water—to Max Ainsworth's face.

"Max," she said, "is that true? You are a doctor, and you must know. Is what Janet has said true, and is Lois going away from us because her heart's desire is lost?"

"How can I answer you, Nell?" he said, hoarsely. "I have told you that she has no trouble that medicine can reach. You know how I have studied and watched her, and I tell you that there is nothing organically wrong with her, nothing, from head to foot. Yet that was what my father said of her mother. And—you know."

"Max," she cried to him, passionate in her great sorrow and pleading, "is there nothing we can do—nothing but to watch her fade and fail before our eyes? If I could blame her that she does not try to rally herself, to grow strong; but I cannot blame her. She is so brave; she never mopes nor cries; she never stays by herself; she does all that you recommend, all that I suggest. She works until she cannot hold the plate longer in her tired little hand. I cannot bear it! I cannot bear it! It is like a tide, slipping backward from the shore, tiny wave by wave, and one can only stand and watch it as it slips."

But they never stood idly by. To-day and to-morrow there was always something new to try. Now it was a little journey up among the hills, in the hope that the new scene, the fresher air might arrest, though but for a little while, that silent, terrible, outward slipping of the tide. But for the first time Lois made protest against their loving plans for her.

"Let me go back to the old studio, Nell, dear Nell, she said. "My work is there, and I am not happy or at ease anywhere else in the world."

And her sister understood, with a helpless, savage sort of resentment, that it was Archie Caird's presence, though vanished now so long, which made the only atmosphere in which Lois found comfort. His name had never been spoken between them, nor any reference made since that rose-filled June afternoon, to his coming into their lives or his going from them. Lois had read that cold and brief little message that the card brought, once, and only once; and then she had passed the card to her sister and said, with a strange quietness:

"You see, Nell, he has gone away, and it is all over, and—and—we were mistaken. I should thank you so much, Nell, if we need never speak about it again together, in all our lives."

Then she had taken one white rose from the great, wet, fragrant wilderness of flowers, and gone away with her face as white and her eyes all dark and tearless, into her room and closed the door. And the seal she had laid on Helen Dowlas' lips had never been broken; nor had Lois, on her side, ever alluded from afar to this, the heart of her sorrows.

But there came one sultry afternoon in early August, when, all inadvertently, she said a word which loosened the seal of this silence. Royd had been with them for an hour, and had left behind him a great bunch of gold-hearted water-lilies, and as he was going, he had said:

"Nell, you must take Ainsworth in hand, presently, or Philistia will swallow him up forever. Do you know that I've seen him, at nearly the same hour on three consecutive days, coming down the steps of that stately mansion which, so to speak, shelters that fair bud, Miss Emily Westborne?"

"It happens, also, to shelter that gouty bit of ripened fruit—pardon the mixed metaphor—Miss Westborne's papa," Helen answered, lightly. "Max told me the other day that Westborne *pere* promised to be a very lucrative addition to his case-book. So let us charitably suppose that it is not love, but lucre that calls him so often to Philistia."

But when they were alone, Lois had given her sister a strange sort of shock by saying, in her quiet and wistful voice:

"Nell, are we going to lose Max, *too?*"

There was something in the pathos of that last, lightly accented word, that went deep to Helen's heart, and roused a tumult there.

"Oh, my girl!" she cried, have you lost so much that you have lost all faith in honor and manliness and lasting friendship?"

"I do not see," said Lois, and she spoke quite steadily, and as if after long thinking, "why a man forfeits his honor because a friendship grows to be less to him than it was at first. I should not think so of Max, if he were to find his happiness with some beautiful and good

girl of the world, which is after all his world. Only—oh, Nell, how we should miss him," and her indrawn breath was like a sob.

Her sister impetuously opened her lips, with the thought pressing close behind them of the folly of judging by a boyish cowardice, a manly, life-long loyalty; but the crnel helplessness of any speaking held her dumb.

And so the days slipped by, and still the tide moved outward, tiny wave by wave, until there came a day in late August, sodden with heavy rain, and chilled through and through with a raw east wind, when Lois begged that they would forgive her "for being so lazy," and let her lie all day on her cosy couch by the welcome and cheery fire with which Mrs. McCossatt had chased away the chill. Late in the afternoon she fell into a light sleep, aud Max Ainsworth and her sister stood looking down at her, as she lay with the firelight on her soft and wasted hauds, and on the purple shadows uuder her weary eyes.

"Max," Helen said, "I cannot stay here. Will you come out with me, just for a breath of life, just for an hour?"

And leaving Lois in Janet's charge, they went out together onto the wet aud windy Common, and wandered wretchedly about, through the cold rain, up and down its drenched and dusking paths. It was just before they parted, that Dr. Max suddenly took courage to speak out something that for weeks had been in his heart to say to her.

"Nell, it is wonderful to me that you can be so kind and so trustful with me, when your heart is breaking with the sorrow that came to you through my bringing. God knows I meaut it happily—"

She stretched out her hand to him impetuously and warmly.

"Oh, hush, Max dear," she said. "I gave over blaming you long ago. You misjudged Archie Caird, I kuow; but I have done worse, I have misjudged his whole world. Oh, I have thought it all over and over in these miserable weeks, and it is I who have beeu to blame, not you. If I had not held Lois back, in her girlhood, from the world she cared for, if I had let her pass easily and naturally into it, through Mrs. Ripley's great kindness for her, she might have met, long ago, some one who wonld have been what Archie Caird seemed to be, and found her life and happiness. Her life never fitted itself to Bohemia, nor could have mated itself there. You see I admit it, now that it is too late. It was not alone Archie Caird's self that drew her, though I know her heart seemed to spring to him from the first. It was the life she would have shared with him, and which you were always right, Max, in saying was the life that belonged to her. You were right in everything but in your estimate of him, and for that I cannot blame you."

He took her chilled and rain-wet hand in both of his, aud there, on the deserted path—strauge act for undemonstrative Dr. Max—he carried it to his lips and kissed it.

"Nell," he said, huskily, "I believe you have the tenderest and most just heart God ever gave a woman since He made the world."

Twilight brought with it a wild wind, and with every honr of the coming night the storm grew fiercer and the rain more violent. In the studio, Helen drew the curtains close above the glass roof, through which the black weather looked ominously in upon them, and poked the great oak log into a generous blaze. She looked ever and again very auxiously at Lois, as she moved about the room on her housewifely errauds.

The girl had awakened from her sleep with a flush upon her delicate face, which was full of terrors to her sister's anxious fancy. And the light in her eyes and the little, desultory, almost gay little chat she had been keeping up since she woke, had made Heleu more miserably apprehensive than all the palor and silence of the last few weeks.

"Nell," she said at last, with a little, fluttering langh, "dou't look at me as if you thought me delirious; I'm not. I'm not even feverish; see, my hand is quite cool. But I think the storm spirit must have wakened me up with his cries and his singing. I feel as if something had rolled away from my heart; as if something so good and so happy had turned my way. Nell," cried the girl, suddenly, with a thrill in her voice, "what if it should come out all right after all?"

"Dear, I beg of you," her sister cried, impetuously, "do not work yourself up into any wild fancy that will end in miserable disappointment, and leave you more spent and weak than before it came to you. If you could mean by its all coming right, Lois, that you will take heart and courage, and stand on your feet again—that you will give me the chance to make up for all my mistakes toward you; will let me say to Annie Ripley: 'Anna, take my girl; I give her to you at last, and to the life she has always longed for;' If it can come right like this, Lols, then Amen and thank God. But if you mean by its coming right that you have any dream in your heart that Archie Caird will ever come back to you, then put that dream from you uow, and forever and ever! He has gone of his own free will, and in going, he like a coward, broke his spoken pledge, and broke the more sacred pledge he left too long unspoken. And Oh"—cried Helen Dowlas, and all the dumb passion choked to silence in the last weary weeks, found voice in that cry—"if Archester Caird's life were in my hauds, I would look to it that he broke no more hearts, and that I promise you."

Lols had put out both hands as Helen spoke, as if to fend from her some bodily hurt. But she suddenly raised them, as one who would impose silence eveu on herself, the better to listen, and all her face went rosy red. The outer door, far below, closed against the storm, had beeu flung open, with a noise that echoed through all the silent building; aud there came, with the sound of one in most eager haste, a quick step hurrying up the stairs.

"Nell," she cried, "do you know whose step that is?"

[To be continued.]

WHAT A BOY DOES.

He comes out at the frout door, bright faced aud happy. He comes out for no particular reason, save that he wants to be moving about. He is full of physical action, and he must get some of it out of him before bedtime or he won't be fit to sleep. He doesn't know this with his head, but his body kuows it; for, after all, the body does a great deal of its own thinking, independently of what we call consciousness. He stands on the step and looks up and down the street.

He doesn't know what he is looking for. Indeed, he is not looking for anything. He just looks with a sort of undefined hope that he will see something suggestive to him of what to do. He jumps down the steps and goes to the gate, hangs ou it a moment, makes a few sounds with his voice such as nobody but a boy can make, and nobody else would make if he could. They don't meau anything. He makes them because—well, because he is a boy.

As if he had suddenly thought of something to do, he bangs the gate open and rushes dowu the middle of the street, yelling like a young Indian. But he has not suddenly thought of something to do. He has simply done that because he couldn't think of anything to do, and must do something. Then he picks up a stone and fires it at a dog, and criuges and feels sorry if it hits the mark. He doesn't want to hurt the dog. He throws the stone because he and the dog and the stone are there, and it is handy to do so. For a few seconds he stands and looks up into a tree at—nothiug. Then he breaks into a run agaiu, and suddenly sits down on the curbstone as if he had accomplished something aud was content. —*Washington Capital.*

THE VEIL.

The veil has always been an important adjunct to the toilet of a woman, and just now, when lovely woman stoops to folly and looks upon the rouge when it is red, the strip of illusion becomes more than ever a necessity. A veil is a coquetry to a pretty girl, a charity to an ugly one. All the fashion writers to the contrary, the veils with big spots on are not fashionable. In the first place, they are not becoming, for the huge, black spots make you look utterly without a complexion, and because of their closeness to the eyes give them a wandering look, that is anything but piquant. One's eyes should show plainly through a veil, the duty of which may be to tone down the complexion, but is never to do anything but intensify the brightness of the eyes.

The preferred veil is a strip of plain, very fine tulle, either in black, brown, dark scarlet, or a shade that is between a gray and a green. If you want a becoming black veil, however, do not take a plain one, as it will make you look older and bring out every wrinkle, but choose instead one with tiny dots that are far apart. Wear your veil below your nose, and not in such a way that it is supposed to hold a bang in place. And do keep the edges trimmed, for when they are ragged or frayed, they can make you look horribly untidy.

WATCHING THE CLOCK.

As the *Christian Union* says, there is a deal of common sense in this story lately told of Edison, whether he said it or not. A gentleman went to the great electrician with his young sou, who was about to begin work as office boy in a well-known business house. The father asked Edison for a motto, which the boy might take to heart iu his struggle for promotion and success. After a moment's pause, Edison said, laconically, "Never look at the clock!"

Edison meant, we take it, that the man who is constantly afraid he is going to work over time or over hours, doesn't stand a chance of competing with the man who clears up his desk, no matter how long it takes. The carpenter who drops his hammer, uplifted above his head, when the whistle blows, is likely to remaiu a second-class workman all his life. The carpenter who stays fifteen minutes to finish a job is working toward a shop of his own.

BE CAREFUL IN SPEECH.

Carefulness and exactitude in speech are sometimes characterized as affectation and mere pedantry, but say what some people may, it is unquestionably the unfailing mark of culture. No one thoroughly and lovingly acquainted with the literature of his language can regard propriety in its use with contempt. The purity and harmony and rhythm of his native tongue are as precious to him as the perfect rendering and interpretation of music are to the musician; aud to the preservation of the English language in its integrity, it shonld be the duty and pleasure of every individual lover of it to contribute.

Our Household.

AS YOU GO THROUGH LIFE.

Don't look for the flaws as you go through life;
And even when you find them
It is wise and kind to be somewhat blind
And look for the virtue behind them.
For the cloudiest night has a hint of the light
Somewhere in its shadows hiding;
It is better by far to hunt for a star
Than the spots on the snn abiding.

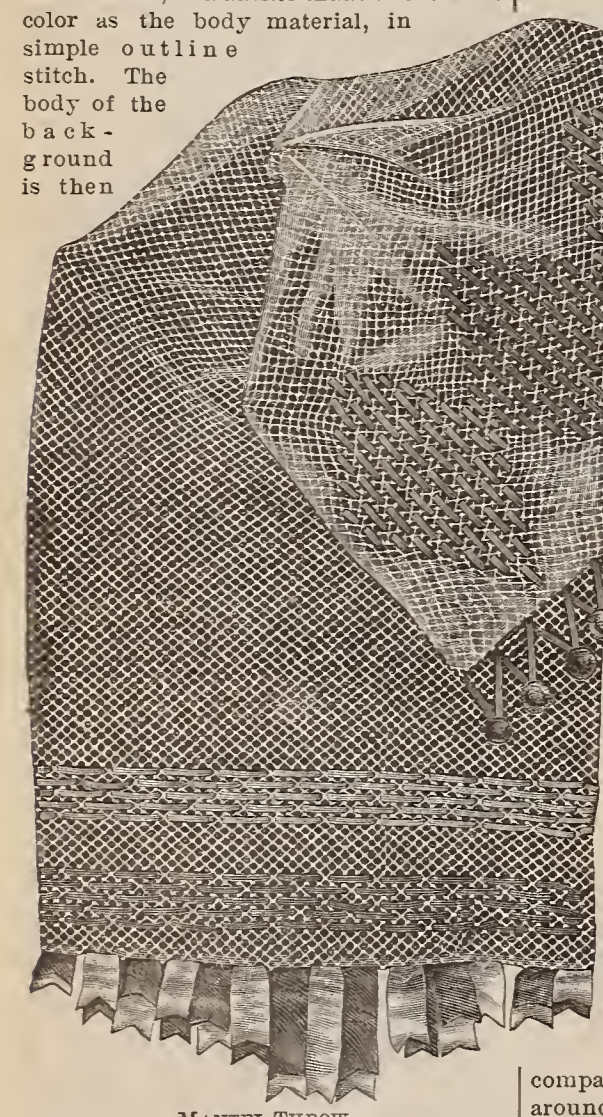
The current of life runs ever away
To the bosom of God's great ocean,
Don't set your force 'gainst the river's course
And think to alter its motion.
Don't waste a curse on the universe—
Remember, it lived before you.
Don't butt at the storm with yonr puny form,
But bend and let it go o'er you.

The world will never adjnst itself
To suit your whim to the letter;
Some things must go wrong your whole life long,
And the sooner you know it the better.
It is folly to fight with the Infinite,
And go under at last in the wrestle;
The wiser man shapes into God's plan
As the water shapes into the vessel.

SUGGESTIONS FOR CHRISTMAS.

CHRISTIE IRVING.

While visiting in a neighboring city, recently, I found a nnmber of nice things to make for Christmas. Sofa-pillows made of a material called English mail-cloth, which comes in various widths, at prices ranging from 65 cents to $1 per yard, and of varions colors. The design is large and very effectively embroidered in Bargarren linen thread, in a darker shade of the same color as the body material, in simple outline stitch. The body of the background is then darned in with one of the same shades. The same effect can be produced upon huckaback toweling, but it comes only in white, and lacks the beauty of color. It is very rapid work, and quite easy.



Mantel-Throw.

An artistic slumber pillow made of chamois skin, delicately tinted with pink, is finished with rich red-brown plush. Etched upon it is the following somnolent sentiment:

O slumber, gentle as the summer air!
Knit up the ravelled sleeve of care;
Unloose the knotted coil of thought
Whene'er this pillowed couch is sought.

Pretty pincushions were made of a very tightly-stuffed cushion of muslin resembling a hassock; this was covered with China silk, with a wide puff around the sides. The top and bottom were of embroidered shirt-bosom linen, done in the Roman cut work, of which we have given samples before this. The two pieces were laced over the puff with cords of silk to match the silk underneath. The stuffed cushion costs 35 cents; the linen cover stamped to embroider, 25 cents. Larger cushions are covered with velvet in the same way, and the top and bottom made of chamois skin, embroidered and cut in the same way. These are used for footstools or sofa-pillows.

Embroidered bed-spreads are new. The material used is the old-fashioned dimity and the Bargarren thread. The soft shades of one color are used, and the designs are large and effective. A honeycomb cloth is used, which comes two yards wide, at $1.50 a yard. This is also nsed for table-covers, with a heavy fringe of the thread mixed with the material ravelled out.

A throw for the corner of a table was made of a whole chamois skin left in its original shape. The edge was cut in snip fringe, and above this was a heavy line in metallic paints. A design of flowers was stamped on, which was outlined in very fine, gold thread; the flowers were washed in with oil paints in very delicate shades, and these were then studded over with iridescent beads in the same colors as the flowers and leaves.

Another, which the illustration will explain, was made of white dress lace, with the designs woven in, of two shades of baby ribbon—old rose and green. One end is finished with the ribbon of the two colors sewed on, the other end with pom-pons in the two colors put on the green ribbon taken across in loops. Another beautiful throw we have not had time to illustrate, is made of white Brnssels net. A piece of the net is cut three quarters of a yard long and half the width; this is hemmed all around with a very narrow hem; the ends are then trimmed with daisies of the net sewed to baby ribbon, and sewed straight on one end and in points on the other. The daisy is a wheel of the material three inches in diameter, the edge turned over and gathered and drawn to the center; it is then pressed between the fingers. The designs in linen, embroidered in silk filo, were numerousand beautiful.

The linen squares for table centers were especially pretty. The silk filo comes in wash colors, and being very soft and fine, lays in the shading very beautifully. One with sunset roses upon it, and the loose petals thrown all over it, was very effective, the shading being as perfect as the natural rose.

Large balls of worsted are made in imitation of fruit, oranges and peaches, and are used as hairpin-receivers. Cut two rounds of pasteboard five inches in diameter, and a hole in the center two inches in diameter. Hold the rings together and wind them tight over and over with the worsted until filled in the center; it mnst be very compact and firm. Cut the worsted all around with a sharp pair of scissors, then tie a string around the center of the worsted between the pasteboards, drawing it very tight. Slip one end of the wire under the string, or a piece of baby ribbon the color of the ball, to hang it up by. Finish at the top with bows of ribbon. If the wire is used, it should be covered with the hollow tubing used in making artificial flowers.

Toilet bottles of quaint shapes are also covered with cut-linen covers, embroidered with silk floss, the bottle being first covered with silk and brought around in a puff where the bottle takes its flaring shape. The covers are finished out with brass rings crocheted with silk the same color as the embroidery on the linen. Ribbon the color of the silk underneath is tied around the neck of the bottle. A cushion and bottles of this description can have as accessories a bureau-scarf of embroidered bolting cloth over yellow, finished at the edge with soft lace, which is now so cheap, a good quality being had for fifteen cents a yard. At the corners place large, yellow bows, or cross bands of yellow ribbons. A hair-receiver of strips of ribbon and lace sewed around a stiff, covered circle of cardboard, and hung by ribbons to the glass. Nothing is prettier to go with this than a brush, comb and hand-mirror with oxydized silver mountings. These have quite superseded the white, celluloid ones.

Another nice gift for the housekeeper is a carving set with oxydized silver handles, the fork tines being silver plated.

Thimble-bags for thimble parties are in high favor. These are made of lengthwise strips of ribbon of different colors sewed together, and then decorated with fancy stitches. This is lined and pockets put on the inside, and are very handy to take for a short afternoon stay with a friend.

A hanging cushion with the sides embroidered on congress canvass and finished around the sides with puffs of silk and long ribbons of the same shade, and trimmed with bows, is a very pretty toilet accessory.

Eye-glass Wiper.—Cut two circular pieces of chamois two and a half inches in diameter, and button-hole stitch the edge of each piece with colored silk. Fasten together at the top with a narrow ribbon bow. On the face of one side the following words may be printed:

The world will never look just right
Unless you keep your glasses bright.

Housewife.—A very pretty device for thimble parties is a dainty affair made of three lengths of No. 4 ribbon—black and yellow. Make the first a quarter of a yard long, the next one an eighth of a yard longer, and the under one another eighth of a yard longer. Place one over the other, and finish at the top with a bow of the ribbon. To the end of the lower one, which should be turned to form points, attach a pair of scissors; to the middle one, a chamois needle-book; the top one, turn the points so the underside of the ribbon comes on top to form a pocket for the thimble.

HOME TOPICS.

Some Recipes.—These recipes, sent to me by a niece, have been tested and proven excellent, and they also have the merit of not being too rich and expensive for common use:

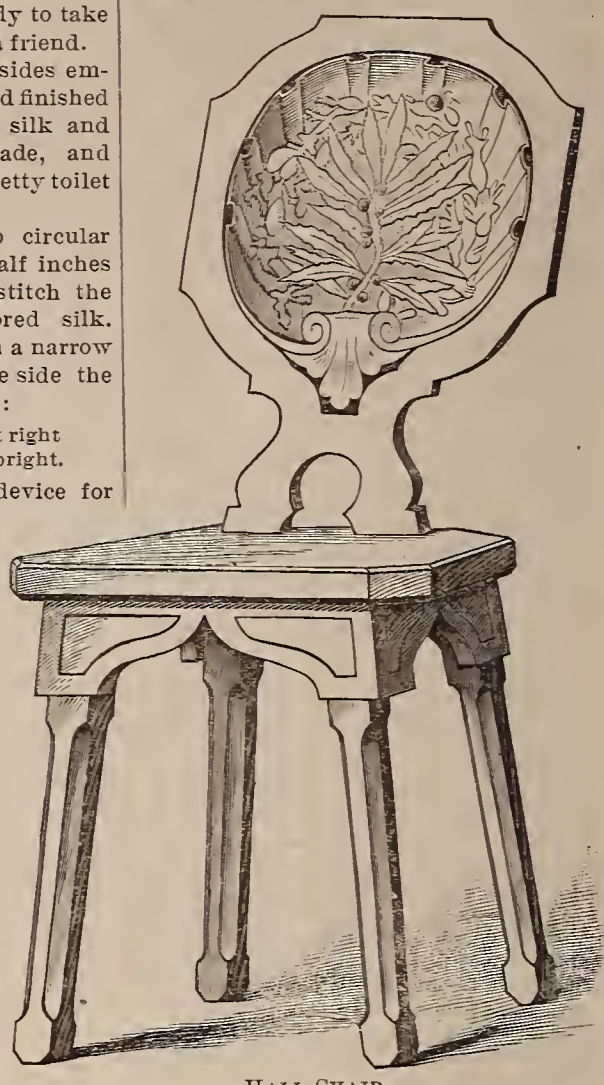
Lemon Pie.—Take one tablespoonful of corn starch, moisten it with a little cold water, then add one cup of boiling water, one cup of sugar, one well-beaten egg, one tablespoonful of butter and the juice and grated rind of one lemon. Bake in one crust. Take the white of one egg, beat it to a stiff froth, add one half tablespoonful of powdered sugar, spread it over the pie when done, and return it to the oven long enough to brown it slightly. This recipe makes one pie.

Cream Pie.—Beat together thoroughly the white of one egg, half a teacupful of sugar and one tablespoonful of flour; then add one teacupful of rich milk, or part cream if you have it; bake with one crust, and grate nutmeg over the top.

Excellent Soft Gingerbread.—One and a half cups of New Orleans molasses, half a cup of brown sugar, half a cup of butter, half a cup of sweet milk, one teaspoonful of soda, one teaspoonful of allspice, half a teaspoonful of ginger. Mix thoroughly and add three cups of sifted flour. Bake in shallow pans. Be careful not to have the oven too hot, as all molasses cakes burn easily.

Nuts.—Many persons have found nuts hard to digest, but it is nearly always because they are not chewed fine enough, or because eaten between meals. The oily matter of nuts is in the form of cream, and if reduced to the consistency of cream they are no harder to digest. They should be eaten at meal time, however, and not between meals or just before going to bed. Pretzels and nuts are nice eaten together.

Getting Ready to be Happy.—Too many of us are looking forward to happiness in the future years instead of getting all the enjoyment possible out of the present. It is well to remember that the time never will come, in this world, when we shall have everything we want, just where and when we want it. The only way to be happy is to enjoy all we have to the utmost, as we go along. It is right to lay up for old age in youth; right to prepare for a rainy day, but it is not right to bend all our energies to this end, and put off until the futnre the happiness we might enjoy every day. It is far too common to see people working and saving, denying themselves all recreation and many comforts to lay up money to buy more land, to build a larger and finer house, or to save for their children, thinking that when they have accomplished this they will be happy and begin to take comfort. The hoped-for point may never be attained, or if it is, sickness or death may have come first, and the dear ones whom we expected to be happy with may be gone forever.



Hall Chair.

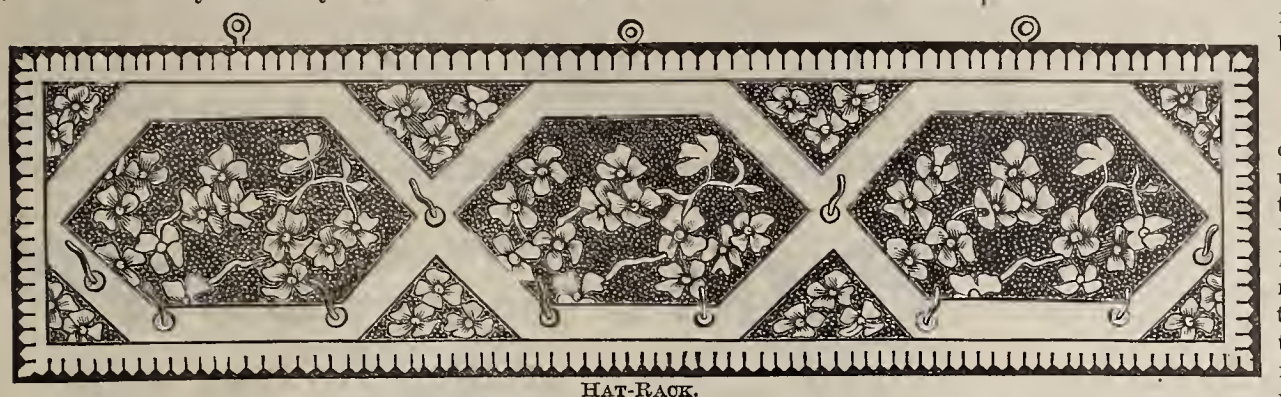
How much better to use some of the good things of life as we go along; to make our humble homes as cheery and bright as possible now, instead of waiting for a better house. Don't starve to-day, either body, mind or soul, thinking that you will riot to-morrow. Don't hoard and scrimp through all the best years of your life, that you may be generous in your wills. Life is uncertain, and it is better to make your children happy while they are under the home roof; to call to that home

Hall Chair.

every agency that will make their lives sweeter and better, than to deny them these that you may leave them a large bank account when you are gone.

Don't keep the parlor shut up and live in the kitchen, unless you want the boys and girls to be anxious to leave you. Take time to read, to rest and to enjoy the society of friends. Especially take time to enjoy the companionship of your children. It will only be a few years at best that they will be with you, and these ought to be years of happiness to both you and them. If we are ever happy in this life we must enjoy what every day brings us. We must be grateful and glad for all the good that comes into our lives, and patiently bear our trials, believing that all, if rightly used, will fit us for the enjoyment of perfect happiness hereafter.

MAIDA McL.



HAT-RACK.

INEXPENSIVE HALL FURNITURE.

This furniture is not only inexpensive, but may be made very elegant, if one has picked up some skill with mallet and chisel. The hall is generally a part of the house which costs us much money and much labor, but it is so convenient, and gives to the house such an air of elegant seclusion, that we are willing to pay all it costs in money and trouble.

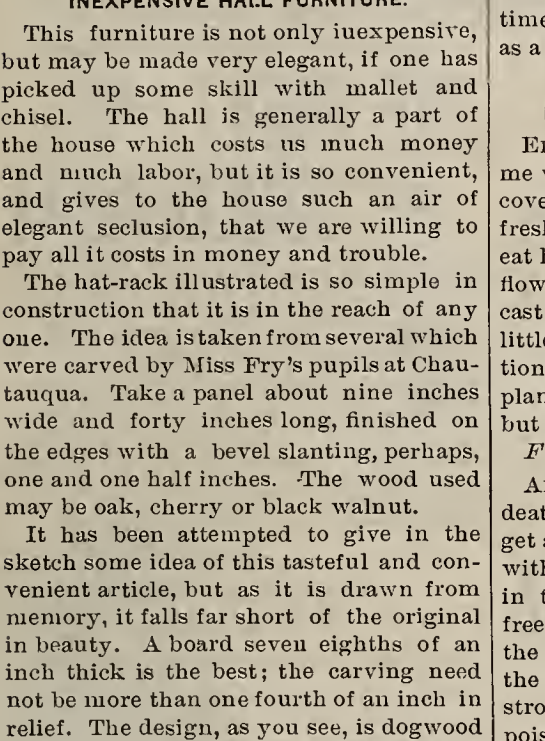
The hat-rack illustrated is so simple in construction that it is in the reach of any one. The idea is taken from several which were carved by Miss Fry's pupils at Chautauqua. Take a panel about nine inches wide and forty inches long, finished on the edges with a bevel slanting, perhaps, one and one half inches. The wood used may be oak, cherry or black walnut.

It has been attempted to give in the sketch some idea of this tasteful and convenient article, but as it is drawn from memory, it falls far short of the original in beauty. A board seven eighths of an inch thick is the best; the carving need not be more than one fourth of an inch in relief. The design, as you see, is dogwood blossoms, each of the three divisions being the same. If desired, a mirror can fill the middle place. The bevel is decorated with a simple conventional design, plainly indicated in the sketch. There are ten brass hooks at intervals on the lower side of the rack, and at the top three brass rings, by which it hangs on the wall.

The cash expense need not exceed two dollars, but the patience and industry necessary to make the carving satisfactory, will cause this article to be very valuable when finished. Those persons who prefer a polish on carved wood, will do well to have a mechanic apply what is known as hard-oil finish.

The two hall chairs given were designed by C. M. Jenckes. They are of the dimensions of an ordinary chair, say eighteen inches from the floor to the seat, and about the same measurement from the seat to the top of the back. Probably the one decorated with ivy will find more admirers. It is the simplest in carving. If you observe the other one closely, you will see that the foundation of the carving represents a shell. On it are arranged sea-weed and a branch of some plant which is of a kindred nature. The straight legs are not so agreeable to one's taste as the criss-cross construction of the chair with the ivy wreath. The round openings, in the places where they occur, also give a pleasing effect, and the cross-piece, held in place by a peg at each end, is an example of old-time construction which has always won favor from persons who value good, honest, durable furniture. A handy cabinet-maker can make either of these at a small expense. Nature, at any time of year, will provide a wreath of ivy as a model for the carver.

KATE KAUFFMAN.



HANGING PIN-CUSHION.

PYRETHRUM POWDER FOR INSECTS.

EDS. FARM AND FIRESIDE:—Please tell me what to do for my plants. They are covered with gnats (same as collect on freshly painted buildings), that not only eat holes through the leaves, but eat the flower bud and stem, making the plants cast their flowers before blooming. These little pests bother my fuchsias and carnations more than they do all my other plants. I have my plants in the house, but they get plenty of air and sunshine.

Flat Rock, Ill. D. C. DUNCAN.

ANSWER:—Pyrethrum powder is sure death to all insects. If our inquirer will get a box of it at the drug-store, together with a little bellows for applying it, and in the evening before retiring dust it freely among the plants and throughout the room if necessary, it will eradicate the pest. If one application does not destroy all, use the powder again. It is not poisonous to man, but produces a tickling sensation in the eyes and throat which is not pleasant. This can be avoided by protecting the face with a veil during the dusting process.

THE THIMBLE.

Betty, did you ever undertake to sew without a thimble? If so, you know how hard it is to push the needle through the cloth, and how the finger pricks and aches from the stabs of the sharp steel.

The thimble is a very small piece of workmanship, but it is a very important and useful one, and grandma is thankful to the good old Dutchman who was so clever as to invent it, although he is dead and gone centuries ago. I think you will like to hear what I have learned about this little instrument. It was brought to England as far back as 1605 by John Lofting, a Dutchman, and was first called a thumb-bell, because it was worn on the thumb and shaped like a bell, and afterward it was called a thumble, and later a thimble, as we have it now.

Thimbles were first made of iron and brass. Those made of iron must have been clumsy and heavy, and the brass discolored the finger; but soon these disadvantages were seen, and steel, silver and gold took their places.

In the ordinary manufacture of thimbles, thin plates of metal are placed in a die and punched into shape, but in Paris this industry is carried on to a great extent, and gold is the metal most used. Thin sheets of sheet iron are cut into dies about two inches in diameter. These are heated red hot and struck with a punch into a number of holes, gradually increasing in depth to give them proper shape. The thimble is then polished, trimmed and indented around its outer surface with a number of little holes by means of a small wheel. It is then changed into steel by the cementation (look that up in the dictionary, dears) process, scoured, tempered and brought to a blue color. A thin sheet of gold is then introduced and attached to the steel by a polished steel mandrel. Gold leaf is then applied and fastened by pressure. The thimble is then complete.

So you see, my dears, that although very small, the thimble—or finger-cap, as the Germans call it—goes through many different processes before it is made ready for the work-box. GRANDMA.

CODFISH.

This is a very convenient and useful article to the farmer's wife, through the hot summer months, when the pork-barrel is the only other resource for meat. If at some distance from market, or you are able to strike a bargain, get a quantity of it, and as soon as possible, before it has any chance to become dried, pick the fish from off the bones, and in small pieces, and pack in some stone jar that will hold it nicely. Scatter some salt over the top, and lay a cloth or tissue paper on.

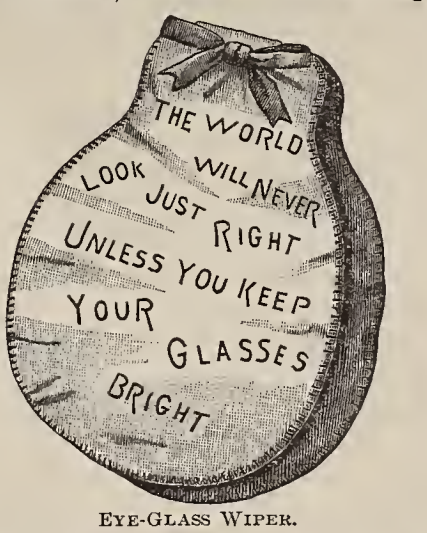
In this way none of the fish becomes so dried and hard that it is wasted, or the thick pieces, which are not as thoroughly salted, become tainted; it is alike all through, and ready to use at a moment's notice. It will keep a long time.

If fish has become dried, soak it before trying to pick it from the bones, and you will find it is much easier to prepare.

GYPSY.

CHOCOLATE MOSS.

This delicious dessert is made in the following manner: One quart of sweet cream, flavored, sweetened and whipped to a stiff froth and drained on a sieve. Meanwhile, have two squares of baker's chocolate melting in a basin set over a tea-kettle of boiling water, stir carefully the melted chocolate into a froth; pour into a pail or freezer, and freeze *without* stirring.



EYE-GLASS WIPER.

When wanted for the table, wet a cloth in boiling water, wrap about the pail until the cream slides out; slice and serve. It looks like moss, and is delicious.

INQUIRIES ANSWERED.

CACTUS.—Please give name and treatment of the cactus of which I send you a specimen. I have had it eleven years, and it has never bloomed. MRS. K.

Maryland.

ANSWER:—The specimen was enclosed in a common envelope, and was mashed and mutilated beyond recognition. It appeared to be a species of Echino cereus, though some of this group so closely resemble certain forms of Echino cactus and mammillaria, that they are not readily distinguished by form alone.

ROOTED WAX-PLANT LEAF.—I have a wax-plant leaf that I rooted two years ago, but it makes no further growth. How shall I treat it? MRS. K.

Maryland.

ANSWER:—The leaves of the hoya root readily, but unless a portion of the plant stem, with a dormant bud, is included, they will never produce plants. The best thing our inquirer can do with the leaf in question is to cast it out. It will always be a cumberer of the ground.

Our Sunday Afternoon.

NO ROOM FOR JESUS.

PLODDING life! crowded so full
Of earthly toil and care;
The body's daily need receives
The first and last concern, and leaves
No room for Jesus there.

O busy brain! by night and day
Working, with patience rare,
Problems of worldly loss or gain,
Thinking till thought becomes a pain;
No room for Jesus there.

O throbbing heart! so quick to feel
In other's woes a share;
Yet human loves each power inthrall,
And sordid treasures fill it all;
No room for Jesus there.

O sinful soul! thus to debase
The being God doth spare;
Blood bought, thou art no more thine own;
Heart, brain, life, all are his alone;
Make room for Jesus there.

Lest soon the bitter day shall come
When vain shall be thy prayer,
To find in Jesus' heart a place,
Forever closed the door of grace,
Thou'll gain no entrance there.

—*Christian Observer.*

RIPENESS IN CHARACTER.

ONE mark is beauty. Ripe fruit has its own perfect beauty. As the fruit ripens the sun tints it with surpassing loveliness, and the color deepens till the beauty of the fruit is equal to the beauty of the blossom, and in some respects superior. There is in ripe Christians the beauty of realized sanctification, which the word of God knows by the name of "beauty of holiness."

Another mark of ripe fruit is tenderness. The young, green fruit is hard and stone-like. The mature Christian is noted for tenderness of spirit.

Another mark of ripeness is sweetness. The unripe fruit is sour. As we grow in grace we are sure to grow in charity, sympathy and love. We shall, as we ripen in grace, have greater sweetness toward our fellow Christians. Bitter-spirited Christians may know a great deal, but they are immature.

Those who are quick to censure may be very acute in judgment, but they are as yet immature in heart. I know we who are young beginners in grace think ourselves qualified to reform the whole Christian church. We drag her before us, and condemn her straight way; but when our virtues become more mature I trust we shall not be more tolerant of evil, but we shall be more tolerant of infirmity, more hopeful for the people of God, and certainly less arrogant in our criticisms.

Another and a very sure mark of ripeness is a loose hold of earth. Ripe fruit easily parts from the bough.—*Rev. C. H. Spurgeon.*

THE THREE FIRST MEN.

There are few stories of a legendary nature that are not related in several different forms. A correspondent, who has read the Indian legend of the creation, sends this excellent version of the same story:

When the Great Spirit created the world, he first made three men, all of the same color. Then he led them to a pool of water and bade them jump in and bathe. One of them obeying at once, leaped in advance of his fellows, and came out clean and white.

The others hesitated, but one soon followed the first. When he went in, the water had become somewhat stained, and he came out copper-colored.

Then the third man went in. By that time the water of the pool had become black, and he was consequently black when he had bathed.

Thus it happens that there are white men, red men and black men in the world.

Then the Great Spirit laid down three packages before the three men, which contained their future fate. Out of pity for the black man, he permitted him to have his first choice of the parcels.

The black man, without hesitation, took the largest of the parcels; the red man, whose turn was next, took the next largest parcel, and the white man got the remaining one, which was very small.

Then the men opened their packages. That of the black was found to contain shovels and other implements of labor; the red man's contained bows and arrows, and the white man's small parcel consisted of pens, ink and tools for fine, light work.

From that time on, each man made use of the tools he had chosen.

REST OF SOUL.

Christ is the "Rose of Sharon and the Lily of the Valley." Believers are the bees that swarm about the rose, sighing, rejoicing, hungering and enjoying; flitting around it, either with the wings of prayer or the pinions of delight; and there is no end to the humming about this flower, day and night, in the true church. From it we derive our honey every day, forgiveness, peace, courage and strength; and its fullness is inexhaustible. Many Christians are, indeed, only working bees; day after day they swarm and flutter about the rose and never properly attain to rest. But how great is their folly.

Observe on a summer's evening how other bees act, and then go and do likewise. Wearied by the heat and labor of the day, they slumber peacefully in the calyx of the flowers. The latter inclose them with their tender petals, and the gentle whispers of the evening zephyr rock the reposing and well-secured insect on its balmy conch. How sweet the rest! So do thou also slumber in the calyx of the Rose of Sharon. Forget thyself in thinking of Jesus. Be he thy all, and his promises and merits the covering over thee and the pillow beneath thy head. Oh, then, what does it matter if the tempest howls without and croaking night-birds flutter around thee? Soft is thy couch, and the banner over thee is love.

BOYS AND MEN CONTRASTED.

There is a difference between boys and men, says W. D. Howells, in *Harper's Young People*, but it is a difference of self-knowlege chiefly. A boy wants to do everything because he does not know he cannot; a boy always fails, and a man sometimes succeeds, because the man knows and the boy does not know.

A man is better than a boy because he knows better; he has learned by experience that what is a harm to others is a greater harm to himself, and he would rather not do it. But a boy hardly knows what harm is, and he does it mostly without realizing that it hurts. He cannot invent anything; he can only imitate; and it is easier to imitate evil than good. You can imitate war, but how are you going to imitate peace? So a boy passes his leisure in contriving mischief. If you get another fellow to walk into a wasp's camp, you can see him jump and hear him howl, but if you do not, then nothing at all happens. If you set a dog to chase a cat up a tree, then something has been done; but if you do not set the dog on the cat, then the cat just lies in the sun and sleeps, and you lose your time. If a boy could find out some way of doing good so that he could be active in it, very likely he would want to do good now and then; but as he cannot, he very seldom wants to do good.

READING AND WRITING.

Reading is naturally a quicker and easier operation than writing. It costs more to give than to receive. It costs less to produce a bad sentence than a good one, and, correspondingly, it costs less to read a good sentence than a bad one. He must, therefore, be a good writer who can keep his reader just in pace with him—in pace, though not abreast; for the writer must lead his reader, if he would interest and stimulate him. The reader's thinking must be behind the writer, and not before him. The reader who continually outstrips the writer's thought while he still lags on with his words, is wearied, unsatisfied and loses his respect for his author, as an author. The great trouble with most writers, says Emerson, is that "they spread too thin." To keep thought and words together—this is the problem for all who would handle the pen. And it is a fresh problem with every accomplished writer every time he writes.—*Sunday-School Times.*

Our Farm.

ECHOES FROM THE FARM.

BY JOSEPH.

GROWING FIELD BEANS.—A number of subscribers have sent inquiries about field-bean culture. I am glad to note an increased interest in the bean crop, for I believe it deserves more attention by our farmers. There are thousands of farmers in the East devoting all their energies to the production of wheat, oats, barley, etc., at a positive loss. The average yields are small, and the crop actually costs more, in many instances, than it brings. Here in the East, a yield of anything less than twelve or fifteen bushels of wheat per acre leaves the farmer without profit, if not in debt. Yet on these same lands a crop of field beans might be obtained, at from $10 to $20 or more clear profit per acre. I hope my friends will give this matter due consideration, and act as their own best interests will dictate.

The bean is by no means particular as to character of soil; if it is well drained any kind will do, and it need not be very rich either. The wheat and oat lands, too poor to yield profitable crops of these cereals, will answer for beans, if we only provide a reasonable supply of the mineral plant foods. The plants may be depended upon to get their own nitrogen, either from the air or from the subsoil, and little of that element is needed in the soil. Much humus (decayed vegetable matter) is not needed either. Any land suitable for corn or potatoes, even if not very productive, will give a good yield of beans. Clover sod is excellent, supplying, as it does, all the needed plant foods, and no manure of any kind need be applied, unless it be a light dressing of wood ashes, or of phosphates with potash in the drills. On rather poor sand or sandy loam, these fertilizers should be applied rather more liberally, while on stiffer soils that are yet well provided with potash, some plain superphosphate alone may answer well enough. Take it all in all, the expense for manure will not be heavy, and yet be pretty sure to give good returns.

The usual time of planting is early in June. It is true the earlier varieties do not require the whole season for growth, yet I would prefer to plant as early as the ground can be gotten ready, after danger from late frosts is over, in order to have the benefit of the early autumn, with its warm and dry spells, for properly curing the crop. Prepare the ground *well*—more carefully, even, than for corn or potatoes—then plant the drills 2½ to 3 feet apart, with seeds thickly enough in the drills to make sure of a full stand. It will be better to have too many, and to have to thin them, than to leave great gaps. I usually plant with the Planet Jr. garden drill, but the work can be done nearly as well with other garden drills, or even with an ordinary grain drill, throwing part of the seed tubes out of gear. The hand planters as now used for corn, may also be used for planting beans. We must try to plant about five or six beans in a hill, and have the hills in the row about twelve or fifteen inches apart.

The next thing is to give thorough and clean cultivation. The Planet Jr. horse hoe, with narrow teeth, will do good work among the rows, but it will be necessary to give at least one good hand hoeing. As soon as a large majority of the pods are ripe and dry, the whole crop is to be pulled. This may be done by one of the machines devised for this purpose. These machines gather the plants, two rows at a time, leaving them in a windrow behind. In my vicinity, however, this job is all done by hand, and is not near so tedious as it may appear. The plants are put upon the ground with roots up. They should be frequently turned, especially during damp weather, and when thoroughly cured and dry, be gathered and put under shelter in the mow, or on scaffolds in the barn, until ready for threshing. The old way of threshing with a flail or by horse hoofs is yet much practiced, although we now have threshing machines especially made for the purpose, and which do good work. Sometimes the beans are threshed in ordinary grain threshing machines, with cylinder raised somewhat higher.

If the beans are in the least damp, they should be spread out thinly to have a chance to dry, and may then be cleaned by running through a fanning mill. Usually the beans, before being in prime order for market, will have to be picked over by hand, which is a tedious operation, but not necessarily expensive, as it can be done on the long, winter evenings by members of the farmer's family, or on rainy days, or by very cheap labor.

Among the most reliable varieties, we have the Navy or Pea bean and the old Marrowfat. The Kidney beans sometimes bring more money per bushel, but they are not as reliable croppers as the others.

The most interesting point to all of us, probably (it is to me), is that of profit. I can easily grow 30 bushels per acre with ordinary culture, by using a little commercial fertilizer or some wood ashes. The average yield, of course, is far below this, but a good farmer should not raise less than 25 bushels on fairly suitable soil. This makes the gross receipts about $50 per acre. The cost of the crop is about as follows: Plowing, $1.50; harrowing, $1; cultivating and hoeing, $5; harvesting, threshing, cleaning, etc., $10; marketing, $2; rent of land, $3; other expenses, $2.50. This makes a total of $25. Of course, I do not claim this to be more than a rough estimate. With a fairly good crop (25 bushels) and a fairly good price ($2 per bushel), the net profit amounts to the respectable sum of $25 per acre, which certainly is far above what might be realized from wheat or oats, or barley or corn on soil of this description. Why not grow more beans?

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INJURY TO THE PEACH BUDS.

PROF. S. T. MAYNARD, IN MASSACHUSETTS BULLETIN, NO. 10.

In New England the great question to be solved in the cultivation of the peach, is the protection of the buds from injury from the cold during the winter.

To learn when the buds were destroyed, observations of their condition were made every week from December 1, 1889, to March 13, 1890, and at each observation 500 buds were cut open and examined. On December 21st, the first buds were found injured. On December 28th, 6 per cent had been destroyed. From this time up to January 22d, no larger per cent was found to be injured, the lowest temperature up to this time being 11 degrees above zero. On the 23d of January the temperature dropped to 8 degrees below zero, and January 25th to 7 degrees above zero, but the evidence of injury did not show itself until February 1st, when 14 per cent were found injured. This state of injury remained until March 27th, when 52 per cent were found destroyed. Then on March 7th the temperature dropped to 6 degrees below zero and held nearly at zero the following night, after which about 80 per cent of the buds were found to be injured. This was the average of all the varieties examined, but some were more injured than others, and at the time of blossoming the average remained about the same.

The following table may be of interest as showing the amount of blossoms that were opened on each variety:

Amsden & Alexander	89.5 per cent.
Coolidge Favorite	30 "
Crawford's Early	2 "
Crawford's Late	2 "
Excelsior	90 "
Foster	2 "
Hale's Early	70 "
Large E. York	75 "
Morris White	15 "
Old Mixon	3 "
Mrs. Brett	10 "
Reeves' Favorite	1 "
Red Cheek Melocton	25 "
Sally Wond	20 "
Schumaker	80 "
Stump	25 "
Waterloo	75 "
Wager	30 "
Wheatland	40 "

PROTECTION OF PEACH BUDS.

After another year of earnest effort to find something to protect the buds from the effects of the cold, we must again acknowledge ourselves baffled. We have demonstrated that large peach trees can be loosened at the roots and laid down on the ground for winter protection, and be again set np successfully, but we have thus far failed in saving the buds. We shall continue our efforts and if any grower can suggest any way that offers even the slightest hope of success, we will carefully test it; for the peach tree can be grown successfully in all parts of Massachusetts, and if some means could be found to save the buds from winter's cold, peach growing would be a profitable industry, supplying our markets with one of the choicest and most healthful of fruits.

THE PLUM CURCULIO ATTACKING THE PEACH.

When the young peaches had reached the size of small hickory nuts, they began to drop from the trees in great numbers, and upon careful examination it was found that every one contained the larvæ of the plum curculio, or some species closely related.

This trouble has been reported to us from several localities, and should receive prompt attention from all fruit growers.

The ordinary method of destruction upon the plum trees by jarring should be tried on young trees, and Paris green upon large ones soon after the fruit is set. As the peach foliage is easily injured, not more than one pound of Paris green should be used in 300 to 400 gallons of water.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Fungus on Chestnut Trees.—A. B. K., Fenton, Mich. The disease that attacked your horse-chestnut leaves last summer was a fungus which has not, that I am aware of, been studied in this country. A similar disease attacks the trees in Europe, and has been described in their journals. There is no practical remedy known. The disease could be prevented, probably, by using Bordeaux mixture, the same as is used to prevent grape rot.

Grapevine Raspberry.—L. B. H., Blanchard, Iowa. The Grapevine raspberry is so new an introduction that but little is known of its behavior. It might do for you to try it in a small way, but some of our common, well-known cultivated kinds, such as Earhart, Souhegan, Cuthbert or Marlboro, will be sure to give you satisfaction, while a new thing will probably fail. I say probably, for of the new things put on the market but very few ever turn out as represented, and it does not always follow that it is because the introducers were frauds, for often when a certain variety does extremely well in one locality, it will fail entirely in others. Some apples that have come from seed and been very hardy in the original tree, are failures when submitted to the test of grafting and change to other soils. Peter Henderson once said that he considered that not more than one in ten of the novelties offered in trees and plants were truly desirable.

Low Land for Fruit.—M. L. F., Darien, Ga., writes: "I have a few acres of low land between two swamps, consisting of sand and loam, covered with chincapin, gallberry, huckleberry and low oak brush, with a few palmettoes. It has never been broken up, and the ground is matted with small roots, and supposed to be somewhat sour. What fruit trees would do best on it?"

REPLY:—Such land, if not wet, would produce almost any of the hardy fruits of your locality. Pears and plums would undoubtedly do well.

Pear-Tree Slug.—C. M., New Castle, Pa., writes: "(1) What is the name of a small, green worm that is eating the leaves all off the pear trees? The worm is about three eighths of an inch long; his body is dark green, head large and of a light green color. (2) What is the best way to rid the trees of them?"

REPLY:— (1) The insect that troubled your pear tree leaves last summer, eating the tissue out of them and leaving them as only skeletons of bones, was the pear-tree slug. (2) It may be destroyed by applying hellebore and water to them, mixed in the proportion of two gallons of water to one ounce of hellebore. I have dusted the leaves, sometimes, with slacked lime, after the insects had become sticky, and it certainly kept them in check.

EXTRACTS FROM CORRESPONDENCE.

FROM MONTANA.—I send you two potatoes, grown on a farm on Belt creek. The soil is sandy. They were planted the 15th of May, and had only two showers of rain all summer. Last summer is considered by old-timers to be the dryest summer in the annals of Montana. Three thousand pounds were raised on one third of an acre. Out of that amount, there are fully one thousand pounds like those sent to you. One potato weighed two pounds. I can show you a potato grown on a ranch near here, that weighed five pounds, and bushels that weighed one and two pouuds each, but the latter were irrigated. Let other countries beat that. C. M.

Belt, Montana.

[The potatoes received from Mr. M. are large, fine-looking specimens, weighing a pound each, are of excellent quality, and bear witness to the fertility of Moutana soil.—ED.]

FROM MICHIGAN.—The climate is about the same as that of northern Ohio, healthful and not so extremely cold in winter, nor so intensely warm in the summer. The soil is mostly clay and gravelly sand. We raise most everything in the line of farm produce, and have a good market for it. Toledo, Ohio, is only ten miles from us, which affords a number one market. Land is cheap, and is sold on easy terms. Corn was a good crop this year, while wheat was better than for years. Oats were somewhat light on account of the cold rains in the spring. Rye and barley were average crops. Potatoes were fair, and sweet potatoes yielded from 175 to 300 bushels to the acre. I think this would be a good locality for the "Farmers' Alliance" to organize. Let us hear from them. W. S. H.

Erie, Monroe county, Mich.

Queries.

☞READ THIS NOTICE.☜

Questions from regular subscribers of Farm and Fireside, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Ice House and Cold Room.—J. D., Aurora, Ill. You will find an illustrated article on ice houses in *Scientific American* supplement, No. 59, price 10 cents. Address Munn & Co., 361 Broadway, New York.

Trapping Foxes.—J. W. D., Lower Southampton, N. B. You will fiud full particulars about trapping the fox and other animals in The Amateur Trapper, price 50 cents, published by Dick & Fitzgerald, New York.

Pure Bred Dogs Wanted.—W. J. D., Farmers Valley, Pa. Send stamp for a sample copy of the *Forest and Stream*, which contains advertisements of pure bred dogs of various breeds, for sale. Address Forest and Stream Publishing Co., 318 Broadway, New York.

Storing Celery for Winter.—W. G. N., Riverdale, Idaho, asks: "What is the best way of putting away celery for winter use?"

Reply by Joseph.—Take up by prying under the plants with a spade, at same time lifting up at top. This will bring the plants out with some soil adhering to the roots. Then stand upright upon the cellar bottom, filling some soil in between the roots and stalks, or in boxes upon a few inches of soil. The whole secret of keeping them in good condition may be told in a few words; namely, keep the tops dry and the roots wet. Of course the plants must be kept from freezing.

Culture of Field Beans.—T. M., of Utah, asks for directions how to grow field beans, when they are to be harvested and how many can be grown on an acre; also, how threshed.

Reply by Joseph.—An article on the subject is given on another page in this issue. The crop is harvested, when mature, by pulling the plants up by the roots, not by pulling off the pods. Thirty bushels per acre is considered a good crop. Threshers are now made for the very purpose of threshing beans, although the hulk of the crop is yet threshed out in the old-fashioned way, with the flail.

Onions from Transplanted Seedlings.—J. T. H., Oak Hill, Kansas, writes: "Please tell us how to make a cold frame for starting young onion plants, also, where to obtain seed of the Prizetaker."

Reply by Joseph.—I hold a number of communications from various parts of the country, in regard to this onion matter. If my friends will have just a little patience, I will give full particulars as to the starting of the plants, etc., after a while. The Prizetaker was introduced by Wm. Henry Maule, the Spanish King, by Johnson & Stokes, both of Philadelphia, Pa.

Cement.—M. J. R., Collins, N. Y. The following is highly recommended: Take two ounces of clear gum arabic, one and a half ounces of fine starch and one half ounce of white sugar. Pulverize the gum arabic and dissolve it in as much water as the laundress would use for the quantity of starch indicated. Dissolve the starch and sugar in the gum solution. Then cook the mixture in a vessel suspended in boiling water until the starch becomes clear. The cement should be as thick as tar, and should be kept so. It can be kept from spoiling by dropping in a lump of gum camphor or a little oil of cloves or sassafras.

Pototo Seed.—V. G. D., Pinckney, Mich., wishes to know how to save and plant the seed from potato seed-balls. Save the seed like you would that of cucumbers or tomatoes. Squeeze the seeds out from the pulp, dry and preserve them in paper. Early in the spring sow the seed on the surface in boxes of sandy loam. Sift fine soil over them one quarter inch deep, firming it down lightly. Water sparingly. When the seedling plants are about three inches high, transplant them and cultivate like other potatoes. The potatoes grown from the seed will be small, about the size of a walnut. Select the best and plant in the ordinary way. It will take about three years to determine the value of a seedling.

Early Vermont and Rose Potatoes.—J. B. H., Omaha, Ark., writes: "Have been raising Early Vermont and Early Rose potatoes for the past six years. At first I noticed the former were better to eat. Of late I can see no difference between them. Have always saved my own seed for planting. Do you think varieties will mix if planted side by side?

Reply by Joseph:—I have grown both varieties, some years ago, but could discover very little difference in quality between them. Of course potatoes will not mix if tubers are planted side by side, but the tubers are very liable to get mixed when dug by a careless workhand, or in adjoining bins in the cellar, or when planted, or in any of the manipulations of handling. It may be the varieties have deteriorated in quality by inferior culture. Try to get some stock of the genuine varieties, and test them in comparison with your own seed.

Renting a Farm.—W. M. S., St. David, Ill., writes: "Which is the more profitable way to rent a farm of one hundred and sixty acres in good state of cultivation, to pay cash rent, $4 per acre, or to stock the place, furnishing half of the stock, implements, etc., pay for all the labor, and give one half of everything sold? We raise wheat, corn, cattle and hogs principally. I can rent a good farm on either of the above terms, and would like to know which will make me the most money."

Answer.—We believe the more satisfactory way would be to rent for a reasonable cash rent for a term of years. Not knowing the condition of the farms or the markets you have, we cannot tell whether $4 per acre is too much rent or not. If you rent for one year at a time, rent on shares. The share terms you name are liberal, and we are of the opinion that the cash rent you name is a little high.

Cauliflower Seed, Celery, Potatoes, etc.—S. L. B., Rociada, New Mex., asks: (1) "Can we grow good cauliflower seed here? Our seasons are something like those of western Washington. (2) Please give instructions for growing celery, as to climate, soil and cultivation. (3) What are the best varieties of Irish potatoes for main crop? (4) What will potatoes probably be worth next spring?"

Reply by Joseph.—(1) A few trials will give you an answer to this question. (2) This subject has already been treated at some length recently. Please look up the back numbers of Farm and Fireside. (3) For early market the best may be among the following: Early Ohio, Burpee's Extra Early, Early Sunrise, and, perhaps, Early Rose and Beauty of Hebron; for general crop, among the following: White Star, Rural Blush, Rural New Yorker No. 2, Empire State, etc. Which is best for New Mexico, or any part of that state I am not able to say. (4) To tell now what price potatoes will bring next spring requires the gift of a prophet. In all probability they will come high—how high is more than I dare to even guess at this writing.

VETERINARY.

Conducted by Dr. H. J. Detmers.

Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of Farm and Fireside, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 35 King Avenue, Columbus, Ohio.

Probably Actinomycosis.—R. B. E., Moselle, Mo. Your description does not give sufficient data to determine the nature of the lumps complained of. Possibly they may be actinomycosis. Will see to it that the bulletin of the Ohio Agricultural Experiment Station, treating of that disease, is sent to you.

A Bad Cough.—C. G., Brady's Bend, Pa. If you will tell me what causes the cow to cough, I may be able to give you advice. I cannot base a diagnosis upon a single symptom, especially if the same is so common as a cough. Have your cow examined by a competent veterinarian. The disease may be tuberculosis, and may even be something worse.

A Paralytic Colt.—Z. D. S., Waterloo, Neb., writes: "I have a suckling colt that drags its hind legs, first one then the other. It seems to have stiff joints."

Answer:—Unless the dragging of the hind legs, etc., is due to weakness, and the colt very young, only a few days old, there is no prospect of a cure. It don't pay to raise a paralytic colt, even if it should live.

Craves Willow Leaves.—C. L. D. writes: "Please tell me if willow leaves will hurt a young horse that has been sick with founder, and is coming out fine? He seems to crave them."

Answer:—I hardly think that willow leaves will do any harm, especially at this season of the year, provided the young horse receives a sufficient quantity of other good and suitable food.

Extraordinarily Large on One Side.—H. P., Cardonia, Ind., writes: "I have a cow that has not been fresh for two years. At present she seems extraordinarily large on one side, while the other side seems small. Is she with calf?"

Answer:—If the cow is larger on the right side, it may be considered as a sign of being with calf. If on the left side, it is a sure indication that she is not with calf.

Signs of Pregnancy in a Cow.—J. M. P., DeLancey, Pa., asks how to know when a cow is with calf.

Answer:—There are no reliable signs during the first four or five months, except such as may be ascertained by a local examination. During the last four months, a filling up of the right side of the abdomen, a vigorous appetite, a quiet behavior, a decrease of milk, and especially the movements of the calf, which can be felt, and during the last two or three months occasionally even be seen on the right side, are considered as the principal symptoms.

Garget—Swelled Glands.—O. O. V., Lisbon, N. D. You will find something on garget in nearly every number of this paper. During the first stage, when the milk coagulates, the treatment consists in frequent and most thorough milking. When that is neglected, either induration, suppuration or gangrene is sure to follow. Indurated quarters cannot be restored to health.——Concerning your horse, I have to say once more that it is utterly impossible to base a diagnosis upon one single symptom, especially if the one symptom is not what may be called a characteristic one. If you think your horse has glanders, have him examined by somebody familiar with that disease.

What Ailed the Hog?—P. M. F., Arlington, Tex., writes: "What was the matter with my hog? I fed my hogs in the morning, and all ate heartily. Shortly after feeding, one began heaving like a horse with the thumps. It kept its hind feet drawn under, and died in about twenty miuntes. It jumped about while dying, as though it had its head cut off. An examination revealed some spots on the liver, and the lungs were completely filled and coated over with a white stuff like the white of an egg, which, when pressed, looked like water."

Answer:—Your description of the symptoms would indicate choking, and the result of the post-mortem examination, as given, pneumonia and plenritis, or possibly swine plague or so-called hog cholera.

Veterinary Schools.—A. W. N., Vichy, Mo. There are several veterinary schools or colleges in the United States, some of them private and some of them state institutions. The veterinary school of the Ohio State University, at Columbus, is a state institution, in which a thorough instruction is given in all branches of veterinary medicine. Being a state institution, the expenses are low, and the course, which begins with the fall term of the college year (middle of September), is three years, at the end of which the degree of Doctor of Veterinary Medicine will be conferred upon all those who have been regular in atteudance, and have passed the examinations in all branches taught. Candidates for admission, unless graduates of high schools, or possessing a teacher's certificate, will be examined in orthography, writing, grammar, geography and arithmetic, and must be at least sixteen years old.

A Badly Damaged Hoof.—F. W. R., DeLand, Fla., writes: "I have had a mule that hurt his fore foot while plowing new land, and most of the outer hoof came off. I can put my finger between the shell and the inner hoof. The mule limps badly. The hoof seems to be brittle."

Answer:—If you endeavor to force or to accelerate the growth of new horn, the new horn produced will be morbid (brittle) and will constantly give trouble. The best you can do is to cut away all the old horn that is loose, and then keep the foot well dressed and well bandaged until all the soft parts are completely covered with new horn. The dressing and the baudage must be renewed twice a day. If sores are existing, mild antiseptics must be used until the sores are healed, and no more discharge takes place. If there are no sores, clean cotton is the best material to apply to parts destitute of horn beneath the bandage. The latter ought to be moderately tight.

Distemper.—J. W. B., Ohiowa, Neb., writes: "I have a mare colt about seven months old. She eats heartily, but discharges at the nose a thin, whitish fluid. Once in a while it stops, then swells at the throat. This is relieved by smoking, which causes the nose to run. The discharge is quite thick now, and food and water have a tendency to come from the nose."

Answer:—Your colt, it seems, suffers from chronic distemper or strangles. Protect the same against the inclemencies of the weather, and give the following medicine either mixed with the feed (ground oats, etc.,) or in shape of pills: Tart. emetic, three drachms; chlorate of ammonia (crystal), one onuce; powdered marshmallow root, powdered anise or fennel seed, and powdered licorice root, of each an ounce and a half. If the colt will take the medicine voluntarily with the food, you may give of the above three times a day, a good half tablespoonful, but if not, add a little water to the powders, just enough to make a stiff dough, and make fifteen pills of it, and give one three times a day.

Sore Feet.—H. A. E., Flat Rock, Ill., writes: "I have a cow that has sore feet. She stands and holds one foot up and then another. All appear sore, but I can find no cause. Her hoofs grow long and break off. She appears weak, is poor in flesh, but has good pastnre. She raised a calf this summer, gives a gallon and a half of milk a day, but we fear to use the milk."

Answer:—I do not know how extensive the degeneration of the feet of your cow is, but if you want to effect a cure, you must first trim and cut away all the horn of the hoofs that is superfluous, loose or decayed. This done, all decayed soft parts must be removed either with a knife or with caustics, and then, after the sores have thus been cleaned, you may twice a day dress them, which, I suppose, are mainly in the cleft, with absorbent cotton saturated with a mixture of liquid subacetate of lead, one part, and sweet oil, three parts. The feet, after being dressed, must be protected by bandages. If the horn of the hoof is too hard to be cut, you may first, for a day or two, poultice them with powdered flaxseed. That the cow should be kept on a dry and clean floor may not need to be mentioned.

Oats.—H. W. C., East Orange, N. J., writes: "I have a colt that was a year old last July. Last winter I gave her three quarts of oats a day. Since May she has been on pasture until lately. Now I have commenced giving her six quarts of oats a day. I would like to know if am I feeding her right? My neighbors tell me if I continue to give her oats her feet will be soft and tender, and that I ought not give her anything but hay. While making a trip of twenty miles in one day she stumbled a great deal, and if I walk her a mile or so she will stumble. Please let me know if it is on account of the oats, and if I am feeding her right and giving her enough, as she always has a good appetite. I want to keep her in a good growing condition.

Answer:—Give your colt all the oats it can digest and assimilate. At any rate give enough to make its growth and development a continuous and uninterrupted one, and if you have a good colt, you surely will get a good horse. The feeding has nothing whatever to do with the stumbling. No wonder that a young colt stumbles when traveling twenty miles; besides that, the growing animal may be big and awkward.

Probably Actinomycosis in the Tongue.—V. C. E., Dudenville, Mo., writes: "I have a cow that has a lump or swelling under the jaw. The tongue is swollen and inactive, and she slobbers all the time. She dried up her milk and lost flesh. She reels as she walks. The knot under her jaw is a hard, immovable swelling. I cut into it a few times, but there was no pus; it bled a little. Her tongue stuck out of her mouth and was stiff. Her appetite is good. I fed her boiled oats, bran mashes and red clover. During the warm weather she got so she could get her own living, and gained some flesh. Since cool weather set in it is the same thing over—swelling increased and loss of flesh. She appears to be healthy in other respects."

Answer:—Your description indicates actinomycosis in the tongue, which, of course, is incurable, because caustics (such as would be necessary) for obvious reasons, cannot be applied, and an amputation of the whole diseased portion of the tongue is out of the question. Actinomycosis is a local disease, and does not affect the meat of the animal, except where the morbid process is situated, or indirectly by causing emaciation, in so far as it interferes with the process of eating.

Wants to Know What Ailed the Colt.—T. J. S., Walkerton, Ind, writes: "What ailed my colt? I had a six-months-old colt take sick and die. He went with his head down, ears drooped and a languid look out of his eyes. His ears and limbs were cold. He would lie down and get up frequently, but would lie down most of the time. When he would first get up he would go backward. His bowels were loose, urine scanty and of a dark red color. He had a high fever and rapid and irregular pulse, and died with spasms. The colt was opened after death. His lungs had brown spots on them, but a small portion of them was sound. The inner lining of the first stomach was two thirds consumed.——Will wild parsnips kill (poison) a horse?"

Answer:—I cannot satisfactorily answer your question. The symptoms given are such as are frequently observed in the last stage, or during the agony of death of several fatal diseases; and what you say of the result of the post-mortem examination concerning the lungs, may not at all be a morbid change produced during life, but simply a post-mortem change. What you say about the "first" stomach is a riddle to me, because I never knew that a horse had more than one stomach. ——Wild parsnip (Æthusa cynapium) is poisonous, but a horse will hardly ever eat enough of it to be seriously damaged.

Catarrhal Affection—Skin Disease.—E. M. J., Beaver, Oregon, writes: (1) "About one year ago one of our cows came up one night acting as if she could not get her breath. Her nose seemed stopped up, but after a while she seemed better, and in a day or two her nose began running a thick slime. She got all right again and we thought no more of it until about two weeks ago, when one or two others came up just the same way, and now nearly all of them are affected. The cows run in pasture and have an abundance of fresh, running water, accessable at all times. They seem all right every other way. (2) What is the matter with our dog? There is a place under his right front leg about as large as a person's hand, from which the hair has all come off. The skin is thick and wrinkled and of a black color. He scratches it, and it seems to itch. It does not seem sore. His ears are sore inside, and he scratches them and whines with pain. He is about one year old."

Answer:—(1) Your cows evidently suffer from a catarrhal affection of the nasal cavities, and, perhaps, of the frontal and maxillary sinusses, but not being sufficiently familiar with the peculiarities of your country, and with the conditions under which your cattle are kept, I can hardly give you a satisfactory answer. In some countries such a catarrhal affection sometimes makes its appearance as an epizootic—in other words, is of an infectious character. In regard to treatment, it will be advisable to protect the affected animals as much as possible against the inclemency of the weather—wet and cold especially—and to keep their bowels open by mild laxatives, such as sulphate of soda or sulphate of magnesia. In very severe cases a more complicated treatment may be advisable, but as said before, not being sufficiently familiar with your country and the probable cause, I do not deem it safe to prescribe any further treatment. The above, though, will suffice unless the cases are of a malignant character. (2) As to your dog, give him first a good wash with soap and warm water, and then wash the place under his right fore leg once a day with a five-per-cent solution of carbolic acid, and anoint the sores in his ears once a day with a mixture of liquid subacetate of lead, one part, and olive oil, three parts. But to prevent him flopping his ears and scratching the same, you must make him a cap, by which you can keep the ears turned up on top of his head.

Ringbone and Spavin.—M. H., Richmond, Va., writes: "I would like to know a cure for ringbone. My colt is three years old. He became lame last June. I took him to a veterinary surgeon, and he pronounced it ringbone. Can you give me a cure for it?"

B. G. S., Rogersville, Mich., writes: "I have a four-year-old horse, that, after being driven or worked, or even after standing in the stable for some time, acts quite lame until he has been moved around for a little while. His lameness is in the left hind leg. One of my neighbors says a bone spavin is growing."

Answer:—The morbid process of ringbone and spavin are the same; the only difference is in the seat of the disease, and the only way to cure the lameness is to produce anchylosis, or, in other words, to effect a union of the diseased bones. Hence, to cure the lameness is out of the question. 1. If the morbid process of ringbone or spavin extends to a joint that cannot be spared, or if anchylosed would cause a stiff leg. Consequently, if spavin extends to the upper joint of the hock, or ringbone to the pastern, or to the hoof or coffin joint, a cure cannot be effected. 2. If the diseased joint is naturally very weak, but especially if the weight and concussion are very unequally distributed—are concentrated upon one portion of the joint—for in that case an anchylosis will not be formed, or if forming, will not be permanent. 3. If the animal cannot have rest for a sufficient length of time. If all the conditions are favorable, that is, if the morbid process of spavin is limited to the lower or semi-movable joints of the hock, and that of the ringbone to the coronet joint (joint between first and second phalanx); if the joints in question are sufficiently strong, and the weight pretty evenly distributed; and last, but not least, if the animal can have rest, anchylosis can be effected, if a moderate degree of inflammation (just enough to throw out the amount of exudates needed) is produced in the periosteum of the diseased bones. Whether this is done by judicious firing, or by repeated applications of sharp ointments is immaterial, as far as the result is concerned. Only firing leaves scars, which can be avoided if a sharp ointment is used. If the latter is preferred, a composition of biniodide of mercury, one part, and lard, sixteen parts, will answer. It may be rubbed in about once every fourth day. To produce anchylosis usually requires eight weeks or two months. During the treatment the horse should be kept in a stall with a level floor.

HOW I GOT TO COLORADO.

Having read in several papers that they were giving away lots at Montrose, Colorado, I wrote and received the deed so promptly that a large number of my friends at once sent, and after getting their deeds, they appointed me a delegate to visit Montrose; through the courtesy of the Colorado Homestead and Improvement Co., I got a free ticket there and back. I had a lovely trip, and while there sold my lot for $127.50. Any person can get one lot *absolutely free* by addressing the Colorado Homestead and Improvement Co., Montrose, Colorado. By giving every third lot they will bring thousands of people there. Montrose, the county seat, is a railroad junction, and a beautiful city of nearly 3,000, and will have ten thousand within a year. Their motto is "Get There Boys," and certainly free lots and free tickets are sure winners. When property can be obtained *free*, why should not *everyone* own real estate.

S. S. N——., Elizaheth, N. J.

Our Miscellany.

WHY seek to know?
Enjoy the merry shrove-tide of thy youth!
Take each fair mask for what it gives itself,
Nor strive to look beneath it.—*Longfellow.*

THE most successful woman in life is the one with a lot of sentiment, but who is never sentimental.

JAY GOULD'S income is $10,000,000 a year it is said, and he don't know what to do with it except to invest it in securities.

"You will never come to any good, my son, unless you turn over a new leaf—come in earlier at night and get up betimes. Remember, it's the early bird that catches the worm."

"But how about the worm that got up early enough to be caught?"

"My son, that worm hadn't been to bed at all; he was on his way home."—*Chatter.*

Friend—"How's business?"

Manufacturer of hand-grenades—"Fine! Why, I keep sixty-five drummers going all the time in the state of Maine alone!"

Friend—"I didn't imagine that there was such a call for them down that way. What is the cause? People scared about fires?"

Manufacturer—"No; it's a prohibition state, you see."—*Light.*

FOR A DISORDERED LIVER TRY BEECHAM'S PILLS.

AWAY off in an obscure part of Texas, near Hempstead, lives Elizaheth Ney, a grandniece of the famous Marshal Ney, of France. She is both pretty and talented, and a sculptress by profession.

IT is stated that a Kansas doctor recently reported to his medical society a case of lead poisoning, which he attributed to the patient's habit of putting the end of his lead pencil in his mouth.

HAVE lots of fun, laugh all you can and keep the sunshine in your heart if you want to be well, young and popular. The world hates a person with a grievance. It pays to be honestly happy. There is absolutely no profit in being blue and very little sympathy attending it.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 820 *Powers' Block, Rochester, N. Y.*

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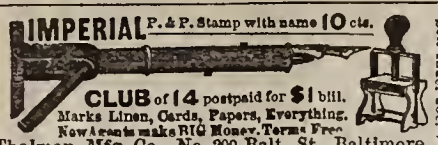

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VERNON HILL, VA.—GENTS: I have already received over 1,000 parcels of mail, scores of magazines, etc., for which I had often paid 25c each before. My experience proves your Directory far excels all others, as I find most of them are frauds and cheats. E. T. JAMES.

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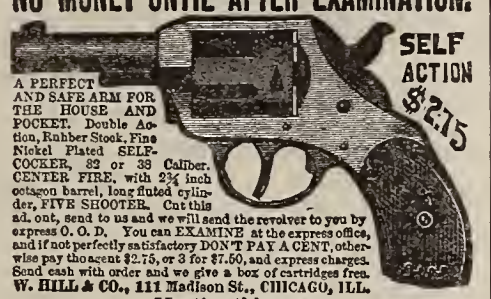

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THERE WILL BE a marked improvement in the general appearance of the Magazine, and various new and attractive features will be added.

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OUR FASHION AND FANCY-WORK Departments will combine beauty and utility, adornment and economy; maintaining our reputation as the best of the fashion magazines.

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WE are IMPORTERS of Tea and Coffee, China and Crockery, and do the largest Tea and Coffee business in Boston (direct with consumers). We also carry a Large Stock and sell at the Lowest Possible Cash Prices Dinner and Tea Sets, Silver-Plated Ware, Lamps, etc. To those who take the time and trouble to get up CLUBS for Tea, Coffee, Spices and Extracts, we offer PREMIUMS. In buying Tea and Coffee from us you get full value for the money invested and get a Premium, and you get goods that are direct from the IMPORTERS. If you buy Tea and Coffee from your grocer you pay three or four profits and *pay for a premium* but do not get it. In an article published in one of the largest dailies in this country it was claimed the Tea bought from the retail grocer showed a profit of 100 per cent. The moral is plain, buy from First Hands.

We have been doing business in Boston for 16 years, and the publishers of this paper will tell you of our *undoubted* reliability. We do a business of over $300,000 yearly, and our Cash sales of Dinner, Tea and Toilet Sets, Silver Ware, Lamps, etc., amounted to $41,000 in 1889, aside from OUR TEA AND COFFEE sales. (Rogers Knives $3.50 per dozen.) Our illustrated Price and Premium list tells the whole story. We like to mail it to all who write for it; it costs you nothing and will interest you. 120 pages.

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These three numbers contain the following reading-matter:

(1) **Mrs. Amelia E. Barr's** new serial, "The Beads of Tasmer." Mrs. Barr is the author of that most successful serial, "Friend Olivia," just completed in *The Century;* but hereafter Mrs. Barr will write exclusively for *The New York Ledger.*

(2) **Hon. George Bancroft's** description of "The Battle of Lake Erie," beautifully illustrated.

(3) **Margaret Deland's** latest story. "To What End?"

(4) **James Russell Lowell's** poem, "My Brook," written expressly for *The Ledger*, beautifully illustrated by Wilson de Meza, and issued as a FOUR-PAGE SOUVENIR SUPPLEMENT.

(5) **Mrs. Dr. Julia Holmes Smith** starts a series of articles giving very valuable information to young mothers.

(6) **Robert Grant's** entertaining society novel, "Mrs. Harold Stagg."

(7) **Harriet Prescott Spofford, Marion Harland, Marquise Lanza, Maurice Thompson,** and **George Frederic Parsons** contribute short stories.

(8) **James Parton, M. W. Hazeltine** and **Oliver Dyer** (author of "Great Senators") contribute articles of interest.

In addition to the above, SPARKLING EDITORIALS, Illustrated Poems, HELEN MARSHALL NORTH'S chatty column, and a variety of delightful reading of interest to all members of the household.

The foregoing is a sample of the matter which goes to make up the most perfect National Family Journal ever offered to the American people.

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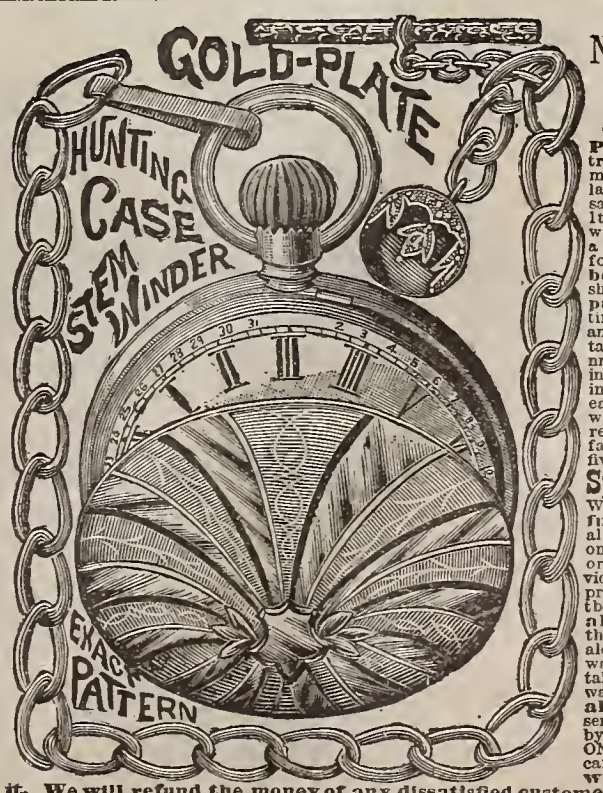


THE NEW AMERICAN
Stem Wind & Stem Set,
ONLY $1.00.

The New American in Handsome Shell Pattern Hunting Case, a correct illustration of which we show in this advertisement, is now ready and by placing a very large order we have secured the exclusive sale for the United States and Canada. It is a stem winder and stem setter with patent adjustment, and is fitted with a new patent stem winding arrangement found on no other. It is hunting case, beautifully engraved of the new style shell pattern, as shown in cut, plated with pure gold on solid yellow metal (sometimes called aluminium), and in appearance is similar to a gold watch. The crystal is double thick polished french glass, and all the cog wheels, pinions and bearings are perfectly made by the most improved and expensive machinery, and each part is carefully fitted by skilled workmen. Each one is carefully inspected, regulated and tested before leaving the factory, and fully warranted by us for five years if used with reasonable care.

Special Offer We will send the New American Stem Winder and Stem Setter, with a beautiful gold plated chain and charm, all packed in an elegant satin lined case, on receipt of only $1.00 bill, money order, postage stamps or postal note, provided the person receiving it will faithfully promise to send us as many orders from their locality as possible. Our New Catalogue of Watches, representing one of the largest lines to be found in any Catalogue will be sent with each order. We want one good agent in every town to take the agency for the sale of our reliable watches, which we illustrate in Our Catalogue at prices from $2.00 upward. We send them to all parts of the United States by mail and express. SEND $1.00 AT ONCE and we will forward the New American by mail, post-paid. Your order will be filled the day we receive it. We will refund the money of any dissatisfied customer. Send $1.00 by registered letter, post office money order, express money order or bank draft, payable to our order,

Babcock & Co., 35 & 37 Frankfort St., N. Y.

Smiles.

THE TYPEWRITER GIRL.

When I was yonng, I served a term
As typewriteress to a legal firm;
My fingers played o'er the keys so free,
That the folios fairly piled 'round me.

One eve—'twas already growing dark—
When I was hailed by the junior clark,
Who joined me with a smile so bland
That I felt I had brought one fish to land;
And sure enough, he proposed that we
Should set sail together on life's wild sea!

I hemmed and hawed, and I finallee
Snggested 'twas better that we bide a wee;
His lips puckered np and his eyes grew moist;
But it wasn't long ere my heart rejoiced
That I nipped my dream in its dainty bloom,
And laid first love in a snug wee tomh;
For the senior partner, rich and grand,
Did me proud to sue for my dainty hand.

I've sold my "machine," and I live in state;
Bnt I give you this, kind readers, straight,
That the senior partuer hires no girl
To make the folios dance and curl;
For I hrook no rival, don't yon see?
And the typewriter lass I consider "N. G."

MORAL.

Keep close to your desk and your fancy free,
And so you may promoted to the hrown stone be. W. B. C.

HE SURPRISED ELIZA.

JOHN ROBERTS, of North East, is a farmer well enough to do, but he had always been eccentric about his clothes, writes a Salamanca correspondent of the *New York Sun*. Untll a week or so ago, he had not been known to huy a uew suit of clothes for years. The ones he wore had been so often patched and repatched that no bit of the original warp and wool was visible. This personal slovenliness on the part of her hushand was a source of constant annoyance to Mrs. Roberts, who is a woman of exceptional neatness. She long ago became so ashamed of his appearance that she would no longer accompany him to town to do her trading. This singular characteristic of the farmer was not owing to pennriousness, for he is a liberal man in all his dealings.

A few days ago he went to town to do a little trading, and, to the utter astonishment of the town, he purchased a new suit of clothes for himself. His new clothes were done up in a package, and he placed the package on the wagon-seat heside him when he started home that night. It was a dark night. Farmer Roberts had got half way home when a hrilliant Idea struck him. He stopped his horse on a hridge where the road crosses the East hranch.

"I'll do it, hy gum!" he said. "I'll do it, and su'prise Eliza."

Thereupon the farmer rose up in his wagon, and hegan to take off the patched and repatched clothes he had worn so long. As he removed a garment, he tossed it into the creek, until he had tossed them all in, and had nothing on hut his shirt.

"Great applesass!" he exclaimed, "hnt won't Eliza be su'prised?"

Then Farmer Roberts reached for the package that he had his new clothes in. It wasn't on the seat. Farmer Roberts got down and reached under the seat. The package wasn't there. Then he felt all over the hottom of the wagon. The package wasn't anywhere on the hottom. Farmer Roberts rose up in the wagon and looked hack along the pitch-dark road.

Then he climhed back in his seat, and away the horses went for home. The night was chllly, and there were three miles to go. When Farmer Roberts reached home and climhed out of hls wagon he paused.

"The hull idee didn't work," said he, "but I'll het nine dollars that I su'prise Eliza!"

That he did no one douhts, but when he got up in the morning and went out to the harn, clad in the hired man's overalls, and saw his package of new clothes hanging hy its string on the hrake handle at the side of the wagon, he was a little surprised himself.

HER TRIFLING OMISSION.

"I can't see what is the matter with this cake," the young wife said. "I've put in the eggs and the sugar and the corn starch and the flavoring, just as the recipe says, and its a horrible mess. I don't believe I can make anythiug out of it at all; it is too bad!"

"You haven't forgotten anything, have you?" inquired the husbaud, looking up from his newspaper.

"Nothing. It says 'With one quart of sour milk and a teaspoonful of soda, make a hatter in the usual way; then add the other Ingredients.' I added them, but it doesn't seem to me to look like a batter. It's just a nasty mess of eggs and sour milk and things."

"Where is your flour, my love?"

"Flour, Horace?" exclaimed the sweet, young wife. "Do they put flour in cake?"

A SHREWD MAN.

Cumso—"The increased tarlff on tohacco made Jones' fortune."

Banks—"He had a lot of tohacco on hand, had he?"

Cumso—"No, hut he had a corner on the cabbage market."

"PERSONAL GOSSIP."

The practice to which many newspapers are given nowadays of publishing the idlest of tattle under the head of "Personal News," has inspired a writer in the Boston *Transcript* with the following "gossip" by way of satire:

Mr. G. Gazzam forgot to wind his watch night hefore last.

Pietro Vermicelli has relinquished his connection with the track-repairing gang on the East and West railroad.

Colonel Sahertash had his hoots half soled and heeled yesterday. The colonel has long heen noted for his *recherche* foot-wear.

Mrs. Limberchin writes to inform ns that her kitchen tea-kettle boiled over one day this week, and caused quite a slop on the floor.

We are gratified to hear that Mrs. Blackamoor Pugg has sent her pet dog iuto the country. The Puggs will remain in town.

The Homespuns had their Aunt Keziah at supper Wednesday evening. The old lady looks much improved iu her new celluloid teeth.

Mrs. Brown, of Suite No. 12, Hotel Discomfort, has engaged a new maid-of-all-work. The young person auswers to the name of Bridget, and is unusnally affluent in cousins.

Mrs. Captain A. B. Cutter's girl broke another dish yesterday. Mrs. Captain Cutter declares it is shameful. All of Mrs. Captain Cutter's many friends will sympathize with that estimable lady in this the hour of her affliction.

Among those who missed the 6.25 train to Suburhantown last evening were, Mrs. Slowbody, Henry and Thomas Smith, General McGont, the Misses Shopperly and maid, Charles Montgomery Begg, Terrence McFlaherty, Doctor Longlance, Ah Sin Finn, Mrs. Mulvey, John Smith and the two Doglington boys.

IN A NEW COUNTRY HOUSE.

Bridget—"Phwat's the matther wid the wather, Mary?"

Mary—"You mean the color?"

Bridget—"I do. It's shtained, it is."

Mary—It's rain-water."

Bridget—"An' do they dhrink rain-wather?"

Mary—Certainly.

Brldget—Snre that's the fnrst I iver heard of that. In the onld conntry we dhrink no rain-wather. We may he poor, hut thank God, we're not ignorant!"

VERY OBLIGING.

Mrs. Scoldmore—"Dearest, what do you want for a birthday present?"

Mr. Scoldmore—"Oh, give me a rest."

Mrs. Scoldmore—"I will, dear. There are some beautifnl ones on Piphany's hric-a-brac counter, and they are only $12 each."—*Jewelers' Weekly.*

NOT FEBRUARY.

Teacher—"Which is the shortest month of the year?"

Small hoy—"Orgust."

Teacher—"Angust?"

Small hoy—"Yes'm. That's the last month of vacation."—*Street and Smith's Good News.*

THE DEAR GIRLS.

Ethel (romantically)—"It makes me feel sad to see the trees losing their heauty as the days go by."

Maud—Yon have a sort of fellow feeling for them, I suppose."

A CLEVER MAID.

"Ah, Rosalie," sighed her friend, "you don't know what you miss by not caring to dance."

"Don't I?" replied the girl, "that's all right—I've had five proposals already this season while sitting out dances iu the conservatory."

Millions of Dollars

are saved every year by American farmers taking good care of their horses. Until the last few years farmers believed it did no good to blanket a horse in the stable at night, but shrewd farmers have learned that blanketing saves enough food to more than pay for the blanket, besides adding to the value of the horse and keeping him in good condition. The warmth must be kept up in some way, and if a horse is not blanketed in the stable he must eat more to keep warm.

5/A Horse Blankets are the strongest. Like all good things they are imitated. Always buy a blanket with the 5/A Trade Mark sewed inside.

5/A HORSE BLANKETS are made by Wm. Ayres & Sons, Philadelphia, and are for sale by all dealers. If you can not get them from your dealer write them. There are **Thirty Styles** at prices to suit all. Among them are the **5/A Five Mile**, with five miles of warp threads in each blanket. **5/A Boss Stable**, a giant for strength. **5/A Electric** for ont door use, very strong. **5/A Extra Test** which stands the highest test for strength. Also the celebrated **5/A Baker** which is used by railroad, express and fire companies in all the large cities. These are shown in the **5/A Book**, which you can get **free** from your dealer. Ask for it.

MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.

Recent Publications.

CAPONS AND CAPONIZING.—This little book concisely and plainly gives full information on caponizing, and tells how to care for and market capons. Price, 50 cents, postpaid. Published by John B. Alden, New York City.

HOW TO GROW STRAWBERRIES.—By T. B. Terry and A. I. Root. The best monograph on the subject that has come under our notice. Brief, plain and practical, it should be of value to all who grow small fruits. Price by mail, 40 cents. A. I. Root, Medina, Ohio, publisher.

BEES AND HONEY.—By Thomas G. Newman, editor of the *American Bee Journal*. An illustrated, bound volume of nearly two hundred pages. This is a new and revised edition, "fully up with the times," and containing the principles for the scientific and successful management of the apiary. $1. Thomas G. Newman & Son, Chicago, Ill.

HOW TO MAKE THE GARDEN PAY.—By Tuisco Greiner, better known to our readers as "Joseph." In this book he teaches the art of gardening in the same sensible, practical way familiar to the readers of this paper. The work gives all the best modern methods, removes all the imagined drudgery, and makes gardening a source of much pleasure and recreation, as well as profit. Published by Wm. Henry Maule, Philadelphia, Pa.

THE TABLE—HOW TO BUY FOOD, HOW TO COOK IT AND HOW TO SERVE IT.—By Alessandro Filippini, of Delmonico's, New York. For many years the name of Delmonico has been associated with the perfection of the culinary art, and their establishments are the most famous places in the country for dining. Now a *chef* who has been with Delmonico for nearly a quarter of a century, has written a book on the art of which he is master. It is an elaborate work of over five hundred pages. Although written by one who earned his fame as caterer to the public, his work is designed and adapted to the use of private families that want the best there is in the art of cooking and dining. Price, $2.50. Published by Chas. L. Webster & Co., New York.

CATALOGUES RECEIVED.

The G. H. Minn Mfg. Co., Hudson, Ohio and Rutland, Vt., makers of evaporators.

Fashionably-bred Trotting and Thoroughbred Stock at Ashland Park Stock Farm, near Lexington, Ky. B. J. Treacy, proprietor.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

ALABAMA.—(Canebrake Station, Uniontown) Bulletin No. 9. Crops for ensilage; forage plants and grasses. (College Station, Auburn.) Bulletin No. 19, October, 1890. Roads and road making. Meteorology.

ARKANSAS.—(Fayetteville) Bulletin No. 13, August, 1890. Strawberries. Bulletin No. 14, September, 1890. The effects of the arsenites upon plants.

CALIFORNIA.—(Berkley) Bulletin No. 88. The use of fertilizers in California.

CANADA.—(Guelph) Bulletin No. 52, June 16, 1890. Corn ensilage and roots as food factors in swine feeding. Bulletin No. 54, October 1, 1890. Black knots on plums.

CONNECTICUT.—(New Haven) Bulletin No. 104, October, 1890. Analyses of fertilizers.

LOUISIANA.—(Baton Rouge) Bulletin No. 2. Texas screw-worm. Bulletin No. 3. Report of the horticultural department. Bulletin No. 4. Irish potatoes.

MASSACHUSETTS.—(Hatch Station, Amherst) Bulletin No. 10, October, 1890. Report on special fertilizers for greenhouse crops. Report on small fruits.

NEW JERSEY.—(New Brunswick) Bulletin No. 72, October 4, 1890. Plant lice, and how to deal with them. Bulletin No. 73, October 6, 1890. Analyses and valuation of complete fertilizers.

OHIO.—(Columbus) Bulletin No. 7, Vol. III., August, 1890. Strawberries and raspberries.

TEXAS.—(College Station) Bulletin No. 12, September, 1890. The screw-worm (illustrated.)

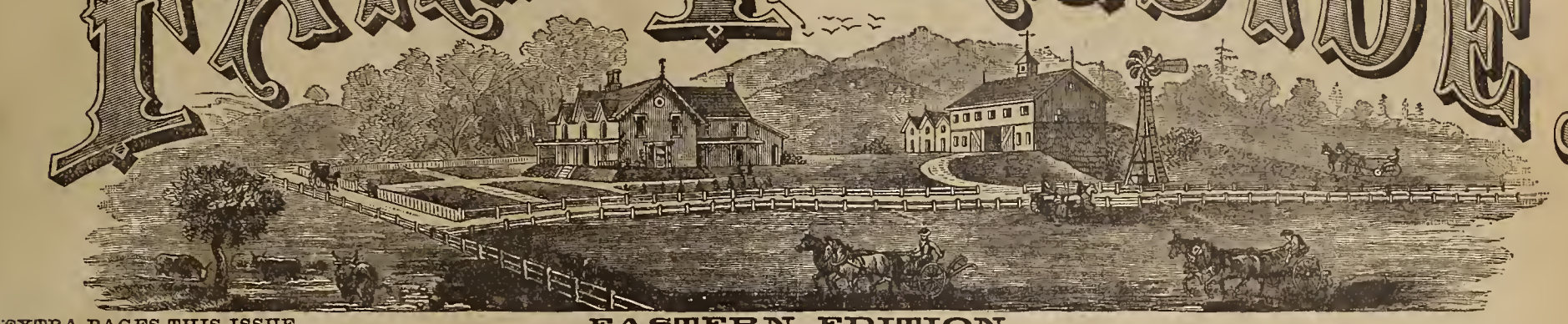
WEST VIRGINIA.—(Morgantown) Bulletin No. 7. Experiments upon wheat, fruit trees, garden seeds, grasses, forage crops and miscellaneous subjects.

WISCONSIN.—(Madison) Bulletin No. 25, October, 1890. Feeding bone meal and hardwood ashes.

The Markets.

	Chicago.	New York	N. Orle'ns
Butter.—			
Fancy Cream'ry...	25 @ 28	27 @ 29	30 @ 31
" Dairy.....	20 @ 24	20 @ 25	18 @ 19
Common.....	9 @ 11	10	10
Grain.—			
Wheat No.2w'nt'r	97	1 01½	.....
Corn, "	50 @ 54	59¾	66 @ 67
Oats, "	42½@ 48½	48 @ 57	56 @ 59
Live Stock.—			
Cattle, Extra.....	5 15	4 95	.....
" Shippers...	3 85@ 5 00	3 00@ 3 95	2 25@ 2 75
" Stockers...	1 65@ 3 00	2 85	.....
Hogs.....	3 10@ 4 05	3 50@ 4 20	4 00@ 5 00
Sheep,com.togood	3 00@ 5 25	4 00@ 5 60	2 25@ 2 75
" Lambs.....	3 75@ 5 65	5 00@ 5 20	.....
Provisions.—			
Lard.....	6 40	6 30	5 50
Mess Pork.....	11 85	11 00@12 25	11 75@12 00
Seeds.—			
Flax, No. 1.....	1 31	.....	.....
Timothy	1 22	.....	.....
Clover.....	3 50@ 4 30	.....	.....
Wool.—	Chicago.	Boston.	
Fine, Ohio & Pa...	.....	.....	.....
" Western.....	.....	.....	.....
" Unwashed..	18 @ 22	.....	.....
Medium,Ohio&Pa	.....	.....	.....
" Western.....	30 @ 33	.....	.....
" Unwashed..	23 @ 26	.....	.....
Combing&Delaine	.....	.....	.....
Coarse & Black....	18 @ 20	.....	.....

FARM AND FIRESIDE.



4 EXTRA PAGES THIS ISSUE. EASTERN EDITION.

VOL. XIV. NO. 6. PHILADELPHIA, PA., and SPRINGFIELD, OHIO, DECEMBER 15, 1890. TERMS {50 CENTS A YEAR. 24 NUMBERS.

Current Comment.

THE pet scheme of the Farmers' Alliance of the South is the establishment by the United States government of sub-treasuries for the purpose of receiving farm products and issuing treasury notes on them which shall circulate as lawful money. Does it now intend to abandon this scheme? The indications point that way. In Georgia the Alliance carried the legislature by a large majority. But in the very hour of their triumph these Alliance men turn around and elect to the United States Senate a man who has unequivocally opposed the sub-treasury scheme and denounced it as nonsensical. Ex-Governor John B. Gordon is an honorable, able man, well qualified and worthy of representing his state in the Senate, but the Georgia Alliance men go squarely back on one of their leading principles in sending him there. They certainly have no right to expect him to favor such a scheme in Congress, when he had the courage of his convictions to denounce it previous to and at the risk of his election. If this action on their part does not indicate that they are willing to abandon their pet scheme, it means that they do not know how to use a victory when they win it, and that they can never make such a measure the law of the land. Senator Vance, of North Carolina, although also strongly opposed to this impracticable sub-treasury plan, will probably be re-elected by men who favor it. It is doubtful if a single senator who favors the scheme will be elected.

THE sub-treasury scheme is only one form of the movement that is behind the Alliance, North and South, for an inflation of the currency. The Alliance has adopted the idea that agricultural depression can be relieved by an inflation of the currency. That an inflation of the currency, by some means or other, without any regard for the future consequences of such inflation, is one of the definite objects in view, there can be no doubt. President Polk, of the National Farmers' Alliance, alluding to the result of the last congressional elections, said: "People who believe that the issue was won on tariff lines are mistaken. *It was financial reform that caused the sweep.* The farmers did not make the tariff the issue. *They want more money, and they will get it.* By 1892 we will have things all our own way; the sub-treasury scheme will be adopted."

In the West the movement is in the form of a demand for the abolition of the national banking system and the issue of an enormous volume of treasury notes. But how will the farmers get more money? They must either sell more products or borrow it. It seems to be the iridescent dream of some of them that some arrangement can be effected by which they can borrow all the money they want direct from the government and never have to pay it back. But how are these loans to be secured? By a deposit of farm products as collateral, which is the principle of the sub-treasury scheme, or by mortgages on land? It is not likely that this country is ready to follow the example of Argentine in any wild inflation and land mortgage schemes. Any currency not redeemable in gold or silver coin is a failure.

THE following is the Alliance platform:

We demand the abolition of national banks and the substitution of legal tender; treasury notes in lieu of national-bank notes, issued in sufficient volume to do the business of the country on a cash system; regulating the amount needed on a per capita basis as the business interests of the country expand; and that all money issued by the government shall be legal tender in payment of all debts, both public and private.

2. We demand that congress shall pass such laws as shall effectually prevent the dealing in futures of all agricultural and mechanical productions; preserving a stringent system of procedure in trials as shall procure the prompt conviction, and imposing such penalties as shall secure most perfect compliance with the law.

3. We demand the free and unlimited coinage of silver.

4. We demand the passage of laws prohibiting the alien ownership of land, and that congress take early steps to devise some plan to obtain all lands now owned by aliens and foreign syndicates; and that all lands now held by railroad and other corporations in excess of such as is actually used and needed by them, be reclaimed by the government and held for actual settlers.

5. Believing in the doctrine of "equal rights to all, and special privileges to none," we demand that taxation, national or state, shall not be used to build up one interest or class at the expense of another. We believe that the money of the country should be kept as much as possible in the hands of the people, and hence we demand that all revenues, national, state or county, shall be limited to the necessary expenses of the government economically and honestly administered.

6. We demand that congress issue a sufficient amount of fractional American currency to facilitate exchange through the medium of the United States mail.

7. We demand that the means of communication and transportation shall be owned by and operated in the interest of the people, and we favor the United States postal system.

1. This plank contains an inflation scheme. In order to distribute these treasury notes among borrowers, the government must establish a system of loan bureaus, which will perform some of the functions of national banks. What assurance have we that such a system will be any better for the people than the present national banking system?

The second, fourth, fifth and sixth planks are all excellent.

3. If this plank means the free, unlimited coinage of silver, on exactly the same terms as gold, it is all right. If it means that the silver dollar shall be of such weight and fineness that its bullion value will be less than its face value; or, in other words, that the true value of the metal in a silver dollar shall be only three fourths the value of the metal in a gold dollar, then it is not right.

7. This plank favors the government ownership of railroads. It is a long stride towards nationalism. Government control, without ownership, will be sufficient to guard the interests of the people.

IN his annual message to Congress, the President speaks as follows on agricultural affairs:

The report of the Secretary of Agriculture deserves especial attention in view of the fact that the year has been marked in a very unusual degree by agitation and organization among the farmers, looking to an increase in the profits of their business. It will be found that the efforts of the department have been intelligently and zealously devoted to the promotion of the interests entrusted to its care.

A very substantial improvement in the market prices of the leading farm products during the year is noticed. The price of wheat advanced from 81 cents in October, 1889, to $1.00¾ in October, 1890; corn from 31 cents to 50½ cents; oats from 19¼ cents to 43 cents; and barley from 63 cents to 78 cents. Meats showed a substantial but not so large an increase. The export trade in live animals and fowls shows a very large increase; the total value of such exports for the year ending June 30, 1890 was $33,000,000, and the increase over the preceding year was over $15,000,000. Nearly 200,000 more cattle and over 45,000 more hogs were exported than in the preceding year. The export trade in beef and pork products and in dairy products was very largely increased, the increase in the article of butter alone being from 15,504,978 pounds to 29,748,042 pounds, and the total increase in the value of meat and dairy products exported being $34,000,000. This trade, so directly helpful to the farmer, it is believed, will be yet further and very largely increased when the system of inspection and sanitary supervision, now provided by law, is brought fully into operation.

The efforts of the Secretary to establish the healthfulness of our meats against the disparaging imputations that have been put upon them abroad, have resulted in substantial progress. Veterinary surgeons sent out by the department are now allowed to participate in the inspection of the live cattle from this country, landed at the English docks, and during the several months they have been on duty no case of contagious pleuro-pneumonia has been reported. This inspection abroad, and the domestic inspection of live animals and pork products, provided for by the act of August 30, 1890, will afford as perfect a guaranty for the wholesomeness of our meats offered for foreign consumption as is anywhere given to any food product, and its non-acceptance will quite clearly reveal the real motive of any continued restriction of their use, and that having been made clear, the duty of the Executive will be very plain.

The information given by the secretary of the progress and prospects of the beet-sugar industry is full of interest. It has already passed the experimental stage and is a commercial success. The area over which the sugar beet can be successfully cultivated is very large, and another field crop of great value is offered to the choice of the farmer.

LAST month there was organized, at Chicago, the greatest manufacturing corporation in the world—the American Harvester Company. It was formed by a consolidation of all the principal reaper and mower manufacturers of the country. Its capital stock is $35,000,000. This combine is not a trust, but an incorporated, straight out stock company, something stronger than a trust, and not amenable to the laws against trusts. As it is composed of twenty or more of the leading concerns engaged in the manufacture of harvesting machinery, it will practically have a monopoly of the business in the future.

The avowed purpose of the new company is to decrease the cost of manufacturing, distributing and selling reapers, mowers and binders. That the cost of production of harvesting machinery can be decreased greatly by this arrangement there can be no doubt. Whether the farmers will be benefited or not is another question. The organizers unanimously declare that the selling price of machines will not be increased, and some of them promise that they will be lowered. The company can cheapen their product. Their savings over the present cost of production will insure large profits. Whether this company will share the benefits to be derived by consolidation with its patrons remains to be seen. The Standard Oil Company has cheapened oil to consumers, but it has undoubtedly kept the lion's share of the reduction that has been effected in the cost of production and distribution of oil.

The American Harvester Company will continue the manufacture of all the standard machines, and the purchaser can have any kind that he prefers. Owning and operating two large twine factories, the company promises that the farmers, hereafter, shall have cheap twine. It hopes to effect a great saving in a complete reform of the methods of selling machines and collecting the pay. These things and many others are possible, but the farmers will look on this gigantic monopoly with great disfavor until it fulfils its fair promises.

It is reported that the threshing machine manufacturers are endeavoring to form a similar combination. The aggregation of capital is the tendency of the times. Combination is taking place in manufacturing, mercantile and commercial pursuits. The cheapening of the cost of production and distribution is the sound business reason that is behind the movement, which is proceeding according to the laws of the development of modern civilization. That the consumers, as a rule, do not receive their share of the benefits of the reduced cost of production, is the evil for which there is yet no applied remedy.

SOME kind and obliging friend of the adulterators of hog's lard is sending out from New York a little pamphlet which he calls the "Farmer's Primer." The farmer who can be deluded by it has never advanced beyond the primer. It is intended to be an argument, but is only a vile attack on the Conger lard bill. The pamphlet is dedicated to farmers by "one of them," but its real purpose is to help the cotton-seed oil corporations and the compounders of cotton-seed oil and animal fats. One of its misleading statements is that the mixers of 320,000,000 pounds per annum of compound lard are the best customers of the hog raisers. Every farmer knows that every pound of adulteration made and used, displaces a pound of the pure article. Again, if cotton-seed oil is wanted by consumers as a substitute for lard, why is it not sold on its merits? Why not call the mixture compound cotton-seed oil instead of compound lard? It finds its present market by being a fraud.

LET our inquiring friends who are interested in onion culture exercise their patience for a little while longer. In one of the forthcoming issues of FARM AND FIRESIDE "Joseph" will give the full details of the new method of onion culture. He is also preparing an illustrated pamphlet on the subject, which will be a valuable addition to garden literature.

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COMMENTS ON STATION BULLETINS.

BY JOSEPH.

Small Fruits.—The Ohio Experiment Station, in bulletin for August (Vol. 3, No. 7 of second series), gives a report on the newer varieties of strawberries and raspberries. In his summary, Prof. Wm. J. Green tells us, and correctly, too, that the most valuable varieties are the least variable, and easily suited to soil and climate. The following strawberry varieties have been thoroughly tested, and are suited to the wants of those who grow berries for market: Bubach, Enreka, Haverland, Crescent, Warfield. Where large berries are desired, rather than quantity, the following can be recommended for home nse or for market: Cumberland, Crawford, Gandy, Louise, Lida, Miami, Pearl. The most productive varieties are those that have a long season; that is, give a comparatively large number of pickings. Very early and extremely late varieties are less fruitful than the medium early. Perfect-flowered, as a rule, are less productive than the pistillate or imperfect-flowered varieties. In regard to the varieties that appear to be most promising, my own ideas may be somewhat at variance with Mr. Green's, and probably the growers generally are not entirely agreed on this point. Soil, season and treatment have considerable bearing upon the outcome with most of these sorts.

Of raspberries, the blackcap varieties now considered the most reliable are Gregg, Hilborn, Ohio, Palmer, while the red sorts succeeding best are Turner and Shaffer, and the best for shipping, Brandywine and Marlboro.

The Arkansas Industrial University Experiment Station (Fayetteville, Ark.,) also gives a full report on strawberries (bulletin 13), but in its summary it comes to altogether different conclusions concerning the merits of the varieties. The report includes 71 sorts. Warfield No. 2, Daisy and Louise are named as the heaviest croppers, while the following are recommended for the home garden: Sharpless, Haverland, Bubach, Crescent, Warfield.

I know something about the work and care required to keep these test lots of a hundred or more varieties. If we want to be fair with all sorts, we have to make a new plantation of *all sorts every year*, as it would not be just right to compare the first crop of some new sort with a second or third crop of older ones. It hardly seems to me necessary for the stations to continue testing the whole list year after year. The older and less valuable varieties might be mercilessly thrown ont, and only a few of the best retained as standards for the comparison of the newer ones. The following, for instance, have long since been given their proper standing: Jersey Queen, Kentucky, Bidwell, Jas. Vick, Monarch, Pres. Lincoln, Capt. Jack, Jewell, Chas. Downing, Iron Clad (or Phelps), Daniel Boone, Manchester, Piper, Glendale, Mt. Vernon, May King, Belmont, Atlantic, Miner, Sharpless, Hoffman, Monmouth, Gandy, Ontario and a large number of others that are now surpassed by better sorts, or, at least, are valuable only for a few sections; and we might as well strike all of them from our list of test varieties. The Arkansas station even reports on Jumbo and Big Bob. This is too much of a good thing. Let the stations be relieved of so much unnecessary labor. It is wasted energy. If a few leading sorts, like Wilson, Haverland, Warfield, etc., are retained, they will fully answer as a standard of comparison for the new varieties. The individual grower must decide about the value of new varieties in the last instance. Where the stations can do us real service is in *preliminary* tests. The public should refuse to buy new sorts until the introducers have given the stations a chance to test them in comparison with the best of the older ones, and the stations have pronounced them at least promising. If this could be done, the stations would save us much trouble and expense in testing worthless novelties, and do much more effective work than is done now, by the laborious undertaking of testing hundreds of varieties *after* they are introduced to the public.

Determining Milk Fats.—Bulletin 12, of the Pennsylvania State College Agricultural Experiment Station, contains a number of so-called simple methods of determining milk fats. The description is quite elaborate, and made comprehensive by means of illustrations. But, while the methods are simple enough for the chemist, I do not thiuk they will be of any earthly use to the ordinary farmer.

The same bnlletin calls attention to the "dried brewers' grains" prepared by the Pabst Brewing Company, of Milwankee, Wis. The refuse brewers' grains have long been recognized as excellent food for milch cattle, but it is a very watery material, expensive to carry great distances and difficult to preserve, being highly fermentable. It has heretofore been found difficult to dry it economically, so as to make its preservation and transportation possible. Recently, the company named have dried the grain at a low temperature by means of a vacnum process, and without pressure. This dried material analysis is as follows:

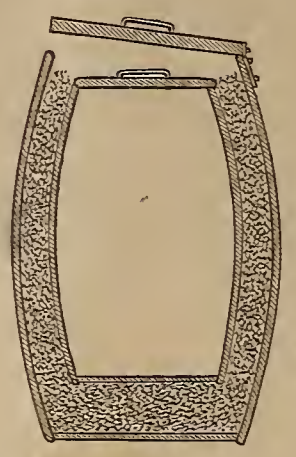
Moisture	7.44 per cent
Fat	9.19 "
Fibre	17.72 "
Nitrogen, free extract	39.67 "
Protein	21.50 "

Out of the 21.50 per cent, 17.44 per cent consists of true albuminoids. In composition the material lies, in most respects, between linseed meal and wheat bran, save that it has nearly twice as much fibre. If placed upon the market at such a price as to compete with other foods of its class, it will undoubtedly prove a valuable addition to our list of highly nitrogenous by-products, useful as cattle foods.

The Screw Worm.—Bulletin 12, of the Texas Agricultural Experiment Station, contains an account of the screw worm, which is the larvæ or maggot of a fly somewhat larger than our ordinary house-fly, and well distributed over the whole American continent, but of real economic importance to us only in Texas. Cattle suffer most from its ravages, bnt uearly all domestic animals, and even human beings are subject to its attacks. The fly lays its eggs in wound sores, and even in the natural openings of man and animals. While the larvæ are developing, the flies are constantly laying fresh eggs in the wounds, so that the young worms take the places of the matured ones, and thus keep up a constant and progressive loss of tissue. If the worms are not killed, they eat constantly deeper, and often kill the auimal. Sometimes the abdomen is opened and the bowels escape—as is especially liable in case of heifers spayed through the abdomen. At other times, a tail is eaten off, or extensive caverns are made into the muscles. The larvæ may be killed with cresylic ointment, calomel, chloroform or carbolic acid. All treatment should be supplemented by daubing the margins of the wound with pine tar to ward off the fly. A vast number of cases can be prevented by keeping cattle free from common cattle ticks.

PIGGY'S PUNCH BOWL.

A serviceable and cheap swill-tub, capable of protecting its coutents from the coldest weather, can be easily arranged on the following plan: Take a large cask or oil barrel, and having set it where it is to stand for use, cover the bottom with straw about a foot deep, or more, pressing it down firmly. Within the cask or barrel place one of smaller dimensions and pack straw tightly between the two: then fit a cover to the inside barrel, which, for convenience, may be held in place by leather hinges. Be careful to have the top of this inside barrel at least six inches below the top of the outside one. Lastly, fit a cover in the same way to the top of the outside barrel and the swill-tub is complete. Be sure and set the tub where it can be easily reached by the women of the household, and where they will not be compelled to use a flight of stairs every time it is wanted.—*New England Homestead.*



WINTER FEED.

In many parts of the country the grass has been frosted, and though the cows will still eat it, it is not nutritious feed, and we must depend upon our winter stores if we want the cows to do their best. As long as the weather is good and the ground not frozen, I let my cows have the run of the pasture; this I do because they are better satisfied to be out of the yard, but after cold weather begins and there is no prospect of grass making any growth, I keep the cows confined to the yard and stable.

ENSILAGE.

If the dairyman has plenty of ensilage, it is a good plan to begin to feed it before the grass is all gone, so that there will be no abrupt change in the feed and the cows will be all ready to go ou full feed of ensilage when grass fails. Ensilage being a succulent feed and having grain mixed with it, there ought to be but little shrinkage of milk when the cows are gradually changed from grass to ensilage. Some dairymen pull the ears from the ensilage corn before cntting it into the silo, but I see no advantage in this practice, unless the corn is needed to feed dry to horses or other stock. One writer said he found the ensilage with no grain in it just as good as that which had all the ears left on, but I don't see how that can be if there is any value in corn as a grain food, and we all know there is. When we cut up the grain with the fodder and put all together in the silo, we save a vast amount of labor and time in husking, shelling, hauling and grinding the corn. Feeding whole corn in ensilage is the only practical way of feeding it to cows without waste.

HAY.

Clover hay stands next to ensilage as a dairy feed; with plenty of clover hay and ensilage we have a very good ration for milk and butter. Timothy hay is not so good as clover, though if it is cut when just going out of bloom and nicely cured, it makes good cow hay. Red top stands lower than timothy, and orchard grass, first crop, I rank lower than any of the others named. The second crop of orchard grass I like better than the first, as it has no woody stems in it and the cows seem to like it, too; but the yield is small. I have given up the cultivation of orchard grass for hay, but still believe in it as a pasture grass.

GRAIN.

When we have ensilage that averages one good ear to the stalk before cutting, we need not concern ourselves any further about corn as a grain feed, but there are other kinds of grain that we should feed, when the price will justify purchase. Linseed meal—old process—I think ranks first among the grain foods we bny; it is especially adapted to feed with corn ensilage, is a good feed for both milk and butter, makes a rich manure, keeps the cows in a healthy condition and for calf feeding is excellent. Bran is also a good feed to use in connection with ensilage and clover hay, but I don't think it is as cheap at present prices as linseed meal. A good deal of bran as now made is very filthy, having the sweepings of the mills mixed with it, and also a large per cent of mouse and rat manure; when in this condition it is not a valuable addition to the cow ration. Middlings are heavier than bran owing to the larger per cent of flour in them, and weight for weight they are considered no more valnable; but I always get better results from feeding middlings than bran. It should be remembered in feeding bran and middlings in competition that equal values in money should be fed, not equal measures. Oats are ont of the question this winter on acconnt of price, but there is no better feed, in my experience, than corn and oats ground together. Buckwheat bran I think very little of and corn bran but little more, unless when it is made at hominy mills and contains all the soft parts of the grain; then it is a good cow feed, perhaps better than if it had the whole of the corn in it.

ROOTS.

Mangels are a very usefnl root for feeding to dairy cows when there is no ensilage; they should be cut up and the grain feed sprinkled over them. Turnips are a poor cow feed and will flavor the milk if fed freely. Ruta-bagas are very good, but more expensive to grow than mangels; the same may be said of parsnips and carrots. Potatoes I have not a very good opinion of as a cow feed, but they add succulence to the winter ration and so far are good. Pumpkins—which may be classed with roots—are good, but must be fed early, as they will not keep well. The seeds act on the kidneys, and if pumpkins are fed liberally, part of the seeds should be removed before feeding; otherwise I should expect a shrinkage in the milk yield.

A RATION.

If I could select just what I preferred from the list of foods here given for a winter ration, I should make it from ensilage, clover hay, linseed meal and middlings, the linseed meal—old process—and the middlings heavy. If I had to substitute timothy or any other hay for the clover, I should use more of the linseed meal and middlings. As to the quantity to be fed, definite directions are hard to give; so much depends upon the cows, the climate, the purpose for which the cows are fed—milk or butter—and, above all, on the feeder; while one feeder will get good results from a certain ration, another will get poor. But I would make ensilage the principal feed, giving a bushel twice a day with all the clover hay the cows will eat after they have eaten the ensilage. The meal feed mnst depend somewhat upon the amount of grain in the ensilage; beginning early in the season with two pounds a day—of linseed meal or bran—increase the feed gradually till the pail or churn shows no profitable increase in the milk or butter we are feeding for. But don't get your cows off their feed by too sudden an increase in their ration.

A. L. Crosby.

THE PEACH.

In my first chapter on the peach, I showed that the tree and fruit buds could be easily bred up by raising seedlings, generation after generation, from a variety showing ability to withstand severe cold in these points. I will now relate another experiment giving still more valuable results. Some twenty years ago, while carrying on the nursery business in Illinois, I received a letter in the spring from a man in a neighboriug town, saying he had a hardy peach and that he would like to exchange six of them for an equal number of Wild Goose plum trees. He stated that his variety had borne a full crop of peaches the season just past.

I knew that the winter before had been as cold as twenty-six degrees below zero; therefore, I wrote him to send on his trees. When they came, to my disgust, I found that they were seedlings, but all looking very nearly alike, with pale green,

very smooth bark, I planted them in not a first-class location and they all grew. The next winter being very severe, two of them were killed. I noticed that one of them, the strongest grower, was scarcely injured at all; it had a few blossoms on it that spring and matured four peaches, the seeds of which I carefully planted and from them got three trees. The next winter was not so severe—I think, 26 degrees below zero—and three of the trees gave fruit, while the fourth one was dead. The best tree gave nearly a full crop of clear white peaches, not large, but very fine in quality. The other two fruited sparingly of not nearly so large or so good fruit, showing traces of red aronnd the seed.

The seeds from the best tree were again saved, but forgotten the next spring and not planted; of the three young seedliugs, two were killed by the cold. The next winter was severely cold—28 degrees below zero—after a dry autumn and killed all the trees except the best one and its remaining seedling. The old tree did not bloom; the young tree bloomed sparingly but set no fruit. The next winter was milder and both trees set an enormous crop, so that the fruit had to be severely thinned. I was from home when they ripened, but was told that the fruits from the two trees were almost exactly alike. The seed was not saved. The next winter was the coldest ever known, with several blizzards as cold as 26 to 28 degrees below zero, culminating in the mercury sinking to from 32 to 35 degrees one morning. This sorely crippled both the remaining trees, though they gradually recovered, and so ends their history, so far as I know, for I left the worst of all climates and came here to California, where both peach trees and men can live.

I have written of this strain of peaches as if they were the pure thing; yet, I am fully convinced they were not. I am confident the stock was a hybrid between the Snow peach and the Chickasaw plum. Why? They showed that they were hybrids in many points first, the frnit buds were very small, having the peculiar form and size of this species of plum; second, the flowers were very small and pnre white, with calyx, stamens and pistil, more nearly like those of the Chickasaw plum than the peach; and third, the greatest peculiarity about the older tree was that it suckered qnite freely from its roots, a thing I have never known or heard of a pure peach doing, which, as is well known, is a striking peculiarity of the plum.

The fact is now well known that nearly the whole of the stone fruit family, and, perhaps, the whole genus rosaceæ, can be hybridized, the one species with another.

On the gronnds of T. V. Munson, Denison, Texas, and of Luther Burbank, Santa Rosa, Cal., numerous examples of such hybrids can be seen growing to-day, as well as hybrids between scores of other distinct species in Mr. Burbank's great experiment gronnds, even true hybrids between the raspberry and strawberry. The peach and Chickasaw plum have been known to hybridize naturally when the trees were growing near each other. The Blackman plum is an example of such an accidental hybrid, thongh its imperfect flowers renders it of no valne. We all know that the Chickasaw plum is very much hardier in every way than the peach, and even a very minute infusion of its blood into the peach might make a vast improvement on its hardihood, both in tree and fruit buds, and its general health, and not materially injure the fine quality of its frnit.

None of us as yet know even the A B C's of hybridizing in fruits. Burbank, who has made greater strides in this line than any other living man, freely admits that he can have little idea what effect the pollen of one species will have if applied to the pistil of another species, and is absorbed and frnctified by it. Nearly all of us have the idea that if we prodnce a hybrid between two species that it will have all the characteristics of the two species plainly commingled. This is far from being true. A seedling grown from seed, from the flower of one species fertilized with the pollen of a distinct species, may show in itself no visible change from the mother species whatever. But if its seeds are sown, they may show every gradation between the two species, and some of them may be far removed from either, though usually the first generation shows marked changes.

In hybridity there is a grand chance for valuable experiments. Therefore, in my next chapter I will give a few facts that have come under my own observation.

California's fruit season has rounded ont nobly All fruits have given their nsual average crops of fine qnality, and all have been marketed with great profit. After all the blowing and booming, I am confident that more net money per acre will be reccived from acres of the staid old apple in this Sonoma county than from acres in any other fruit, in any part of the state, and they paid very nearly as well last year. I would hardly dare publish the retnrns from some of our best cared-for orchards, planted with the best market varieties of apples, but may do so at some future time. Some portions of this connty are well-nigh perfection, both in soil and climate, for the production of choice winter and also early apples. There are thousands of acres of this soil as yet unimproved, that can be had at very reasonable prices. What think you of $1,200 to $1,800 in gross returns yearly, and not semi-occasionally, from an acre in apple orchard? D. B. WIER.

CHEAP LOG-RACK.

Fig. 1 represents the rear axle and bolster of a low wagon or truck, with an easily-made and cheap log-rack. The rack consists of two bed pieces, A A, running parallel with the reach, 3 by 6 inches in size and 12 feet long. These are notched one inch deep onto the bolsters of the truck. At the rear end of these bed pieces are three sets of notches to permit of lengthening the gear for longer logs. One set is 8½ feet from the forward end, to permit of drawing railroad-tie logs; the next, 10 feet, and the last at the extreme end, permitting a 12-foot reach, which will allow of loading logs 20 or 21 feet long.

The false bolsters, B, are of the same size as the bed pieces, 3 by 6, and are notched onto the latter one inch, making the height from top of truck to top of false bolster 10 inches, or just the height of stakes in the trnck for which this rack was originally made. Where the stakes are bnt 9 inches the bolster mnst be notched an inch deeper; and if 11 or 12 inches, the bolster can be thickened by spiking on a 1 or 2-inch piece on top. This is cheaper than getting a special size for a thicker bolster, as the bolsters are sawed from the ends of the bed pieces, a 16-foot hemlock scantling making one bolster and one bed piece.

The forward bolster is bolted to the bed piece with ¾-inch bolts. These bolts are 13 inches long and drop into holes bored into the truck bolster 3 inches. A thread is cut on the lower four inches of the bolts and a burr tnrned np into the lower bed piece, a 2-inch auger hole having been bored one half inch deep to receive it

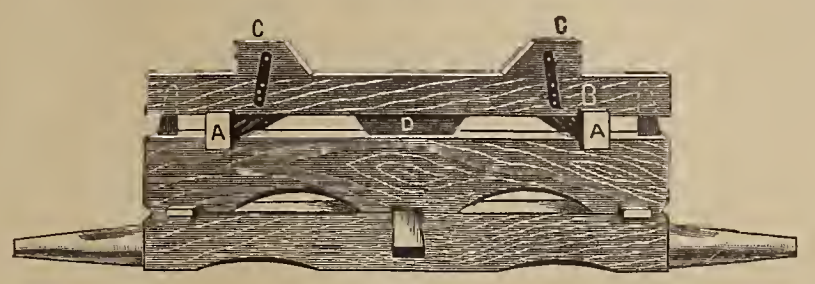


FIG. 1.—CHEAP LOG-RACK.

without marring the real bolster on which it rests. At the rear bolster the bolts are simply dropped in without burrs, it being necessary to change the length of gear quickly and easily to suit different lengths of logs. In passing, I might say that it is a good plan to fill the holes in the real bolster with soft wood plugs, fitting closely and dipped in paint before driving in, at such times as the log-rack is not in nse. This is on the supposition that the truck is a farm wagon, in nse for logging only a few days or weeks in the year. This prevents the holes from filling with dirt or sprouting seeds and rotting the wood; the plugs are quickly bored out when necessary. The four holes in the bolsters are all the preparation necessary to fit the truck for the rack.

The false bolsters have a slot cut in each end to fit the stakes. This is easily made by boring an inch hole near the end and sawing out the wood at the end. D is a piece of scantling toe-nailed onto the nnderside of the false bolster, just thick enough to rest on the truck and distribute the weight. C C are adjnstable blocks to hold the logs in place. As generally made, very little headwork is used in boring the holes or adjnsting the straps, and I know of several log-trucks, used the year around, where this arrangement is about as unhandy and incomplete as can be. A few words and a description of a form of attaching blocks so that they can be placed at any point on the bolster at intervals of an inch, may not be amiss. In Fig. 2, G represents a thin iron strap 1½ inches wide and 8 inches long, with fonr holes, X, near one end, and A 4 inches from X, B 4½ inches from X, and C 5¾ inches from X. Two straps like this are attached to each block, the bolt passing through the hole, X. A common, ⅝-inch carriage bolt may be used, and it is well to batter the end, after turning np the bnrr, so that it may not work loose. The measnrements are from center to center.

Fig. 2 shows how it works in practice. D is the block with strap attached at X. X is bored 2 inches from the bottom of the block. L is the bolster, and when the hole which is bored two inches from the top is directly nnder X, the hole, A, in the strap is just right for the bolt that passes through the bolster. By shifting the block two inches, or to the dotted line, J, the hole, B, comes right, and shifting two inches farther, the hole, C, comes right to use. The holes in the bolster shonld be five inches apart, and then by slanting the straps the other way to an adjoining hole, the block will come half way between. With blocks adjnstable to changes of one inch, a little chopping away of rough bark will enable the lnmberman to secure a log quickly and closely. A carriage bolt with easily-tnrning bnrrs proves, in practice, to be best for the bolts that must be removed to change the blocks. Spring keys become rnsty and bent and immovable, and leather thongs lose ont and bolts and blocks are lost in consequence.

In conclusion, a log-rack like the one here described, taken to pieces, takes but little storage room and will last a lifetime.

L. B. PIERCE.

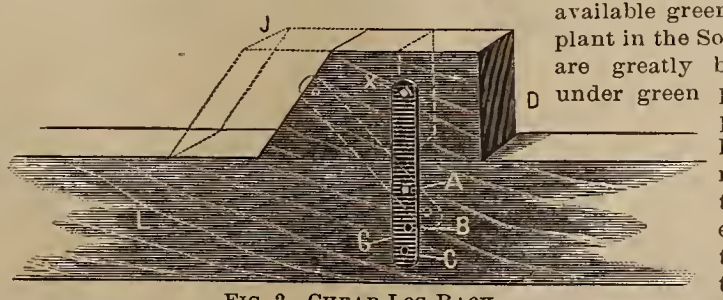


FIG. 2.—CHEAP LOG-RACK.

LET US HAVE PEAS!

There are many reasons why southern farmers should plant plenty of stock peas. Their value as fodder and pasturage is alone sufficient to commend them; but these qualities are by no means their only recommendation. They are the most available green manure crop we can plant in the South. All kinds of soil are greatly benefited by plowing under green pea vines. The sugar planters of Louisiana have for years recognized the pea vine as the quickest and most effective renovator of their sugar lands that has ever been adopted.

New Orleans is the largest stock pea market in the United States. All varieties of this legume find ready sale there. The wholesale dealers in plantation snpplies buy thonsands of bushels every autumn from the farmers of Georgia, Alabama, Tennessee, the Carolinas and other states, and sell them in the spring to the planters, who sow them broadcast upon the fields they want to improve.

The most popnlar varieties for this purpose are the Clay and Tory or red pea. The little black pea is also very popular. All three of these varieties are very hardy, and the seed will lie on the ground through the winter without rotting, and come up the following spring in great nnmbers, thus saving one planting, where it is desirable to plow nnder two green crops in succession.

The Unknown pea is an immense vine producer and is gaining general favor in the South. It is also a prolific bearer, maturing its crops late in the fall. The Little Couch pea is also a great vine producer, but a poor bearer below the 30th degree of north latitude. The Whippoorwill is a speckled pea, a good bearer of the bunch variety, and is popular for hay, being easily cut on account of its bunchy growth.

For table use, the white varieties take the lead, and find ready sale in all southern towns and cities. Among the best of these are the Rice and Lady peas, both being small and very pretty in appearance, and the Blackeye, which is a large, plump pea and a fine bearer.

A new and very important use has just been discovered for stock peas. It is found that the cotton-boll worm, which annually destroys a great deal of cotton, is the same worm that bores into the green pea pods, green corn and green tomatoes. Mr. Jeff Welborn, one of the closest students of agricnltural problems in the South, says, in a recent letter to Texas *Farm and Ranch*: "I think I have found a solution to the boll-worm problem." He then goes on to state his observations of the boll worm in green peas, and says: "The peas seem to be more relished by the worms than cotton. I believe there are fifty boll worms in my pea patch to one in the cotton on each side of it." Mr. Welborn in this connection snggests that cotton planters sow peas near their cotton fields, so as to be in full bearing about the time the cotton begins to fruit, in order to divert the boll-worm fly or moth from the cotton to the pea patch.

I heard an old cotton planter say, not long since, that next year he intended to plant every alternate row in a cotton field with stock peas, in order to enrich the land. If Mr. Welborn's theory of the boll worm preferring the green cow-pea to the green cotton boll is correct, this planter will "kill two birds with one stone," when he plants every alternate row of his cotton field in stock peas. The following year he intends to reverse the rows, that is, plant cotton where the peas grew, and more peas where the cotton grew the preceding year. By following up this plan continnously, the cotton planter will not only protect his crop from the ravages of the boll worm, but also keep his land in a high state of tilth the meanwhile. DICK NAYLOR.

A RATION OF COTTON-SEED MEAL.

Henry Morse, of Delaware county, N.Y., who has become wealthy by dairying, says that he has fed cotton-seed meal to his cows for eight years, the first four in connection with other grains and after that pnre, except while the cows were dry and on coarse fodder they were given wheat bran and such grain as was produced on the farm. As soon as the cows came in full milk they were given hay twice a day and three quarts of cotton-seed meal in the morning and two quarts at night. The morning ration of meal was mixed with six quarts of sweet, skimmed milk. When at pasture they received two quarts of the meal a day. Following this practice he was able to keep twenty-five per cent more cows and make twenty per cent more bntter per cow than by any other grain method. The manure from the cows fed so heavily on cotton-seed meal was very rich and gave about double the crops of hay that other manures gave. The pastures also show it, and the increased value of the manure nearly pays for the cotton-seed meal.—*New England Homestead.*

Our Farm.

A CONVENIENT COLD PIT.

BY JOSEPH.

Some time ago one of the readers of Farm and Fireside, Mr. E. Bushyager, of Westmoreland county, Pa., sent me a plan of a forcing house that he intended to build this fall. A sketch of this is given in the annexed illustrations. In explanation I will say that the structure is built against a slight rise of ground or hillside; of course, on the south or south-east side, graded to the desired width. The plant-beds are directly on the ground where graded, and the alleys between them dug out two feet deep and one and a half feet wide. The roof is formed of ordinary hot-bed sash, or what is much better, of permanent sash-bars wide enough apart to admit panes 10 to 12 inches wide, and strengthened by thin, iron rods running across along the center of each side. Chances for ventilation are easily provided.

There are grave objections to this style of regular forcing house. The chief one is the easy access of the cold, open air to the pit by means of the entrance as here arranged. In a cold winter this might be ruinous to the plants. Another objection is the placing of the heater inside the pit itself. These objections would be avoided by having a furnace or boiler-room at the north or west end, with an entrance from there leading to the pit itself.

The evident superior convenience of the structure as planned by Mr. Bushyager, however, appeals strongly to my favor. While I could not recommend it as a warm house, and for plants of a somewhat tender nature, I have no doubt that it will answer very well for a cold pit for forcing spinach, lettuce, radishes, parsley, etc., and for growing early vegetable plants, as cabbages, cauliflower, etc., at least in localities where winters are not usually too severe. In New Jersey, southern Pennsylvania and thence south, large cold houses are now in use for just the purposes named, where no artificial heat is employed. Spinach is sown in the fall and comes off in February or March, in time for sowing radishes or setting out lettuce. All these crops are marketed in time when prices usually rule high; that is, several weeks in advance of the time that such crops could be produced in open ground. Cucumbers or tomatoes are planted just as soon as lettuce or radishes enough are taken off to make room for these succeeding crops. These cold houses, therefore, produce at least three successive crops each year, and their skillful management never fails to be remunerative.

Don't you think the possession of a pit as here described and pictured would be a blessing to many a farmer and his family? Not only does it furnish you the means of obtaining what green stuff may be wanted for the table during winter and early spring, and perhaps some to sell: not only does it enable you to grow a good supply of choice plants for your own use and for sale, but it also affords a fine place to visit during stormy days, to take comfort in contact with nature and to instruct the boys, or let them take their own valuable lessons in winter gardening. To make things more comfortable in cold days and nights, a gable of boards lined inside with galvanized iron or some similar arrangement, may be added opposite the point of entrance to give room for a cheap, small, coal stove.

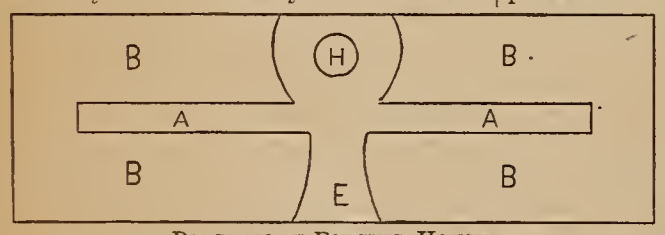


Diagram of Forcing House.
A, alley; B, beds; E, entrance; H, heater.

What will be the expense of such a cold pit? If we decide to have one about 40 feet in length it will take about 13 ordinary hot-bed sashes on each side—26 in all—or their equivalent in permanent sash-bars, besides the gable ends, which we will say equal six additional sashes. We then have to provide 32 sashes or their equivalent, which will cost about $64. The few boards and other lumber required in constructing a frame, the door and other fixings, will swell this to, say $75. Of course, the pit may be made longer or shorter at correspondingly increased or decreased expense. I think a convenience of this kind is worth, to any ordinary farmer and his family, all it may cost.

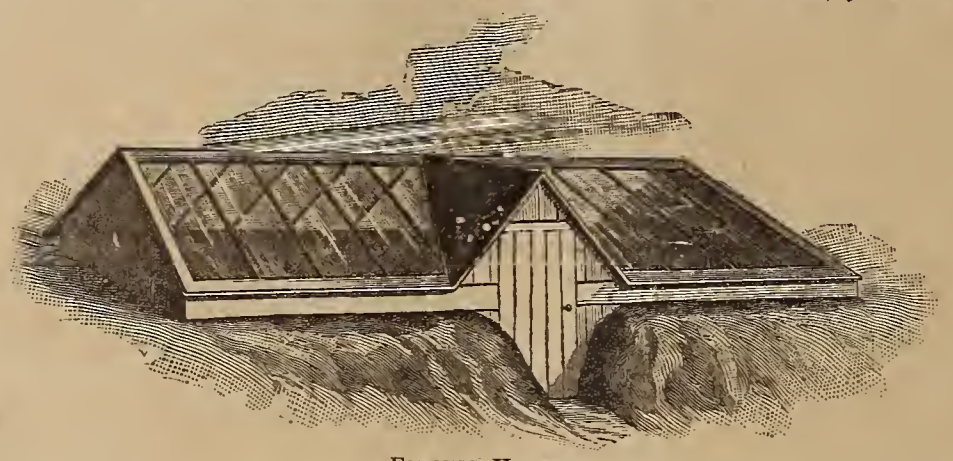
Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

PROTECTION OF APPLE TREES.

BY SAMUEL B. GREEN.

The term "sun scald" is applied to the wounds found on trees on their south or south-west sides. This seems to be a more common source of injury to fruit and forest trees in the western and northern states than in the East or South. Such wounds commence by the discoloration of the bark at some part exposed to the sun's rays, and ends in the dying and falling off of the bark. I have seen scarlet oaks, whose butts were exposed to the sun, that had the bark coming off for as much as twenty feet, or even more, on their south-west side. Very many apple trees are thus injured. What the cause is has often been disputed, but it is probable that it results from the action of the sap on the south side being suddenly checked after a time of warm weather, during which it had become very active where the direct sun rays warmed the trunk.



Forcing House.

There are several methods now in use, and of value to prevent or reduce loss from this cause. First, inclining the body and top of the tree to the south-west at an angle of about 60° with the horizon. By this means the direct sun's rays are kept off the trunk by the head which shades it. Second, the use of boards, paper, corn stalks, etc., to shade the trunk, or shading it by growing a small shrub on the south side.

Within the past two years some experiments made on a small scale have apparently secured results worthy of very general adoption wherever, from this cause, trees are injured. The results were secured by boxing up the young trees in the fall, as high as the branches, and then filling the boxes with soil. A tree thus prepared for winter has well nigh perfect protection for its trunk, both from climatic and insectivorous troubles. It bas been found that trees thus treated make a much stronger growth the following summer than trees not protected. Further, such trees can never become black hearted, for they are perfectly protected, and are as safe from sun scald as the roots in the ground. While this has been shown to be the case only after a short trial, yet we all know the advantages of a covering of earth over our plants, and that it is the best kind of winter protection for them. We rarely have much sun scald on the branches of trees, for they shade one another.

It seems, therefore, that if we can by this means preserve the vitality of the trunk there will be much greater recuperative power in the whole tree in the spring. It is recommended to take the boxes off each spring, but I think it may be found that leaving the boxes on all summer will be beneficial, though we may find that the trunks will be made too tender by being covered all summer; and perhaps in very wet seasons the trunks may send out roots into the earth in the boxes, which would be bad, unless the butts were to be protected during the life of the tree. However, I am inclined to think that even did the tree send out roots from the stem, the box could be taken off in summer for a few seasons until the bark had become covered with a thick, corky layer, when, if desired, the protection might be discontinued.

TWO POPLAR INSECTS.

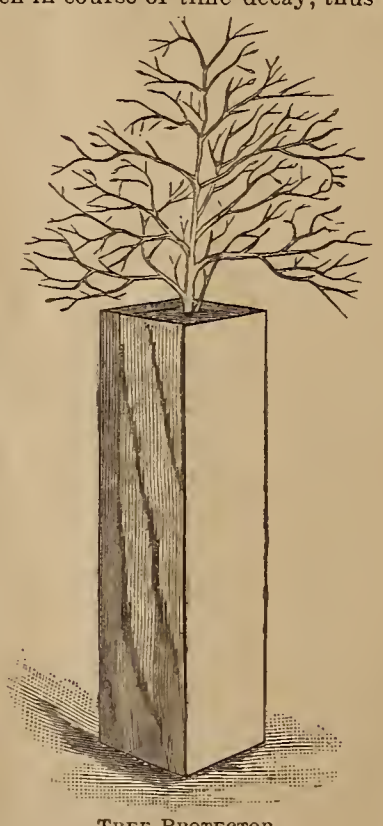
THE POPLAR BORER.

BY PROF OTTO. LUGGER IN MINNESOTA EXP. STATION BULLETIN, No. 9.

This large, bluish-gray beetle, finely punctured with brown, with four ochre-yellow lines on the head and three on the top of the thorax, with an ochre-yellow scutel and several irregular lines and spots of the same color on the wing-covers, measures nearly 1½ inches in length. It is one of the most destructive insects in the Western states to the cottonwood, poplar and even willow. The beetle is found in August, usually resting on the trunks or branches of the various trees infested by it; it is, however, quite active during the night, and sometimes enters open windows, attracted by a burning light. The injury done to the trees is caused by its larva. This larva, one of the so-called *round-headed borers*, is about two inches long, has a very thick body, which is rather large in front. The first segment is broad, sloping obliquely downward to the head. The larva is a yellowish-white grub, without any legs. It bores into the solid wood of the infested tree.

THE POPLAR GIRDLER.

This is a very much smaller beetle of uniformly gray color, with no spots, with black antennæ stained with gray at the joints. Its larva is very injurious to sapling poplars, and by mining around the trunk, forms large, gall-like swellings, which in course of time decay, thus killing the plant. Frequently the tree is killed by the larva girdling the trunk.



Tree Protector.

The females of both insects deposit their eggs in cracks and depressions of the trunk, and the young larvæ feed at first below the bark. After hibernation they penetrate into the solid wood, forming irregular channels filled with their excrement, looking like saw-dust. It seems to require two years for the larvæ to mature, as we always find larvæ of two sizes in the same tree. When full grown the larva makes a hole leading to the open air, fills it with chips and saw-dust, and retreats to the interior of the burrow, where it changes to a pupa, which in due time transforms into a winged insect, which leaves the tree by the hole prepared by its larva.

The beetles are very sluggish during the day and can be gathered in large numbers. Painting, from time to time, the trunks of the trees with a mixture of soft soap and Paris green, prevents the females from depositing their eggs. The presence of larvæ is also easily discovered by a discolored blotch upon the bark, and by the little heaps of saw-dust that are pushed out by them during their boring operations. The larvæ can be killed by means of a wire, or can be removed with a pruning knife. Perfectly healthy trees but seldom harbor these borers, and taking pains to have thrifty trees is the best prevention.

Quite a number of different species of parasitic Ichneumonidæ assist us in our war against these noxious borers.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Apple-root Plant Louse.—K. S. K., Jefferson City, Mo. The most successful remedy yet used against this pest is scalding hot water applied around the roots of the trees. If the trees are to remain in the soil the roots may he laid bare and the water nsed nearly hoiling hot without injury. But where they have heen taken up for transplanting and are to he dipped in hot water, the temperature should nót exceed 150° Fahrenheit; under these circumstances from 120° to 150° would be hot enough. A mulch placed around the trees for some time previous to treatment, has heen fouud of use in hringing the lice near the surface, where they can he the more easily reached hy hot water. It will be a good plan for you to try the hot water this fall, hut in the spring you should make another attempt to destroy them, and then put on a mulch and try the hot water again as late as August.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

NEST FOR EGG-EATING HENS.

MR. WM. K. KIDDER, Corry, Pa., sends us some designs of a nest not only for egg-eating hens, but also for sitting hens or hens that disturb others. Mr. K. has given it a trial, finds it a great improvement and advantage, and describes it as follows:

In the drawings, Fig. 0 is a board 12x14 inches, with a cleat 4 inches wide nailed across, to keep the board from splitting, and which serves as legs for support in a nest-box. The board is sloped in the center, clear through to the other side, making a hole about 4 inches in diameter, which should be cushioned a little, forming a recess for the hen's body, cotton or matting tacked on for that purpose. We

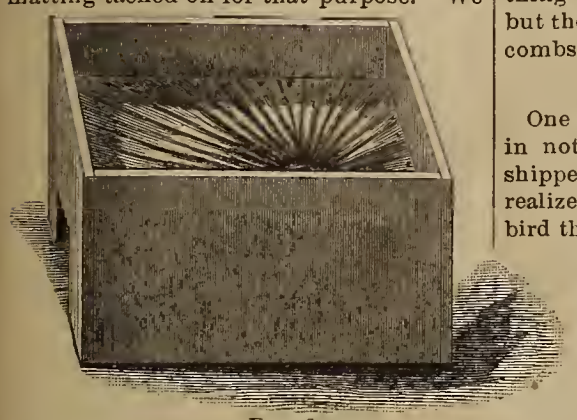


FIG. 6.

now place a border, 1½ inches high, near the edges of the board (Figs. 1 and 2), covered with canvas, tacked close (Figs. 1 and 6).

Fig. 3 shows the board bottom up, and Fig. 2 shows a side view of the board. The cleats are nailed on the underside of the said board, to support the balance-board. The balance-board has two arms nailed to it, shown in Fig. 3. The pivots, or pinions, are of six-penny wire nails, while the arms are made of thin edges of shingles, covered on the top surface with canvas, and a china nest-egg is shown on top of the canvas, fastened with a fine wire thread.

In Figs. 2 and 3 a button is shown, and is adjustable, hence, shown in any position, used as a balance. The screw which attaches it to the balance-board is at or near the small end of the button, and into the balance-board near the line of its axis, between the pivots in which it operates, is a dump, which lodges the eggs on a thin layer of chaff on the floor of the nest-box. If the egg be too light, turn the button to the left; if too heavy, turn to the right.

Fig. 6 shows a box suitable for a nest, with a trap dropped into it. The canvas of the hole, also the nest-egg is shown. A square hole is cut in the end of the box near the bottom, through which the eggs are taken out when the hen is on; other-

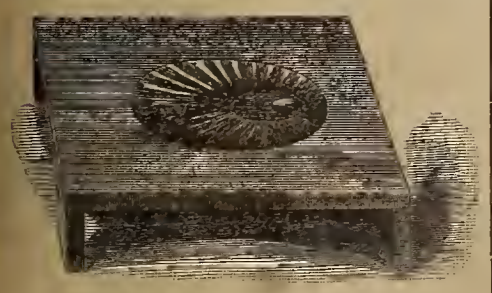


FIG. 0.

wise, the trap may be lifted up to take them out. The pivot should be put in place after the nest-egg is fastened on the canvas, and near the lower edge of the board (Fig. 2). Also, a slide door should cover the opening (Fig. 6), to prevent eggs from rolling out.

Fig. 2 shows the trap in position, ready to receive the egg, the button being adjusted so as to dump the egg without disturbance. It must not dump too easily, or the hens will not occupy the nest.

Mr. K. then gives his experience in fooling the hens, and breaking them from egg eating, and advises our readers to try it.

INSECTS ON FRUIT TREES

Can be destroyed by spraying with London Purple. Diseases of grape vines can be checked by spraying with Bordeaux mixture. The Field Force Pump Co., of Lockport, N. Y., manufactnre the Knapsack Sprayer and a full line of Orchard and Vineyard Outfits. Write them for circulars and directions.

KEEPING EGGS FOR HATCHING.

If the weather is not too cold, the eggs may be placed in the cellar, on trays or racks, and turned half over twice a week. Any temperature above freezing, so that the eggs are kept cool, will answer. Eggs kept in this manner will hatch when six weeks old, and the chicks will be as strong and as active as those from freshly laid eggs. If any of our readers have doubts on the matter, let them try the experiment with a few eggs at first.

ROSE-COMB FOWLS.

It is claimed that the rose-comb is not as liable to the effects of the frost in winter as are the single combs. We do not know how this theory ever originated, but there is much more surface exposed to the action of cold on the rose-combs than on the single combs. In our *experience* with both we find the rose-comb fully as liable, and when attacked by frost its broad surface renders the injury more severe than with single combs. Something depends on the size of the comb, but the comparison is made here of large combs.

MARKET STOCK AND PRICES.

One reason why some are disappointed in not securing high prices for poultry shipped to market, is that they do not realize the fact that it is not the size of a bird that gives the value, but the quality. The carloads of scraggy stock that reach the market is enormous, and yet a majority of the persons who make such shipments suppose that the best prices should be obtained because the quotations vary but little when the demand is great.

A fat, plump fowl will sell readily, and at more than the market price, but a poor and inferior carcass, no matter how much it weighs or how fresh it may be, will not pass out of the merchant's hands until all the best stock is gone. When prices are quoted, it is better to take a price between the highest and lowest figures given, as the value of the stock sent, and you will not be so liable to disappointment when the merchant sends his returns to you.

TURNIPS AS POULTRY FOOD.

The turnip is not rich in the elements necessary for the purpose of the hens, but

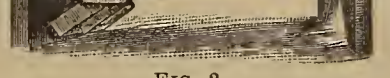


FIG. 2.

it promotes health and egg production by affording a change from the dry food in winter. A mess of cooked turnips, to which ground grain is added, will prove more beneficial than either turnips or grain alone. For this reason the turnips can be used profitably for all classes of poultry, and the crop will save grain and increase the profits. All who make a specialty of keeping a large number of fowls should grow turnips. Geese and ducks will eat them raw, if they are chopped fine.

THE DEMAND FOR TURKEYS.

The supply of turkeys in 1889 was entirely inadequate to the demand, and even in January of this year choice turkeys, dressed, sold at eighteen cents per pound. During the few days before Christmas as much as twenty-five cents per pound was paid for turkeys in some sections, and they were scarce at all points. There is an excellent opportunity for turkey raisers the coming year.

FATTENING FOWLS RAPIDLY.

Pick out every fowl intended for the market, and put all those selected in a pen in which there are no laying hens, as a different food should be fed to layers, they not requiring food that fattens quickly. Do not coop them in little coops or boxes, but give them a house and small yard, so that they will not notice the confinement so quickly. Early in the morning, give them a warm mess of corn meal and milk, thickened to the consistency of dough, and at noon give wheat. At night, give corn—as much as they will eat. Keep plenty of sharp gravel aud pounded charcoal where they can help themselves, and if the weather is cold, give warm water three times a day. Of course, if an addition can be given, in the shape of bran and potatoes, mixed, it will be an advantage, while sweet potatoes exceed everything else for fattening. Under this process, the birds should be as fat as possible in two weeks. If milk is plentiful, give the birds a warm drink of it in the afternoon before feeding the corn.

INQUIRIES ANSWERED.

Which are the Best?—V. S. C., Inglewood, Wash., writes: "What are the best ducks, geese and turkeys for market?—What are best laying hens?"

REPLY:—It is claimed that the Pekin is the best duck, the Bronze the best turkey, and the Embden the best goose, but all varieties are favorites with some.—Probably the Leghorns are the equals of any of the breeds.

CORRESPONDENCE.

PIP IN FOWLS.—I saw in your paper some time last year, and again in the number just out, that you say there is no such thing as "pip" among fowls. Permit me, for the benefit of your many readers and of the fowls in particular, to give my experience with the above disease. It is a hard substance, that forms on the tip of the tongue, and unless it is removed the tongue becomes paralyzed, the fowl cannot eat, aud in time dies of cholera, as [so many say, when the real cause was a pip on the tongue. Now, for the removal. I examine every droopy fowl, and if I find a "pip," I take the tongue between the thumb and finger

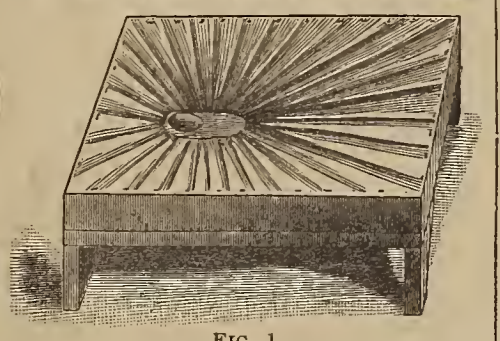


FIG. 1.

of my left hand, and with a large needle loosen the pip from underneath, then pull it off, when I put a pinch of salt and pepper in the mouth to heal it. As soon as the operation is performed, they are generally ready for eating. I have raised fowls on a small scale for ten years, and have not lost more than six hens. MRS. L. B. S.

[What is known as "pip" is a result of the disease—dryness of tongue—and not a disease of itself.—ED.]

POTATO BUGS AND POULTRY.—In a recent issue of the FARM AND FIRESIDE, I noticed an article on "Poultry and Potato Bugs," which I think answers a query that I was going to send to you about my chickens. About two weeks ago, a young rooster from my first brood (old enough to fry) was found quite a distance from the house, unable to walk, with nothing apparently the matter except starvation. Chickens which I had killed and used from the same brood were fat. Its eyes, feathers and comb were all bright, and there were no vermin of any kind on it, but it was wasted to nothing but skin and bone, and its crop felt empty. When offered food, it ate heartily, and became able to walk a few steps. It was fed repeatedly, and revived considerably, but died the following day. The second day after its death another chick of the same age (only a pullet this time) was discovered in the same condition. It was concluded to experiment with this one, so, as a first experiment, its food was made hot with pepper. It ate greedily and began to revive, and this diet was continued successfully for three days, at

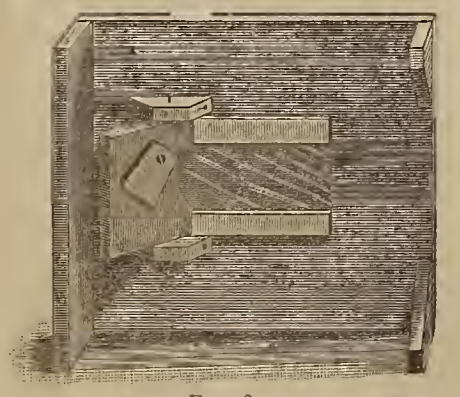


FIG. 3.

the end of which time it was well. Since then there have been no more cases. Do you think it could be that they had been eating potato bugs, and that the pepper killed the bugs aud rendered them digestible, or is there some disease among poultry that acts in this manner? Whatever it is, black pepper is its cure. I am a novice at poultry raising, and have a great deal to learn by experience, and always read everything on the subject that I can find in your paper and elsewhere. There is one thing I would like to know, but doubt if it comes within the limits of the subject of poultry raising, and that is, how to dress a duck for market. I think duck raising would be as profitable as chickens, if it were not for the difficulty of getting the down off when picking them. Can you tell me how, in your columns, or where can I find out how? Is there an easy way? MRS. A. E. M.

Wyoming, Ohio.

[No doubt the bugs caused the difficulty, as previously described. An article on preparing ducks for market was given in December 1st issue.—ED.]

EXTRACTS FROM CORRESPONDENCE.

From Nebraska.—In Buffalo county we have had good crops ever since 1877 until this last year, when they were nearly a total failure. Farmers as a rule are now out of grain. They have not been in the habit of holding any over and are now paying sixty cents per bushel for corn. This country has very rich soil and produces well, hut the prices as a general thing are very low. Land is worth from $6 to $25 per acre; cows are worth $20, horses and mules $50 to $125. This couutry is devoid of fuel. Farmers have burnt lots of coru in former years when it was so cheap. H. A. B.

Sweetwater, Neb.

From Kansas.—In Cherokee county crops were fair last year. Wheat yielded from 12 to 20 bushels per acre; flax, 12 to 16; oats, 20 to 35; castor heans, 7 to 15; corn and potatoes were less than half a crop. Prices are good. Wheat is worth 95 cents per bushel, oats, 38 corn, 65; flax, $1.10. We did not suffer much from drouth. Apples were a good half crop, and are selling from 40 to 65 cents per bushel. Hogs are scarce, and are heing sold rapidly on account of the high price of corn. This is one of the richest and best counties in the state for farming, miniug and stock aud fruit raising. Our proximity to the mines gives us an excellent market. Land ranges in price from $15 to $50 an acre. There are splendid chances for men with small captal and lots of energy. H. B.

Sherwin Junction, Kan.

From New Mexico.—Our potato crop is good and prices are better than for some years past, owing to the failure elsewhere. The sugar beet grows to perfectiou, and a sugar factory would be a paying investment to nien of enterprise aud skill. We have everythiug that nature can provide for a sugar industry, and all waiting for some one to start the ball moving. We have all sorts of climates in this territory, owing to tbe high and low altitudes. I write at au altitude of about 8,500 feet. In this section the people are robust and healtby. Asthmatics find iumediate relief and an absolute cure while they remain here. Other lung troubles find relief if not too far advanced. There is a vast amount of unoccupied government land here yet, for both the farmer and stock-raiser, and the white population is exceedingly anxious to have white settlers come among us. Our soil will produce from $100 to $150 worth of potatoes per acre. Good crops of all kinds are grown in the mountains without irrigation. S. L. B.

Rociada, N. Mex.

From Oklahoma.—I have been a resident here since the opening, and am familiar with the facts and the people. When I arrived here society was principally the cowboys and the Pawnee Indiaus. The Pawnees have a reservation north-east of this part of Oklahoma. These Indians are now takiug allotments, and their lands will be opeu for settlement in the near future; likewise, the Iowas, Sac and Fox are taking their allotments, and there is some hope that their land will come in by spriug. Tbis part of Oklahoma is mucb better than the Cherokee strip. The soil is mostly of a mulatto color, but in some places the black loam is one to oue foot and a half deep, not ouly in the bottoms, but on the higher prairies. Everytbiug seems to grow well here. Fruit trees, small shrubbery, grain and grasses, cabbage, sweet and Irish potatoes, watermelons and garden truck generally grow as well here on sod as they do in Missouri, Illinois and Kansas on old and well-manured grounds. We have many springs, hut while the water is pleasant tasting, it is uot very cold. Wells are dug from twelve to forty fect deep, whicb furnish good, cold water. This country is principally rolling prairie, with scatteriug patches of timber, seven tenths of which is along the streams. Tbere is a very small portion of sandrock in places on the prairies, and lime and sandrock in creeks aud gulches. Wild grass grows from a foot to as bigh as a man's head. There are some turkey, deer, chicken, quail, duck, coon, opossum, polecat and now and then a prairie wolf. Our legislature has been slow in giving us school laws, but now we will have a schoolhouse every three miles. The government has appropriated $50,000 for school purposes. Society is mixed. There are some of the best people and some of a low character, hut the latter are selling out to good, substantial settlers. There are Sabbath-schools and preaching regularly, Methodist, Presbyterian, Baptist and Christian. We have had a drouth this summer, which is said to be the first in eight years, by cowboys and cattlemen who have lived here. R. F. M.

Ingalls, O. T.

From Wisconsin.—Marinette is in the northern tier and the second county from the east Its chief industry is lumbering. The pine forests are interspersed with belts of hard wood, birch and maple predominating. The soil is yellow sand, with a slight admixture of loam and vegetable mould. For the culture of garden crops, small fruits, potatoes, clover and timothy it cannot be excelled, and all of these find a ready home market at remunerative prices. In the forests are found deer, bear, gray wolves and some of the fur-bearing animals, as otter, beaver, mink, etc. Partridge and spruce-hens are found in abundance, and afford much sport for the hunter. The brooks abound with speckled trout, and in the lakes and rivers are found salmon, bass, dora, catfish and sturgeon. Blueberries, blackberries, raspberries and cranberries find a natural home in this region, and are a source of profit to those who gather them for commerce. Big Wausaukee, in the eastern part of the county, is five years old and has a populatiou of seven hundred. We have two saw-mills in active operation summer and winter, with an annual output of about twenty million feet of lumber. The product of these mills is shipped largely to tbe west and south-west. There is another mill and box factory in process of erection, which will employ a large force when completed. The wages usually paid for labor at the mills or in the logging camps average about twenty-four dollars a month, with good board aud lodging. A good man with a heavy team will command about double that amount. The camps are all in active operation now, with a force of from twenty-five to fifty men each, cutting and skidding the logs, whicb will be hauled to the streams, or direct to the mills when snow comes. We also have rich granite quarries, that employ many men and are a source of almost unlimited wealth. With good water, good health, cheap homes and prospects of steady employment to those who are inclined to work, there are inducements for active men with small means to come to Wausaukee aud viciuity. D. M. N.

Big Wausaukee, Wis.

From Long Island, New York.—Suffolk is a long county, and there are all kinds of soil. The middle is a poor, sandy soil, covered with scrub oaks and pine, used for fuel and charcoal. After leaving Riverhead, traveling east, the soil is better. Where I am the farms are a heavy loam, and will grow everything that is grown in latitude 41. Sweet potatoes are grown to some extent. Irish potatoes are extensively grown; most farmers have three to twenty acres each. Tbe yield is from 150 to 250 bushels per acre, in proportion to the fertilizer used, one ton per acre giving the highest. The cost of the fertilizer is $44 to $48 per ton. The price of potatoes is 80 cents per bushel. The next crop is cauliflower. The same amount of fertilizer is required per acre, and some get a profit of $150 per acre. Peconic ships seveu or eigbt huudred barrels per day. Corn was very good, but oats were a complete failure, owiug to the lice. Wheat was also injured by the same pest. The yield was 12 to 18 bushels per acre. Hay was very good, and is selling at $12 per ton. Straw is in demand at $8 per ton. Butter is 28 to 30 cents per pound. Great quautities of sea-weed are used for manure on the east eud of the island. It grows very heavy coru, 100 bushels of ears per acre. Poultry and eggs are largely raised. Eggs are 30 cents per dozeu. The climate is very changeable in winter. It will change, in three hours, from zero to 60° above. The last five years have been very wet, aud potatoes have rotted to some exteut. The summers are warm in the first half of the day, but the wiud changes in the afternoon and comes off the ocean, and it is cool all night which makes sleepiug comfortable. The range is from 70° to 90°. The water is very good. Wells are 10 to 50 feet deep. The country is quite level, and most farms are clear of rocks aud stones. The land is diversified with trees and small groves. Salt-water fish, eels, clams and scallops can be had if you go and get them. This is a paradise for bugs and worms. If you grow apples, they are very poor. Cherries are wormy. Cucumbers and melons grow if the bugs are looked after. The green worm is after the cabbage as soon as it is large enough. A person gets discouraged, fighting for everything that grows. Some seasons the pests are not so pleuty. I speak of these things that people may know that this is not a paradise. Taxes are high; land is $100 to $150 per acre, being near New York City. Fashions are almost equal to the city itself. City boarders through the summer months make lively times here.

Peconic, Long Island, New York. W. A. H.

EXPLORATION OF ALASKA.

A bill introduced in the house of representatives provides that the secretary of war be authorized to send an expeditiou to the Interior of Alaska, for the purpose of making a thorough exploration of that territory, with a view of ascertainiug its resources and capabilities. It is proposed that the party sent out should locate near the center of the territory, and from that point as a base, push expeditious into all parts of the Interior. The party is to remain not less than three years. In this way a thorough knowledge of the topography of the country may be gained. An appropriation of $100,000 is asked.

A NEW WEBSTER'S DICTIONARY.

Webster's International Dictionary in many distinctive features is absolutely new, although the ground plan of the work is essentially that of its predecessor, the famous Webster's Unabridged Dictionary. With the progress of civilization the Anglo-Saxon miud is coustantly giviug birth to new thoughts, new modes of expression, not only by means of new combinatious of words, or by giviug fresh significations to words already in use. Besides, advaucement and improvement in every art and scieuce demand uew terms and appellations, and even new systems of nomenclature. To meet these philological demands of the present age, the publishers of this great work have employed during the past ten years, not less than one hundred paid editorial laborers, besides received literary contributious from a large uumber of eminent scholars in all parts of the civilized world, and the result of this prodigious aggregation of brain work and an expenditure of over three hundred thousand dollars, is a 2,118-page volume, replete in every essential feature with the lore of ages. It is a complete Dictionary of the Euglish Language, revised and modernized to meet the demands of our husy everyday life, the general influences of wbich tend to create and foster novelties in speech. It is also an Explanatory and Pronouncing Dictionary of the uames of noted fictitious persons and places: a Pronouncing Gazetteer or Geographical Dictionary of the world, coutaining over 25,000 titles, briefly describing tbe Countries, Cities, Towns and Natural Features of every part of the Globe; a Pronouncing Vocabulary of Scripture proper uames, including both those from the common English version aud those from tbe Anglo-Catholic; a Pronouncing Vocabulary of Greek and Latin proper names; a Pronouncing Vocabulary of Common English Christian names, with their derivatiou, signification and diminutives, or nicknames, and their equivalents iu several other languages.

It is, iudeed, the most comprehensive popular dictiouary of which we have any knowledge. In etymology, pronunciatiou, definitions, citations, pictorial illustrations, it adequately represeuts the vast and various advauces in all departments of thought and knowledge down to present date, and as a convenient, trustworthy and all-sufficient interpreter of the Euglish language, Webster's International is justly worthy to retain that pre-eminence which has long been held by Webster's Unabridged.

Queries.

☞READ THIS NOTICE.☜

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Rice Machinery.—C. T. B., Farill, Ala. You can purchase rice machinery from the Geo. L. Squier Manufacturing Co., Buffalo, N. Y.

Ohio State Farmers' Alliance.—A. D., Troy, Ohio. Full information about the Ohio State Alliance can be obtained from the secretary, Dan Kries, Cardington, Ohio.

To Get Rid of Moles in the Garden.—T. B., Verdon, Neb. We know of no better way to get rid of moles in the garden than by the use of a good mole-trap. Your hardware merchant can obtain one for you.

Threshing Machines.—J. P. B., Maroa, Ill., asks: "When, where and by whom was the threshing machine invented?"

REPLY:—The modern threshing machine is said to have been invented by a Scotch mechanic, Andrew Meikle, in 1787.

Negro Papers.—J. R. G., Brownsville, Tenn. *Defiance*, Atlanta, Ga., *Bee*, Washington, D. C., *Argus*, Indianapolis, Ind., *New Light*, Columbus, Miss., *Age*, New York City, *Christian Recorder*, Philadelphia, Pa., *Living Way*, Memphis, Tenn., *Southern Guide*, Hearne, Texas, *Virginia Lancet*, Richmond, Va., and *Advocate*, Boston, Mass., are some of the papers published in the interests of the Negro race.

Bordeaux Mixture.—G. E., Cleveland, Ohio. The following is a modified formula of the Bordeaux mixture used as a fungicide: Sulphate of copper, 6 pounds, dissolved in 4 gallons of hot water, lime, 4 pounds, dissolved in 4 gallons of cold water. Mix the solution as above, and when desired for use dilute to 22 gallons with cold water. The mixture is applied by means of a "sprayer." It does not endanger young leaves.

VETERINARY.

Conducted by Dr. H. J. Detmers.

Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to DR. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Sweeney.—T. C. M., Tracy, Mo. Exemption from work, voluntary exercise, a sufficiency of nutritious food and six to eight months of time.

Hereditary Blindness.—B. A. D., Long Glade, Va., writes: "Will the colts from a blind stallion inherit blindness?"

ANSWER:—They are apt to.

Small Warts.—V. H., Wards, Ill. Apply to the warts once a day, for a few days in succession, by means of a camel's-hair pencil, a concentrated solution of corrosive sublimate in strong alcohol.

Worms.—J. B. F., Ness City, Kan., writes: "Please tell me what to do for my yearling colt. It is infested with small, white worms."

ANSWER:—Make injections of raw linseed oil into the rectum.

Lice on Cattle.—J. C. G., Inyankara, Wyo. As it is probably too cold in Wyoming by this time to administer a good wash of a tobacco decoction, the best advice I can give you is to use Persian insect-powder, which, if well dusted in between the hair, will get away with the lice in a short time.

Worms.—J. L. B., Milton, Tenn. If the worms are in the rectum and pass off every few days, the remedy easiest administered is an injection of raw linseed oil in the rectum. But no remedy will be effective, that is, will free the animal for any length of time, unless the latter receives nothing but sound food to eat, and clean (well) water to drink. Food and water contaminated with wormwood must be avoided.

Blind Staggers.—The disease, very likely, is due to local causes, heavy food, too rich in nitrogenous compounds—rye, for instance—but may also be due to narcotic poisons. The first and principal object of the treatment is to remove or avoid the causes. To go into the details of the treatment adapted to special cases can do no good, because that must be left to the judgment of the attending veterinarian.

Paralysis.—H. E. M., Adair, Iowa. Your pigs suffer from paralysis of the hind quarters, but whether the same is due to an affection of the spinal chord and its membranes (most likely), to a degeneration of the muscles, or to trichinosis, does not appear from your inquiry. You might have easily ascertained the cause, if you had examined the spinal chord and the muscles. "Kidney worm" is a misnomer; the kidneys are innocent.

Spavin.—F. S., Skaneateles, N. Y. Your description of the lameness points toward spavin. The animal may be lame with spavin without any enlargement of the hock-joint being perceptible. In such a case the morbid process is yet limited to the articular facets and does not extend to the external surface of the bone. For treatment I refer you to the answers given to inquiries headed ringbone, in the last and in this present issue of this paper.

Bog-spavin.—R. D. L., McKeesport, Pa., writes: "I have a three-year-old colt that has a windgall on the inside of the hock-joint of each hind leg. They have been there about three months. What will remove them? At times they are as large as a hen's egg, and they get smaller when the horse is driven or worked all day, but will be as large as ever the following morning."

ANSWER:—Since the accumulation of synovia, and the subsequent enlargement of the capsular ligament or so-called windgall, known by the name of bog-spavin, is decreased by exercise, the proper remedy suggests itself; namely, exercise during the day and a good bandage of woolen flannel, properly applied, during the night. Bog-spavin hardly ever causes any lameness. See to it, though, that the exercise is never too severe, also that the animal is not used for horse-back riding nor for pulling loads up hill.

Partial Luxation.—A. R., Pierpont, Ohio, writes: "I have a colt six months old. When he walks his ankles slip apparently out of joint and back again at every step, making a noise loud enough to be heard for some rods. He eats well and grows finely."

ANSWER:—A bandage of woolen flannel, properly applied, will give considerable support to the weak parts. Besides that, it will be essential to keep the feet in good shape, and also to keep the animal on level ground. The bandages, of course, must be renewed twice a day.

Surfeited.—G. D. M., Aquasco, Mo., writes: "Please inform me how colts that are badly surfeited should be treated. I have been informed that the disease is contracted by exposure to rainy weather. Is it so?"

ANSWER:—What do you mean by "surfeited?" If your colts have been overfed, keep them on a suitable diet, and if you mean a cutaneous eruption, keep the colts under shelter, protect them against bad weather, clean and groom them every day, and give them warm and nutritious food suited to the conditions of the digestive organs of a colt.

Going Blind.—A. H., South-west Oswego, N. Y., writes: "My mare is going blind slowly. She can see much more out of the left eye than the right. Some say she has the pink-eye, but she has been standing in the same stable with two other horses and they are not affected with it."

ANSWER:—Your mare probably suffers from periodical ophthalmia, a disease which almost invariably terminates in blindness. Since both eyes are already affected, any treatment is, at best, of very doubtful value. The disease is not contagious.

Probably Glanders.—W. L. E., Zachary, La., writes: "I have a mule with sore lumps in her nostril about the size of a half marble, which bleed a little, and look like warts. They cause her to breathe hard when pulling a heavy load. What are they and what is a cure for them?"

ANSWER:—If the lumps are raw ulcers, with uneven, swollen borders and a stentomatous bottom, the disease is glanders. In that case, however, you will also find a more or less knotty swelling in the submaxillary lymphatic glands, unless it be that the glands are obsolete or have been extirpated.

Mange.—G. H. E., Rock City Falls, N. Y. A great many things will cure mange, provided the application is a thorough one, and the premises are thoroughly cleaned and disinfected, so that no new infection may take place. Where the crusts are rather thick, it will be well to administer first a good wash of soap and warm water, and then, before the skin is perfectly dry, a good tobacco decoction (1:20); but the application must be a thorough one. This treatment may be repeated on the sixth day, and in inveterate cases a second time, also on the sixth day after the second application. But each time the stable, etc., must be cleaned and disinfected with boiling hot water, whitewash, etc.

Induration in the Mammary Glands.—F. T. J., Drownville, R. I., writes: "A short time ago I bought a cow. The former owner said she had a caked bag, which would soon go down. She had a calf five days old. I milked her frequently and rubbed the hardened udders with warm lard, but all to no purpose. I think the trouble must be chronic, for no milk is thick, but all seems right in that respect. The alternate front and back udders are affected and are hard and lumpy, as though they contained kernels of corn and short sticks. Don't think the two affected udders secrete so much milk as the others. Can anything be done?"

ANSWER:—Since the milk is all right, never mind the indurations; they have come to stay. See to it that the cow is regularly milked, and very likely there will be no trouble.

Probably Heaves.—S. C., St. Clairsville, Ohio, writes: "Please tell me what is wrong and the cure for my mare. About one year ago she began sneezing occasionally when driving. At times it was almost a cough. Recently these symptoms are more apparent, the sneezing ending with a half cough. I can see no change in her breathing. When her larynx is compressed she will at once sneeze and cough. It is so frequent now that it makes driving her very unpleasant.

ANSWER:—Your mare is either affected with heaves, or suffers from a chronic laryngeal and bronchial catarrh. It is probably the former. My advice would be to feed her no hay, but a sufficient quantity of grain, and as a substitute for hay, some good oat straw. See to it that she is never costive, and keep her in a clean, not too warm, and well ventilated stable, where she can have perfectly fresh air to breathe. If the above advice is followed you will witness some improvement.

Chicken Lice—Thrush.—M. C. P., Vineland, N. J. Your description of the skin disease leaves me somewhat in doubt as to its nature. If, however, horse and chickens occupy the same place, I am inclined to suspect that the whole thing is due to chicken lice. In that case, my advice would be to remove the chickens to another place, and to keep them away from the stable; to have the stable thoroughly cleaned, and to see to it that the horse is properly groomed every day. If it is not due to chicken lice, it may be mange, and in that case a thorough washing with a good tobacco decoction, to be repeated on the fifth or sixth day, and each time a thorough cleaning of the stable, will effect a cure, but any half-way measures will not.—As to thrush, a disease due to filth, it will be necessary to keep the animal on a dry and clean floor, to pare away all the horn that is decayed, loose or superfluous, and to pour on the diseased surfaces, while the foot is held up so as to bring the sole of the hoof in an almost horizontal position, some concentrated carbolic acid. Care must be taken not to get the acid in contact with the skin. In very hard cases the treatment may require a repetition in a few days; as a rule, one application is sufficient.

Lymphangitis—Urticaria.—J. T., Auburn, Neb., writes: "I bought two cows two years ago. One had a small lump on the outside of her hind knee joint. It gradually enlarged, as the weather got warm, and in June broke and discharged a thick, waxy matter. All treatment seemed to only aggravate the sore. As cool weather approached it healed. Last spring it enlarged, but did not break, and got small as cool weather approached. The other cow had several small lumps come on her legs, which, as cool weather approached, almost disappeared. When spring returned the lumps grew, but did not break, and are now growing smaller. Can you tell me what is the matter with the cows, and would it be safe to use the milk?—I have a fine mare, four years old. For the last three years, as warm weather comes, she breaks out all over in small lumps or pimples. She will rub herself badly. As cool weather approaches she gets better. The pimples break, and get waxy and hard."

ANSWER:—Lymphangitis in cattle is a troublesome disease, and seldom yields to treatment. As far as the milk is concerned, there is no cause for rejection as long as the animal does not show any general (cachectic) symptoms.—The ailment of your horse is probably nothing but urticaria. When the swellings in the skin reappear next spring (May or June), ask your veterinarian to administer a good physic.

Ringbone and Splint.—R. M., Sandusky, Ohio. Lameness caused by ringbone, like that caused by spavin, disappears if the diseased articular facets are caused to grow together—in other words, if anchylosis is produced—provided, of course, the affected joint, which thus becomes stiff, can be spared. In order to produce anchylosis, a moderate degree of inflammation, just enough to throw out a sufficient amount of exudate to unite the diseased surfaces, must be produced, and, for some time, be kept up. How it is done is immaterial as far as the result is concerned. The easiest way, perhaps, is by judicious firing; but firing leaves scars, hence a blemish behind. If this is to be avoided, repeated applications of binoxide of mercury and lard (1:16) may be made. The ointment should be thoroughly rubbed in, but no more should be used at a time than is required to bring it in thorough contact with the skin. One application every fourth or fifth day, according to the effect of the preceding application, is sufficient. At the same time, however, the animal must have rest, because the diseased joint must be moved no more than is unavoidable; otherwise, anchylosis cannot be affected. The treatment must be continued for about eight weeks.—A splint very seldom causes any lameness. The best way to reduce its size is by applying gentle pressure. If that is too inconvenient, a little bit of gray mercurial ointment may be rubbed in once a day, or once every other day.

Our Fireside.

IDEALS.

How fair they rise!
What grace celestial sways these shadowy forms;
What deep and tender radiance stirs and warms
Those lustrous eyes!

Their rosy lips
With wooing smiles seem to invite us near;
While to our vision, beckoning, appear
Their finger tips.

We strive in vain
To reach those outstretched hands, by one least touch;
The sweet smile mocks, what matters it how much
Our yearning pain?

Yet upward still
We follow, step by step, those phantoms fair;
And sometimes breaths of strange, sweet, heavenly air
Our pulses thrill.

Oh, who shall say
That poet, artist, lover—every soul
That worships longingly its pure ideal—
May not in some far future find it real?
Of this imperfect part complete the whole,
Beyond—some day.

—*Philadelphia Press.*

On Bohemia's Border.

BY DOROTHY LUNDT.

CHAPTER IV.

THERE was something in Lois' tone, weak and gentle as it was, that had not rejoiced her sister's ear in two sad months, and as she asked the question she half raised herself from the cushions, the faint red, like the herald of the sunrise, flushing upward from her delicate throat to her bright, disordered hair.

Helen's nerves, tense and sensitive from their long strain of watching and sorrow, answered her sister's excitement with a sudden thrill. She hurried to her side, and with hands that trembled, forced her tenderly back upon her pillows, drawing back the rugs to their place and smoothing the curls from her moistened forehead.

"Dear, you must not excite yourself so," she said. "Who should it be in such a storm as this? Nobody with any concern for us, that is sure, you foolish child, unless, perhaps, it is Max; he was to bring you a different medicine in the morning, you know, and perhaps—"

But the footsteps were coming nearer—quick, light, young footsteps that were almost leaps, clearing two stair-steps with every bound. They were on the last flight of stairs now; in a second they would be before the door. Steady and leisurely Doctor Max made no such haste as that, and never was Doctor Max met with that look in Lois Dowlas' face. The faint, rosy herald of the sunrise had been swallowed up in a full and glorious red, and the dawn-light was clear in her hazel eyes. She put aside her sister's clasp; she sat upright; her lips were parted; her light hands moved with an odd, fluttering motion, as of birds eager to fly home.

There was a sharp, imperative summons from the old knocker, and in the second's silence that followed they heard a hand drop from the knocker to the handle of the door, and move it as far backward as might be, as if the impatient comer could not wait its opening. Then Helen rose and met her sister's radiant look with a face strangely white and set and stern.

"Lois," she said, low under her breath, "Lois, you think that is Archie Caird, and it may be. But oh, my girl, think, think! He has been so cruel to you; so light in his holding of us all. He has not treated us like gentlewomen, Lois, but like mountebanks and players, to be amused with and to throw aside without apology. And now that his whim is, perhaps, to come back for a little, will you show him what you have suffered because he was away? Will you make us his fools and playthings—*you*, Alan Dowlas' daughter? Meet him as he deserves, Lois, as any honest pride will teach you to meet him. For my sake, for our honor's sake, dear, do not turn that shining face of welcome upon him.

It was a shining face no longer. The fluttering hands withdrew themselves like birds that have flown out into wind and storm; the rosy color went out into a gray mist; the sunrise eyes were piteously clouded. A sudden shriek of wind and scurry of rain was flung against the window, and again, and angry in its impatience, the knocker rang its call through the silent room. Helen crossed the room, conscious through every fibre of her heart of the pale and shrinking little figure into which her impetuous words had changed the glad, new Lois of a moment ago; angry, sorrowful, determined to meet successfully in the next few moments the challenge of her outraged pride, and then, let come what might, she turned the heavy handle and opened the door.

He did not stop for a word of greeting to her. The wet was heavy on his rough traveling coat and cap, and as he brushed past her, light masses of it fell cold upon her wrists and on her hair. He flung down cap and gloves on the old chest as he passed; he half ran to the side of the sofa by the fire, and then he fell on one knee and gathered Lois' little, unresisting hands up into his and looked at her in silence with a look that brought to her gentle face, not sunrise, but full morning, and its light fell on him through the mist that had gathered before his eyes.

Helen, who in her wonder had closed the door and come forward a pace or two into the room, stood with all her senses in a strange beat and whirl, conscious, first and deepest, of a great, unselfish joy that it was life and not death which had come to claim her child, her heart's beloved; conscious, too, with a pang even great, unselfish hearts may know, of how all her love and service had failed to do for Lois what this dark-eyed lad had done with one hand-clasp and one look out of his happy eyes.

Though for long moments there was no sound in the room but the soft crackling of the fire and the voice of the wind at the window, it seemed to two, at least, who listened to that silence as if in it many things had been asked and answered, and there had been an eloquent setting right of much that had been hard and wrong and mistaken, until before the silence was broken it seemed as if words, when they came, could be but a superfluity and a repetition of all that had been told and said.

It was Lois who spoke first. A queer, irrelevant, illogical, joyous little speech it was; and as she spoke she was looking across at Helen with a sort of shining and sweet defiance in her beautiful eyes.

"You would not believe me, Nell," she said. "I told you nothing was really wrong, although it was so puzzling and so strange. I told you it would all be explained and be happy and right, and perhaps now you will believe me." And then her voice died into a happy sob.

That broke the spell which the silence seemed to have cast upon Helen, and she came forward into the firelight, walking a little uncertainly, as one awaking from a dream.

"But I cannot say that it seems to me it *has* been all explained," she said.

Yet her voice was softer than her words, and the look she turned on Archie Caird was not the look which had been in her face for two long months whenever his name had been on her lips or in her thought. For whatever had been the manner of his going, he had come back. Oh, had not his coming brought to Lois that for which her sister had besieged Heaven with prayer, and wrenched her heart with vain hoping for the ebbing life which all the comfort of summer days, friends, friendship and the devotion of those dearest to her could not, for Lois, turn again to its flow, seemed flooding to its full as she lay with her hands in her lover's.

"No," said Helen again, and there was nothing more unkind in her voice than a touch of her old, quaint humor, "I can't say I feel as if it had all been explained—to *me*. Telepathy may work satisfactorily between kindred souls, but you must remember that I am, as it were, an outlying station, and must be communicated with by slower methods. And my dear Mr. Caird," for Archie showed no signs of changing his attitude, but still knelt, smiling at Lois in a rapture of content, "may I suggest that if you were to take off your mackintosh there would be less danger of Lois' cough being aggravated by its undeniable dampness? For she has *had* a cough, I assure you, though you might not suspect it to look at her now."

He sprang lightly to his feet, and with that boyish laugh of his which was good to hear, flung off the dripping coat and hung it in its old place, whither Lois' eyes left even him to follow it, with a look in them which turned her sister's dim. Then he came back to the fire, and quite naturally and as if such a privilege had been his of long right, pushed aside the rugs to make himself a seat on the edge of Lois' couch, and gathered her hands again into his clasp, as one who has found a lost treasure and dares not for even a moment let it lie beyond his touch.

"Nell," he said, reproachfully, and oddly matter-of-course the name sounded from him, considering that never before, in all his knowledge of her, had that stately, young woman with the keen, gray eyes, been anything but Miss Dowlas to him. "Nell, I don't see how you could have been so hard upon me as to believe what you must have believed before my little girl, here."

And then his voice broke, and there was silence again for a moment as he held, with a very eloquent and tender gesture, Lois' little hand where the firelight could show how wasted it had grown, even while it was rosy and warm from his close pressure.

"My lad," said Helen, and there was an eagerness of defense in her tone that was not an answer to his words, but to the deep and soft reproach of her sister's eyes. "My lad, what could I think? You came to us from another world than ours, and what rights has Bohemia that Philistia is bound to respect? Who, if you had been only playing with my girl's heart, and had left her, as it seemed you had left her, who in your world would have said anything but 'What could those Dowlas girls have expected? Not that Archie Caird, the millionaire's son, was going to Roscommon Place to find a wife in a girl who worked for her living, and had no butter to her bread but such as she and her sister earn?' Your world."

I am sorry to say that Archie Caird—forgive him, for the hour had not left him quite master of himself—here said, very distinctly and deliberately, "Oh, d—n my world!"

I am yet more sorry to say that Helen Dowlas, instead of resenting such words with just rebuke, smiled an unqualified and amused approval.

"Exactly," she said. "That is what I have said several times, my lad, since you crossed the border from your world to ours. But how could I know you would say it? You were just a boy, like another. Lois, don't think you can frighten me out of truth-telling with that look of yours! You were just a bright impulsive, good-humored, likable, irresponsible boy like another, but you had the pull over many another, with your handsome eyes and your Fortunatus purse. You had tasted all the savor of Philistia's amusements and adulations, and your glimpse of Bohemia was something piquant and new. And why should you not sip the new flavor as deeply as you liked, so that you paid your scot with roses and Huyler bonbons and symphony concert tickets? And why, when a look in a girl's eyes warned you that she wasn't taking the situation quite as you saw it, shouldn't it strike you as a highly discreet and gentlemanly thing to do—and unselfish, too, upon the whole, considering that really you were finding it all so amusing—to take an unexpected and opportune little trip to Germany, and end it all with a posy and a P. P. C. card, sent——"

Even in the passion and bitterness that had welled up again into her heart and voice with the mere memory of that hard hour, Helen paused. Archie Caird had sprung to his feet. All the color dashed out of his wholesome, young face. He looked strained and gray, as one who has been ill for weeks. His very eyes were haggard.

"Nell," he said, hoarsely, "I send a P. P. C. card? *I?*"

She took her dogged stand on the plain fact, though his evident amazement and emotion touched her more than she was ready to show.

"Dear," she said, gently, to Lois, "will you tell me if the card is in your desk, and I may show it to him?"

There was a sort of tender reverence in her voice, as if, in approaching the motive which had moved Lois to keep and cherish even that cold word of farewell, she stood on sacred ground.

"It is not in my desk, Nell," Lois said.

The tide of crimson swept up from her delicate throat to the forehead under its clustering curls. And then with a lovely simplicity and courage they never forgot, she slipped her hand within the folds of lace across her breast and took from above her heart the words which had lain there all these weeks, like the thorn which is all that had remained of the rose.

"You see, Archie," she said, timidly, "that was every word that came; every word."

He took it dazedly from her hand. And then, still moving mechanically, he tore it across and across and flung it from him and threw himself down like a child to bury his face in Lois' cushions, his stalwart, young figure shaken with one great sob.

"And oh, my little girl," he said, brokenly, by and by, when words came back to him, "*that* is all you have had to judge me by, and yet you could welcome me back!"

Her timid, tender hand stole toward him and rested on his bowed head.

"I thought there must be a mistake, Archie," she whispered. "I thought so all the time, and yet there did not seem any reason for me to think so. You—you did not mean to send it, then—just that and nothing more?"

He had gotten himself somewhat in hand again, and he rose and stood facing them both, with eyes full of manhood and truth.

"It was my cursed carelessness," he said. "I can see how it must have been. It was such a wrench to feel that I must go, that I never knew what I was doing from first to last. You know I told you I had promised Fergnerson to drive him up to Concord by the old road? It was the day after class-day that I was to have done that, and I remembered it in all my daze and wretchedness, and wrote this card to send to him. Was not its envelope addressed to John Ferguerson?" he cried, with a sudden forlorn hope.

"There was no address whatever on the envelope," said Helen. "There was a postage stamp on it; oh, I remember that well enough, for it occurred to me that you had intended to send it by post and had concluded, at the last minute, to smother up its meaning in flowers."

Lois turned on her a quick glance of reproach, and Archie said, grimly enough:

"That's pretty rough on a fellow, Nell, but I dare say, from your point of view it's all right. I suppose I must have forgotten to address it, as I forgot everything else on earth that wretched day but that I was going to put the ocean between Lois and me, and I had not spoken to her. But I can swear I posted *something* just before I rushed into the florist's." He gave a sort of desperate laugh. "And what I really did drop into the box—I was so hurried and so miserable I remember swearing because the flap was rusty and didn't rise quickly—what I did drop into the box must have been my letter to *you*, Lois—that letter which had only one word on the envelope, 'Lois,' and which has been in the dead letter office, the Lord knows how long. I'd kill any clerk I supposed had read it," said

Archie Caird, and his color had quite come back by this time.

In his rage at the comedy of errors which had so nearly turned tragedy, he took it hard that Helen should have flung herself down in such spasms of laughter as threatened hysterics.

"Ah, don't glower at me so, my lad," she gasped. "Let me laugh; ah, let me laugh. If you could know what it is to me to laugh, who have been wondering all these months what it would feel like to have my lips ever shape to a smile again! And it is all so ridiculous where an hour ago it was all so dreadful. And oh, you foolish, foolish boy, could you not even see the stamp on the envelope you gave the florist, and did it not tell you the whole story of the mistake?"

He turned to her with a touch of that sturdy, boyish honesty which more than once had won her to him against her will.

"But I did not see *any*thing just then," he said. "When it came over me with a rush, as I was choosing the roses, that I should not see Lois wearing them that night; that I should not, as I had meant, say to her * * * ; when I remembered and realized it all, I was so broken up, don't you know, that I was sure the clerk would see what a fool I was, and I just thrust the note at him—wrong side up, I dare say—and gasped out the address and fled. But if I had known what I was giving to him, and that card and its curt and cold message was the good-by I was sending to Lois—Nell," he cried, suddenly, "Nell, tell me you believe what I say."

"I believe what you *don't* say," laughed Helen, "and I suppose that is what you want me to admit, isn't it? And I will shake hands upon it, if you like. I really think that good breeding requires that we should shake hands, Mr. Caird, since we omitted that ceremony on your arrival."

But he did not shake hands with her. In the audacity of his gladness he threw both his arms about her and gave her a hearty, brotherly hug and kiss. And Helen Dowlas took no anger from it.

Helen Dowlas, who a short half hour ago had said, "If Archester Caird's life were in my hands I would look to it that he broke no more hearts, and that I promise you." She released herself quickly enough, flushed and smiling, and then she put her two firm, womanly hands on his shoulders, and so holding him for a moment, looked deep and steadily into his eyes; and in that look a pledge was asked and given. And when her hands dropped from his shoulders, it was with the gesture of one freed from a weary burden which may at last, and in honor, be flung away. She drew her favorite, low chair close to the fire, and as she settled herself in it she drew a long, broken sigh of relaxation and of comfort.

He took again his place by Lois' side, and for a little time which none of them ever forgot, there was silence in the room—a lovely silence, full of that nearness which comes with the late hour when the fire burns low and the streets are still and the conventionalities of life seem little things and far away. It was Archie who broke the silence at last, and it was odd how he addressed himself to Helen, always; to Helen, as if between him and Lois all had already been said and understood, and there was no more explanations possible to be asked or made.

"Nell," he said, "you do not know, even yet, why I went away to Germany as I did, on an hour's warning."

"No," she answered, with a gleam of her old quaintness; "that, up to date, is the secret of the post-office clerks who have read that letter to Lois."

He flushed sensitively. It would be long before he could hear, without wincing, an allusion to that foolish, little carelessness which had so nearly wrecked their lives.

"No," he said, gravely enough, "not even the post-office clerks have that secret, for I wrote to Lois that it could not be told in that hurried minute which was all that I could spare to say good-by. But it need not be a long story, now. I do not think you have ever heard me speak of my cousin, Philip Griswold. He is—he was Aunt Harriet's eldest son. He was about my age—a few months older. We were boys together. You know I came home to Aunt Harriet when I was only five years old. He was a very bright and handsome boy, much cleverer than I, you know, and Aunt Harriet's idol. If she could have loved him more wisely, poor soul; but that's all past, now. It seemed at one time, when he was fourteen or fifteen years old, as if there was nothing Phil couldn't be, if he would, so gifted, so winning, with a great fortune and the world his oyster, as they say. But he wasn't much over fifteen when he began—well, began to go the way his father had gone before him. My Uncle Robert Griswold died in an inebriate asylum. If Aunt Harriet could have realized in the beginning, but I have told you how she idolized Phil. I know the talk about heredity, and all that, but I never could bring myself to believe that a fellow is bound to go to the devil because some of his forbears did. If Aunt Harriet could have used the firm hand there, in the very beginning! But she could not see it; she called it boyish high spirits and wild oats, and a manly wish to see life, and so it went on from bad to worse.

"Phil was eighteen, and there wasn't much of the seamy side of life left for him to see, when she woke up to it at last. It was too late, then. She tried everything—change of schools, change of tutors; began to refuse him money, now that all the good it did was to bring on scenes and quarrels that nearly broke her heart. And when he was twenty-one and his own master, or, rather, master of his money—for the beast in him was master of *him*—he cut loose altogether and went abroad with a set of fellows he had gotten in with at college. That was the beginning of Aunt Harriet's invalidism, you know. He wrote to her sometimes. You know how people get used to trouble, and perhaps it wasn't quite as hard to have him at that distance as it was to have him where she lay awake every night listening for the carriage which would bring him home. At any rate, she bore it pretty well. And when his letters were longer than usual, she would get quite hopeful, and say that foreign life was doing wonders for Phil.

He went to Germany a little less than a year ago. His letters did improve through last winter. Once he said, at the end of a business note to me, 'You may not believe it, old man, but I haven't been on a tear for a month.' I showed that note to Aunt Harriet, pretending I wanted her advice about the business part of it. I wish you could have seen her face! That was the day she felt sure of being well enough to matronize Carroll's tea—that tea we were going to together, Lois—Lois—"

All in a minute his voice broke. There was no sound in the room but the wind—not an angry wind now, for if they had cared to know it, the rain was over and a midnight moon was peering down through the hurrying clouds on the wet and silent streets. And then, presently, he went on:

"It was the morning before class-day. Carroll had been bothering me to go out to Harvard with him and help him plan for the next day—where the tables had best be set, and all that sort of thing. We were going down the steps together when the telegraph boy came up. When I saw that it was a cablegram and addressed to me, upon my soul I knew as well as I knew two minutes later what it was and all it meant. I never turned sick so suddenly in my life. 'I am dying; come!' That was what it said. And it was dated at a little German town near Heidelburg, and signed 'Philip Griswold.'

"I don't know how we told Aunt Harriet. It is all like a horrid dream when I look back upon it. I only remember her look as she hurried about, after we had found that by catching the noon train for New York I might just get on board the steamer which sailed that afternoon, packing all sorts of things into my bag, and sending one servant here and another there. And I was ashamed of myself, through all my daze, that I hadn't one thought for Phil; something kept dinning 'Lois, Lois,' into my ears until it seemed as if they must all hear it and blame me for thinking only about my own matters when Aunt Harriet's heart was breaking. She was very sensible about it. One would have supposed she would have insisted on going to Phil herself, but she had said, when I was stammering out some idea of the sort:

"'Oh, my boy, I should be ill on your hands before we reached New York, and nothing must delay you—nothing. Perhaps later, if there is time—' And with that she had broken down into crying.

"And so I was hurried away. I almost lost the train to pay for those minutes I used in writing and in rushing to the florists. And through all those hot, wretched hours of the journey—you remember what a blazing day it was—I seemed to have just one impulse, and that was to curse myself that for a piece of romantic, boyish folly I had lost the chance of speaking to Lois before I was rushed away from her; of being sure. I had meant to speak to her that evening of class-day, Nell," he said. And again it was so odd that it was to Helen he addressed all this intimate explanation, as if Lois already knew it all quite as well as he. "For I had said to myself the year before, when I was all by myself a minute, there under the trees, and my heart was big with it all—the love of the dear, old college, and the queer feeling that a fellow has at the end of those four years, that everything is ending and everything is beginning—I had said to myself, 'If ever I ask any girl to be my wife it shall be here at just this place and time; and I will say to her—'"

"Archie," said Helen Dowlas, and something very sweet was in the voice with which she called him for the first time by his Christain name. "Archie, I—I don't think this is just what you meant to tell me, and I am sure I know it without the telling. But I don't know how you found your cousin.

He flashed her a look of quick appreciation and thanks for the delicacy which spared his saying what in a less exalted mood he would repeat another than Lois having heard.

"There isn't much to tell," he said; "not much that I have a right to tell even you. The miserable story is poor Aunt Harriet's secret and not mine. There was a young girl, the daughter of a shopkeeper, in the little town. She was very pretty, they said (I did not see her), though a very ordinary, uneducated sort of girl. She had been honest until he met her. When it all came out; that is, when the secret was past keeping, it seemed that her people were not the sort Phil counted on; they would not be bought. Her brother came to see him at the inn. He would have it that Phil should marry her. I don't doubt that what Phil said sounded as insolent as it was cruel. You know a man is blunter in a language he doesn't know very well than he needs to be in his own. And her brother shot him."

There was again a little pause; even the wind was still.

"It didn't promise to be a very serious wound at first. Her brother was scarcely more than a boy, and I suppose his hand shook and his aim wasn't sure. And because it was pretty well guessed—the wretched truth of the matter, I mean—there was so much sympathy with the girl and her people that the brother got away without much trouble. But when they found Phil was going to die of it—his whole life was against him, you know, and when blood poisoning set in he hadn't a chance—they began to stir about and get onto his trail in earnest. But Phil stopped them."

There was a flush on Archie's face, and his voice trembled.

"Oh, it wasn't much to do, I know, after all he was to blame for; it wasn't much to do to say that the pursuit must be stopped if he had to leave a sworn declaration that he shot himself, and Gottlieb Sonscheldt had nothing to do with it. But I was glad he did it. I was glad that, at the last, he said to me, 'I won't have him suffer for it. I got what I deserved and no more.' There was a little spark of manliness in the fellow who could say that and mean it. He died two days after I reached him.

It was his wish—and I knew Aunt Harriet would no more dispute his will dead than alive—that his body should not be brought home. There will be fewer questions to ask if there is no funeral fuss at home; that was the reason he gave. And so he was buried there in the little church-yard. He gave all his papers into my hands. There were many debts to pay, and it was a long job to make the Sonscheldt's take for their daughter and her child, what I had promised Phil they should take. And I got through it all somehow.

But the last weeks were like Purgatory, with the wonder why Lois had not sent me the word I begged for. I had told her I should not write until that word came, and I could know I had the right. But it did not come. And when I landed this afternoon, and was rushing up through the rain, I met Dr. Ainsworth not ten steps from Aunt Harriet's door, and he told me—Lois, he told me that you—I guessed from him that my letter must have missed, though I could not see how. And I could not come to you then, though it seemed to me my heart was just tearing its way out of my body and going to you. I must see poor Aunt Harriet. I had a message that Phil wrote a few hours before he died, and that I must give into her hands. I could not get away from her until after nine o'clock, and then—"

And then it was all told, and being told, he turned to Lois.

"You may have exactly ten minutes, my children," said Helen Dowlas. "Just ten minutes; and you may thank the gods of Bohemia for so much grace and favor, for I suppose you know, Archie, that Philistia would have politely and elegantly frozen you out of doors two hours ago. Ten minutes, which I shall employ in waking up Mrs. MacCossatt to inform her that Lois has concluded to try a new medicine, in which she, at least, has every confidence. And exactly in ten minutes I shall give myself the pain of bolting that outer door on you, Mr. Caird."

She did not go at once to Mrs. MacCossatt. She went, instead, to her own quiet bed-room, and turning up the low-burning light, stood looking into the mirror above the plain, little dressing-table.

"My dear," she said to herself explanatorily, "I am curious to see how Helen Dowlas looks with a happy face."

Three hours ago how little she could have guessed what a happy face it would be that smiled back at her. And as little could she guess that there was yet to come a day when that little mirror would show her Helen Dowlas' face with a haggard sadness upon it, of a sort she had never dreamed of as among the possibilities of her life.

[To be continued.]

Our Household.

WISHING.

"I wish I had an eagle's sight!"
Said Johnnie with a radiant look.
As all sat round the evening light,
Each occupied with work or hook—
"Then on far Eiffel tower I'd stand
And view the wonders of each land."

"But you've no ship to cross the sea!"
Cried little May in quick reply,
"And if you had—how sick you'd be!
I'd take the eagle's wings and fly—
Then on and on, o'er hill and plain
Right round the world and home again."

"Pshaw! eyes and wings!" sneered sturdy Dan;
"I'd choose, if I a choice could make,
A lion's strength." "And I," said Nan,
"The lily's breath and beauty take."
Then sweet-toothed Nell piped, "For my part,
Give me, from bees, the honey art."

Wishing ran wild. We all were gay,
Mother sat sewing, weary faced;
Small time had she for books or play,
So many stitches must be placed.
Old pussy stretched, lazy and fat,
Close at her feet upon the mat.

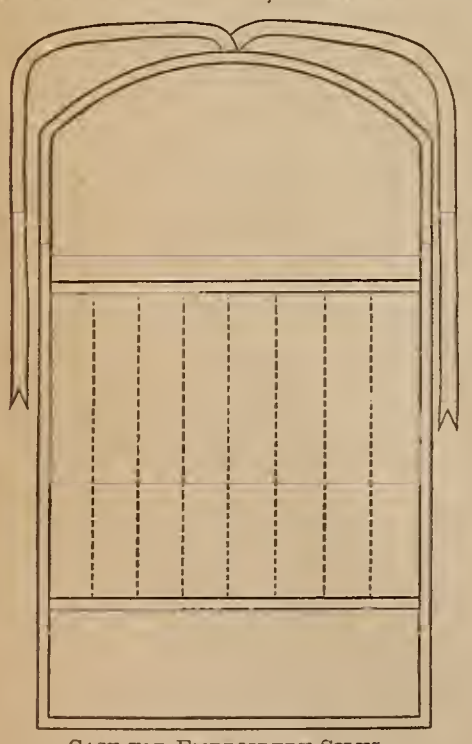
"Mother?" called Dan, "'tis your turn now!
What would you take, had you the chance?"
She pushed her glasses up her brow
And gave us all a kindly glance—
"Well, if I could, and 'twas no crime,
I'd take," she said, "the cat's spare time."

—*Boston Transcript.*

HOME TOPICS.

Curried Rabbit.—The school-girl of the family, who is a member of the high-school cooking-class, prepared a dish for dinner last Saturday which is timely, and may be as new to some of our readers as it was to me. The ingredients required are:

1 rabbit,
1 small onion,
1 tablespoonful of butter,
1 tablespoonful of flour,
1 teacupful of boiling water,
1 teacupful of strained tomatoes,
1 teaspoonful of curry-powder,
1 teacupful of flour, seasoned with pepper and salt. Dress the rabbit, wash it well and cut it up at the joints. Rub each piece well with salt and then roll them in the seasoned flour. Put the butter into a frying-pan and when it is hot, put in the rabbit and let it fry until it is slightly browned. Remove the rabbit to a kettle and add to the butter in which it was fried, the onion chopped fine. Let the onion fry, stirring it until it is yellow, then add the curry-powder and the tablespoonful of flour and stir until smooth; then add the cup of boiling water and cup of tomatoes. Let this just come to the boiling point, then pour it over the rabbit in the kettle and let it cook slowly until it is tender—about an hour, unless the rabbit is very young. Serve on a large platter and garnish with boiled rice and sprigs of parsley.



Case for Embroidery Silks.

Rabbits are best in December, althongh the season begins the first of November. Trapped rabbits are much better than those that have been shot. If you use one that has been shot, be sure and remove all clots of blood from the flesh, and see that there are no shot left in the body. Young rabbits may be distinguished from old ones in several ways. The fur and paws of a young rabbit are soft; the ears are tender and can be easily torn, and the edges of the cleft in the upper lip are quite close together, while in an old rabbit they are spread apart.

Home Study.—Too many girls leave school with the idea that their studying days are over. Unless they engage in teaching or some other regular work, they settle down in their homes, helping a little, perhaps, with the every-day work until some man comes along and takes them to a new home. Most girls expect some day to become wives and mothers and they ought to keep the idea of self-improvement uppermost in their minds. Instead of finishing their education in the years spent in school, they have only just commenced it. If a taste for and a habit of stndy has been acquired, a good beginning has been made.

A wide field of recreation and culture is opened in the establishment of clubs for the study of art, history or literature. In a certain village a "Rome club" was started. Rome, its pagan history, its Christain history, its art in various departments, its relation to the world at various epochs, and its influence on civilization were each studied. Each person was given some special topic to study and to write out conclusions and results to be read at a meeting of the club. The study of countries might be taken up in the same way, with even more advantage. What a cure for neighborhood gossip may be found in such a club! The habit of study formed in girlhood will be strengthened and with added years of study and thought will come added strength of mind and character, that cannot help wielding an influence in the home and the little world around.

If the mother is able to talk well upon current topics, the boys and girls will form and express their opinions, too. If the mother is interested in new books and in discoveries of science, the children will be interested, and an air of intelligence and culture will be given to the home which nothing else can give. From such a home the sons and daughters will be in no haste to go, and when away their hearts will turn back with loving memories.

A round of humdrum honsehold duties becomes tasteless and wearisome unless some recreation and food is given to the mind. Regular study, even though it be only in the form of reading, ought to be a part of every day's duties in every home. The Chautauqua course of reading has filled a long-felt want, and its influence on countless lives can never be estimated.

Maida McL.

FINAL HINTS FOR CHRISTMAS.

CHRISTIE IRVING.

Through the Woman's Exchange in the various cities there has been a revival of the old-time, beautiful hand sewing. Many things that were only a few years ago machine made are not now cared for by those who like dainty belongings. I think it was the overloading everything with trimming that gave it a coarse and vulgar look. Now, more attention is given to daintiness in all underwear and baby outfits. Exquisite material is sought for and good needlework. This has brought into use again the little "housewives" so much used years ago, and which many a girl made for her lover during the war.

Housewife.—The very finest gray linen is used. The pockets in No. 1 are all bound first, then sewed to the lining and then bound together with the outside. Brown or black flannel binding is used; if you wish it nicer, use satin ribbon. It will do for a gentleman. No. 2 is a little daintier and intended for a lady's work-basket. It is made of congress canvas, embroidered in filoselle silks of gold and lavender. China silk is used for the lining, with a very thin layer of cotton between the silk and the canvas. A gilt cord finishes the edge and some pompons the sides. A small pocket of the silk, shirred on India rubber cord is placed across one end. Another convenience is a

Case for Embroidery Silks.—This is made of butcher's linen of fine quality, bound with yellow ribbons. The divisions for the silks are stitched with yellow silk. On the outside can be wrought the initials of the receiver, in plain outline stitch, or the words "Embroidery Silks," as preferred.

Bonbon Box.—These are nice souvenirs for luncheons or small parties. They are made of water-color paper, either white or colored; at the sides, holes are punched with a shoe punch. It is creased to fold up at the dotted lines; the top line should be fonr and one half inches across, the rest in proportion to it. The sides are laced and tied with twisted rope silk or baby ribbon in any color. On the end which will be the lid a pretty design can be painted.

Doll Dressing.—I think most little girls prefer a small doll—one they can dress themselves. A very pretty way is to crochet the dress of pale yellow, split zephyr, with a white guimpe and white sleeves. A little, high cap to match is made and tied under the chin with baby ribbon in white.

Doll Bed.—This is always acceptable to a little girl, but those bought in the stores are never substantial. As I watched this one made for my own little girl I wished over and over that I was a child again and it was going to be mine. However, I shared the pleasure with the owner. The posts were turned at a tnrner's, but the rest was made with penknife, saw and hammer at home. It is of so simple a pattern I think any boy could fashion them who is at all handy with tools. Make it to last, too, as this one has, and will for many more years.

Housewife with Flat Embroidery.

Many pretty articles can be made from cigar boxes. A gentleman who is an invalid, makes, with a hand scroll saw, very pretty boxes for the bureau. The material used is thin walnut. The top and sides are cut in beautiful filagree and are then lined with colored silks and put together with small brads. In the bottom the silk is padded and perfumed with sachet-powder. I wish we might more often hear from the boys where our paper goes, for then I think we might sometimes give them something to work with. We cannot know your needs till we hear. I enjoy "the boy's letter" very much, and wish more would write.

THE CHRISTMAS TREE.

"The Christmas tree hath struck deep roots
In human hearts; its wintry fruits
Are sweet with love, and the bairns believe
It buddeth and beareth on Holy Eve."

The custom of hanging gifts on a tree is very ancient, dating back to the ninth century, and probably had its origin yet earlier. In a recent article on the subject the author says:

"The first account we have of a Christmas tree tells us that the tree was hung by the roots, and appeared to be dropping its gifts downward. In a French romance of the thirteenth century, there is an accounnt of a Christmas tree illuminated with many candles, and a waxen image of the infant Jesus. Tradition informs us that the first Christmas tree in Germany was seen in 1632."

Since the introduction of Christianity in the various countries, the tree has been dedicated to Christ, and we plant it in our homes laden with gifts for all. Whatever may be the origin of the custom, all will agree that it is a beautiful one that brings joy and gladness to our hearts, a growth of love, by which all people are made happier by means of every gift hung upon the outspreading branches, so blessed a privilege is it; and still to give—to give to happy little ones or storm-tossed, aged mariners on the sea of life.

It is the duty, and generally a freely performed one, of parents upon this occasion to yield to the demand of the present moment, the day's demand to make the home life happy and cheerful. Then let every mother try to fill her home upon this occasion so full of innocent joy, and make it so happy in the sweetness of kind words and loving acts that the children will look back to it in after years as the bright oasis in their lives.

Every home should not only have a Christmas tree, but the freshness of nature should be brought as much as possible to the winter fireside. The pine, the spruce, the clustering berries of bitter-sweet and the waxen mistletoe all make beautiful Christmas decorations, and in the humblest homes will bring an odor of Christmas joy. Let us hope, on the glad Christmas morning soon to dawn upon us, that hundreds, nay, thousands of Christmas trees will grow in happy homes, brilliant with light, and typifying all the resources thoughtful love and generous friendship can suggest, inspiring unbounded gratitude and innocent merriment, thus engendering good feeling that will outlive the passing holidays, and bear "peace and good will" far into the new year.

To the children the memory of these days will embrace the greatest blessings that can linger in their minds, chastening their thoughts with sentiments and pleasures of innocent days, and guiding them, perhaps, many times from errors by recalling the gentle mother and fond father in connection with whose virtues they could not dare to think of evil. Yes, give your boys and girls a happy Christmas to remember. It will refresh mind and body, and lead to every good.

Be merry all, be merry all;
With holly dress the festive hall;
Prepare the song, the feast, the ball,
To welcome merry Christmas.

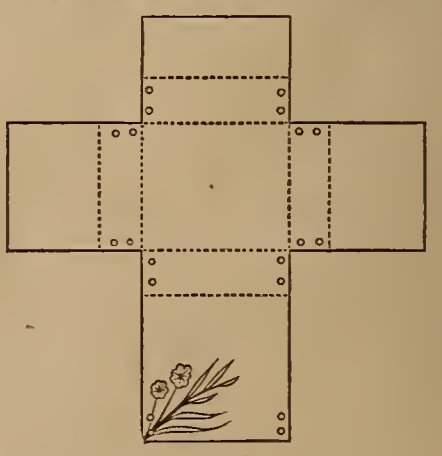
When you the costly banquet deal
To guests who never famine feel,
Oh, spare one morsel from your meal
To feed the poor at Christmas."

Eliza R. Parker.

A COBWEB PARTY.

To present this entertainment successfully requires some little expenditure of time on the part of the hostess, but she may easily find willing aids at this season of leisure. Let her first request a dozen or more of her friends to prepare some simple, inexpensive article of fancy work, or a small gift which may be purchased in a small country store, and let this be wrapped up carefully in a paper parcel or box. The only other requisite of the game is a supply of rather strong cord in long pieces. Several balls of cord or twine may doubtless be found at the village store.

Tie one of the prize packages firmly to one end of the cord, and, having secured a room which need not be opened until the entertainment begins, conceal the parcel in some easily found nook, perhaps behind a picture or under the table, or underneath the chair-seat, taking care to fasten it well in its place of hiding. Now, as your ball of cord slowly unrolls, wind it about chair-legs, door-knobs, to the chandelier, the tops of picture-frames, to



Bonbon Box.

curtain cornices and lambrequins, anywhere at all; but let it extend to all parts of the room, and when the line is of good length, fasten the end to the door-knob, for convenience, until the others are arranged. If you have several colors of cord, so much the better. Treat each package, whether full or empty, in the same way.

A half dozen ladies will arrange the cords together, and when you have prepared as many cords as you have invited guests, twining and intertwining them in every possible or impossible way, the room will look like a labyrinth of strong cobwebs. Very great care must be taken to secure the cord to the package, and to tie or otherwise safely confine it in its hiding-place; otherwise your labor and the pleasure of your guests will be lost.

When a number of cords, twenty-five or thirty, we will say, have been arranged, they may be kept together in a variety of ways until needed. The room may suggest the best arrangement for each hostess. If each is, in turn, wound around a reel or large spool, or if all be wound together in one ball, they may be easily unrolled. When the door is open for the guests, to each in turn is given the end of a cord, and he is directed to follow the line, winding as he goes, until he reaches the end. When twenty or thirty people are thus engaged in disentangling and uncrossing so many cords the room presents a lively appearance. Each is intent on finding his own prize, and all sorts of amusing mishaps occur.

When a package is found, all the seekers are allowed to pause in their task to inspect it and congratulate the finder. A player who has finished his own cobweb is at liberty to pick up any other which may have been dropped inadvertently. Rules are flexible, and may be greatly varied to suit the occasion and the age of the participants. Anyone may intimate to the hostess to whom the cord leading to her prize shall be given. When the room has been arranged, the disentangling may occupy two or even three hours.—*Helen M. North, in September Wide-Awake.*

THE PREPARATION OF FEATHERS.

Despite the strenuous efforts that have been made to arouse a public sentiment against the reckless slaughter of our feathered songsters for their plumage, the caprices of fashion have proved stronger than any sentiment, and never was there such a demand for all varieties of feather decoration as at the present time. Without regard to the pros and cons of the question, we can but admit that nothing handsomer has ever been found for ornamenting winter millinery, whether they be used as tips, quills, wings, breasts or entire birds.

The woman who lives in the country, if she but knows how, can fashion many handsome ornaments without committing the least cruelty, for many of our domestic fowls have beautiful plumage. Wild ducks, which in some localities are plentiful, sometimes have beautiful wings and breast feathers.

Large quills require no treatment to fit them for use other than to dip the quill end in strong, hot alum water, and then dry them thoroughly. The pinions can be cured without removing the bone, but when the entire wing is wanted, the skin should be cut through on the underside and the flesh carefully scraped from the bone. Then sprinkle the damp flesh with carbolic acid or with powdered alum. Bring the skin back into place and pin in shape and dry thoroughly. If one sprinkling does not suffice, take them down and apply it again to the underside. When perfectly dry, line the underside with thin, black silk, first attaching a loop of bonnet wire to the end to fasten it to the hat.

Some cocks have beautiful, slender feathers for making aigrettes with. These require slender quills with a tuft of feathers at the end. When these slender quills are found, the feathers, except at the end, can be scraped off with a sharp knife. Cut the feathers at a distance from four to six inches from the tip. Fasten a loop of fine, black bonnet wire to the end of the quill and cover the joining with a bit of black silk. Hide the silk by gluing over it a few breast feathers.

Very handsome pieces can be taken from the breasts of birds or fowls, by carefully removing the skin with the feathers intact, and then cutting the piece into the desired shape from the skin or inside, being very careful to only cut through the skin. Then either rub the inside with carbolic acid or alum, and pin in shape to dry. These breast feathers are often left as long as possible, and at other times they are cut round or oval, and two pinions, or long wing or tail feathers, are attached to them. No matter what the shape, one or two loops of bonnet wire should be securely fastened to them before they are lined.

No style of feather decoration is more stylish than band trimming, and this can be made in any width desired by gluing small feathers to a strip of silk for a foundation. A band two feathers wide is very handsome, added to the outer edge of a wide-brimmed hat. The glue should be used rather thick, but if of the proper consistency, no difficulty will be experienced in making these bands. When you have the feathers glued on, either pin the band out perfectly straight or else in a circle to dry.

Black quills and wings are very stylish. Sometimes a row of the latter completely encircles the crown.

I have never attempted it myself, but a friend succeeds admirably in dyeing feathers with the prepared dyes. It requires more time than to dye fabrics, and they must be very carefully picked apart and brushed before they are dried. Another friend had equally good success with good shoe dressing. Ostrich tips may be nicely renovated by commencing at the base and drawing each frond between the thumb and a paper-cutter, and afterwards shaking them thoroughly over burning sugar. KATHERINE B. J.

PUDDING FOR DINNER.

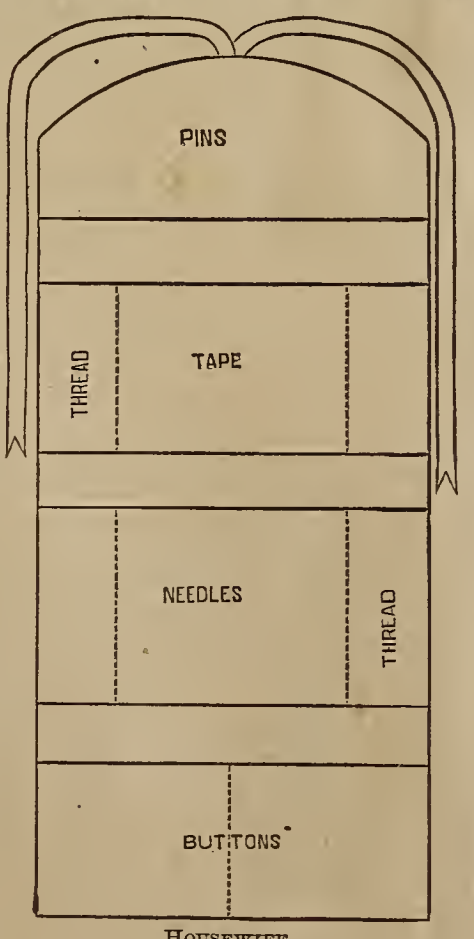
One or two days in a week let's have a respite from the eternal pie. It takes less time and muss to make a pudding, also, which, upon the days we want to cut short the dinner operations, is quite a consideration. Days when all the top of the stove is wanted, is a good time to have an oven dinner. For the principal dishes, we may have baked meat, with potatoes in the same pan, and baked corn (the most delicious way of prepariug corn, to our way of thinking).

BAKED CORN.—Slit and scrape down the corn from twelve good-sized ears. Place in a quart pan and pour on just enough milk to come up to the edge of the corn. Season with a tablespoonful of butter, the same of sugar, half a teaspoonful of salt and a dash of pepper. Bake twenty minutes.

Any one of the following puddings may be selected to go with this:

SPANISH CREAM.—One half box of gelatine, soak in one half pint of milk, then put one quart of milk on to boil, beat the whites of six eggs to a stiff froth; when the milk is boiling hot, stir in the beaten yelks, sugar to taste and add the gelatine; let it thicken as you would soft custard, then pour it, boiling hot, on the whites, stirring all the time; flavor with vanilla and pour into molds to cool. Let it stand at least twelve hours in a cold place before using.

CREAM TAPIOCA PUDDING.—Soak three tablespoonfuls of tapioca in water over night; put the tapioca into a quart of boiling milk and boil half an hour; beat



HOUSEWIFE.

the yelks of four eggs with a cup of sugar; add three tablespoonfuls of prepared cocoanut; stir in and boil ten minutes longer; pour into a pudding-dish; beat the whites of the four eggs to a stiff froth, stir in three tablespoonfuls of sugar and put this over the top; sprinkle cocoanut over it and brown for five minutes.

HARD SAUCE.—One cup of sugar and half a cup of butter beaten together until like cream; the whites of two eggs well beaten; flavor with vanilla, four drops.

QUEEN OF PUDDINGS.—Into one quart of milk put one pint of bread crumbs, butter the size of an egg, the yelks of four eggs; sweeten and flavor as for a custard and bake; make frosting of the whites of the eggs and one cup of sugar; put on a layer of jelly when pudding is hot, and then the frosting; brown slightly in oven.

APPLE FRITTERS.—One egg, one cup of milk, piuch of salt, two cups of chopped apples, two teaspoonfuls baking-powder, flour enough to make a stiff batter; fry in considerable lard; eat hot with a sirup.

SNOW PUDDING.—Soak one ounce of gelatine in a pint of cold water for ten minutes; place the same over the fire, stir, and remove as soon as it is dissolved; and when nearly cold, beat to a stiff froth with an egg-beater. Second.—Beat the whites of three eggs to a stiff froth, add it to the gelatine froth, together with the juice of three lemons and pulverized sugar to suit the taste, and mix the whole. Next pour into a mold and set aside to cool. Serve on a dish with soft custard made from the yelks of the eggs.

EXCELLENT APPLE DUMPLINGS.—The apples should be large and juicy, cored and filled with sugar soaked in lemon juice, and covered with grated lemon peel, powdered nutmeg and a little salt. The paste made in the proportion of a pint of finely minced suet to a large quart of flour and a very little water; one half the suet rubbed into the pan of flour, the other sliced thin and spread over the sheet of dough. They should be boiled in small cloths sprinkled with flour, with room for the dumplings to swell. Serve very hot, and eat with flavored cream or brandy sauce.

By a little judicious education in your family (and the mother can be the head mover in this), you can soon bring about a liking for pudding as well as pie.

Side dishes of slaw, celery, pickles and fruit sauces can be added for variety.

MATENA TOLLEFSON.

Christmas Dinner.

Raw Oysters. Consomme. Baked Fish.
Tartare Sauce. Scalloped Potatoes.
Turkey. Cranberries.
Browned Sweet Potatoes.
Creamed Carrots. Onions Stewed.
Oyster Patties. Beet Salad.
Cold Slaw. Ramequins. Quenelles.
Olives.
Nuts.
Salted Almonds.
Pumpkin Pie. Mince Pie.
Spanish Cream.
Fruit. Cake. Coffee.

All recipes for the above menu will be found in "The Modern Cook Book," advertised in this issue.

COFFEE.

If one wants nice coffee, buy the green berry aud roast it at home. I like the cylinder roaster the best. It is a cylinder made of screening, like the corn-popper, and is turned by means of a handle at the end of a rod, which passes through the cylinder and projects far enough to catch into a slot in a sheet-iron basin, and which is directly opposite the slot in which the handle turns. This basin should fit the holes in the stove, so that the lid may be removed and the roasting done as rapidly as possible. The basin should also be fitted with a tight cover.

Do not fill the cylinder more than half full of coffee, and keep turning the crank until the berries begin to crackle like popcorn. Watch it very carefully now, or it will burn. A second or two of brisk popping is sufficient to give it a proper brown. Sometimes, if the fire is not hot enough, the coffee will get browned without cracking, but it takes longer, and I do not think the flavor is quite as good.

Wheu the coffee is roasted, turn into a pan, and when cool enough to bear your hand, if quickly applied, turn in a beaten egg to one pound of coffee, stir quickly and thoroughly. Each berry is thus covered with a coating of egg, which helps to preserve the strength and flavor, and will also aid in settling the grounds.

In making coffee, we prefer to use cold water on the grounds first. Turn in a pint or so of water to a large tablespoonful of coffee and when it comes to a boil, fill immediately with boiling water, and place on the back of the stove where there is no danger of further boiling.

Many a cup of coffee is ruined by too long boiling. The fine flavor goes off in steam, and there is apt to be left a strong, bitter taste.

HINTS.

To prevent pie juice from running out in the oven, make a little opening in the upper crust and insert a little roll of brown paper perpendicularly. The steam will escape from it as from a chimney, and all the juice will be retained in the pie.

If you wish to keep pickles in your glass fruit jars, rub the insides of the metal caps with lard. The cans with caps lined with porcelain are much to be preferred for all purposes.

About the only way in which the dried or evaporated apples can be made palatable is to stew them slowly for a long time. When thoroughly done, so there will be no lumps, pass through a colander, making a homogenous mass about the color and thickness of apple-butter. Add the juice of a lemon, cinnamon and cloves with discretion, sugar with a liberal heart, regardless of tariff, and by "making believe very hard," after the fashion of Dickens' "Marchioness," you have a very fair substitute for apple-butter.

When you are tired of lemon and vanilla flavoring, try mixing them. To a teaspoonful of lemon extract add about a third of a teaspoonful of vauilla, and you will think you have discovered a new flavor.

CHOCOLATE CAKE.

In these days of high-priced eggs, one values a recipe which does not require more than half a dozen. Here is a good one without any:

Two and one half cups of flour, one cup of sugar and two full teaspoonfuls of baking-powder; sift these together through a flour-sifter three times; then work in two even tablespoonfuls of butter and one full cup of sweet milk. Beat thoroughly until the batter is creamy aud free from lumps. Bake in jelly-tins.

For the filling, use baker's chocolate, which is not sweetened. Grate one half cupful of it, add one half cup of sugar, one teaspoonful of corn starch and three tablespoonfuls of water; place in a dish on the stove and stir until dissolved. Let boil a few moments until a drop will harden in cold water; spread between the layers of cake and over the top. GYPSY.

GOLD is in favor. There is a rage for gold lace, gold braid, gold passementerie and gold ribbons. Gold coins have lost none of their worshipers.

Our Household.

EVENING AMUSEMENTS.

The long, winter evenings are with us again, and many anxious mothers are wondering how they shall amuse the children through this long period of "shut in" life among so many farmers. We found a package of geographical cards to afford us the most amusement last season. They resemble the "author" cards in size. At the top of the card is the name of some city, country, river, mountain, sea, etc., and below were four or five different sentences relating to some property or describing the subject. Any one of these sentences could be asked as a question, and the one guessing rightly the name at the top claimed the card; if all the questions on the card were asked and no one was able to answer any of them, the card belonged to the one asking the questions. These may be asked by one person, who holds all the cards, or the cards may be divided among the players and ask the questions in each one's turn, the first one at the left having first chance at answering the question, and then the next, and so on in rotation with the questions and answers all around the circle or room. We liked the latter way best, as it gave every one equal chances. Perhaps the children liked the game better because papa and mamma would play with them quite often, and it was astonishing how much the parents found they had forgotten since their "geographical days." The children's pile of cards would often be larger than the old people's, and how that would please them.

If the parents would take more pains to play with the litttle ones, and try to make home attractive, there would be fewer boys on the street corners and in the saloon; fewer girls seeking amusement and pleasure in other homes not to your liking, perhaps.

If musical, try and provide something in that line for them. A mouth-organ, well played, makes good music, and surely that is an expense within the reach of any of us. But, really, musical instruments are so cheap, now-a-days, that something in that line can be procured, if the whole family will practice a little self-denial and economy. Don't go without a necessary article of wearing apparel, for there is no economy in abusing one's health. But, perhaps, in the bill of fare you can make a reduction in the expense; fewer pies, cakes, preserves, pickles and jellies, and more good, wholesome bread and butter, vegetables, soup and plain sauces of some kind. Your health will be in no danger of being injured by that change, I assure you.

If your boys show a taste and skill in woodwork, get a bracket saw, if possible, and set them at work. How fast the winter evenings will pass for them, and the home will be adorned with many pretty and useful articles of their manufacture.

If there are near neighbors, can't the young people start a reading circle, meeting at some one of the houses once a week? Don't think it necessary to take up Dickens, Scott or Shakespeare, because some other reading club does, unless you wish that class of reading. It would be a grand thing if every farmer's child could be educated to a standard where such works of prominent authors would be their choice, could be read, appreciated and understood. But as they are not, it would seem better to select subjects from the current topics of the day; and truly, there would seem to be an almost inexhaustible supply of these, in such days of progress as the nineteenth century. Mix in some good selections of poetry in the programme; cultivate a taste for the pure, good and beautiful in literature. Don't read trashy novels. You had far better lie down and sleep than spend your time over them. Nothing is more injurious to a good memory than cramming the mind with that class of reading. Remembering all, you cannot; forgetting some, you will and had better; but in thus doing, you get into a habit of forgetting that causes a deal of trouble to your associates, to say nothing of yourself. A good memory is to be prized as a pearl of great price, and can be acquired by care in reading, studying and a strict application of thought to whatever line of work you are pursuing. Let our young readers (yes, and it will not hurt the old ones) of the Farm and Fireside each appoint himself a committee of one, to see how much improvement and culture he can gain from the coming season's entertainments. Strive to help each other and we will thus help ourselves. In amusement, in sociability, in advancement, in culture, remember the motto: "Home first, the world afterward." Make each home perfect, its inmates models of politeness and good morals, and the reformation of the world is surely begun. One man cannot reform the world, but truly a nation might try to reclaim one man that strayed away. In union there is strength. Let the union be for all that is good and true and ennobling to the character. There are a number of farmers' organizations that have such objects in view; that are aiming to secure a higher degree of education and culture among the farming classes. Join some one of them; become an active member in the good work. Pray that it may become a blessing in every community, and secure the highest degree of excellence and purity in the life of each farmer brother and sister. Gypsy.

THOUGHTS AT THE DINNER-TABLE.

A few days ago, at the boarding-house where I take my dinners, I noticed on the table a pretty, new dish. The landlady explained that her little daughter drew it at a lottery. It was a tea-store prize, or something like that. It put my mind on such things, and I remembered that when Miss Mitford was a little girl she had wonderful luck at a lottery. It was her birthday; she was ten years old, and her father gave her as a present a lottery ticket; with what seemed childish caprice, she insisted on having the ticket number 2,224. It drew a prize of 20,000 pounds, in English money, about equal to one hundred thousand dollars.

Although I have been taught that lotteries are not right, as I sat there looking at my landlady's daughter's dish, and thinking of Miss Mitford, I wished that I could get a fortune in that or some other way.

"What would you do with it?" asked a voice within.

"Well, I should get some new clothes," answered my woman's soul.

"But you don't need new clothes. You have more than you wear; one dress so good that for weeks it hangs undisturbed in the closet."

"Yes, that's true," I had to admit, and then thinking a little while longer, I said, "Well, I'd travel."

"Where would you go?"

It took me a long while to think of some place to go. Of course, there were Europe, Mexico, the Pacific slope, and many other places where I might go, had I my imaginary fortune, bnt what good would it do me? Should I not die of loneliness? Was not home the best place for me after all?

I am quite aware that in disposing of my wished-for fortune, I should have said, "I will do good with it." But I didn't. My meditations lasted till I was well through eating dinner, and some way they grew more cheerful. By the time I came to dessert I felt so satisfied that I didn't care for a fortune.

How different the world seems according to the state of one's stomach. But the real sensible conclusion of my thoughts that day was the same in substance that Paul wrote to Timothy: "Having food and raiment, let us be therewith content." Yes, food, clothing and a pleasant home ought to make us free from fretful anxiety; all beyond is superfluity. "Poor but content is rich, and rich enough."

Kate Kauffman.

SALVE.

Gum camphor, 2 ounces; beeswax, 2 ounces; mutton tallow, ½ ounce. Melt the tallow and beeswax together, then pulverize the camphor and add to it. Stir until thoroughly cooled. This is very healing for chapped hands.

Vernon, Wis. Mrs. A. S.

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Our Sunday Afternoon.

SATURDAY NIGHT.

The week has gone with the troubles
That weigh upon heart and brain;
The cares that are worse than sorrow,
The task that is worse than pain;
The toil for a hard-won pittance,
The scoff and the bitter sneer,
That yet must be borne in silence—
Oh, would the end was near!

But rest comes now. It is midnight,
And I sit by the hearth alone,
And dream of the days departed,
And think of a youth long flown;
The days when a sunny radiance
Surrounded the future years,
When happiness seemed so certain,
And life had no thought of tears.

Ah, well! we have all our visions
When the pulses of youth are stirred,
Naught dreaming of coming sorrow,
Or the sickness of "hope deferred."
How the ties that bind in the morning
May break ere the sun is low,
And our dearest pass from our presence,
And we—we must let them go.

Love, happiness, death and sorrow,
Thorns ever amid the flowers;
It must be so. In a circle
Moves onward this life of ours.
But I think that I should not murmur
If I knew it were near its close;
If to-night I should hear the summons;
Perhaps it may come—who knows?

FINDING FAULT.

DOES it pay to find fault? You who are the wise keepers of houses and the dear keepers of hearts, does it pay? There are heavy burdens to bear all day—manifold cares from the rising to the setting of the sun—blunders made by those who should have known better, many a thing to annoy; but don't make cold and cheerless the home atmosphere by finding fault. There is no blight more deadly in its tendency, nothing that can more surely disturb the harmony of home, nothing that will recoil more quickly upon yourself than this habit of fault finding.

Not that errors should go unrebuked or mistakes uncorrected; but note down in your memory, and when the work and care and tumult of the day are all over, then call the little ones and the larger ones around you and tell them soberly, but kindly, of the wrong doings, and see if you are not amply repaid for your forbearance by the smile and the tear and the little word of contrition and promise of amendment. You will be a thousand times happier when you lie down to sleep, and a sweet forgetfulness has settled over your little flock, than you would have been had the blue eye now closed been filled with bitter tears that overflowed at unkind censure, or had the little golden head drooped under the shadow of your constant frown.

How fair and sweet and satisfying life might be to us all if we would forget to fret and find fault and complain. Don't save your words of praise and appreciation until it is too late. You love the little children—the dear little children! And if they do speak loud and disturb the order of the house, don't find fault. It won't pay.—*Standard.*

A SENSE OF RIDICULE.

A sense of ridicule is an original faculty of the human mind; it is much keener in some individuals than in others, and under proper management, it might possibly find its place in a Christian character, but it is like some plants which, though wholesome in themselves, are never admitted into our gardens because they spread too rapidly, and root out what is more valuable. The love of satire grows by indulgence until it destroys the power of discrimination, blunts sensibility to another's pain, disturbs the balance of justice, weakens all noble and generous feeling and gives a general taint of coarseness and vulgarity to the whole character.

There is nothing too innocent and unobtrusive to be food for this morbid love of fun; nothing too valuable and too beautiful to be viewed in this coarse light; nothing too high and nothing too low to minister to this diseased appetite, and the pain often inflicted upon those who are its innocent objects is a small evil compared with the immense injury it does to the mind that entertains it.

HEART MEMORIES.

There is enshrined in every human heart the bright dream of youth, the golden hope of childhood. And there the memories of those first impressions, pure desires and cloudless joys will live forever. Sorrow and misfortune may fling their dark shadows around our pathway; disappointment and anguish may chill the better feeling of our nature; crime may weave its sombre folds around the heart; the wild storms of passion may sweep its chords; dishonor and shame may shroud its altar; but all these can never blot from its tablets the record of childhood's hours—its first impressions, its budding affections, its dream-like joys. Nor can the pride and pomp of power or wealth or fame extinguish the light of its inner chambers. No, never. The felon doomed to die turns back once more when the star of hope has set, to read the *one* bright page in the light of life's young morning. The aged Christian, too, as the evening twilight gathers around him, and as he waits in patience and in hope for the reaper—death—still turns to catch the gleam of its far-off rays, and in the light of a living faith he trusts in a renewal of youth, in a more enduring form beyond the grave. Oh, yes, there is in the depth of every human heart one warm and sunny spot where nestle the images of early love and the sweet remembrances of childhood's home. There they will remain, even to the final hour, with all the bright memories that cluster around the gladsome period, unchanged forever, the one pure and hallowed spot in life's uncertain way, the star of a darksome world, the earth type of joys to come.—*D. H. B. Brower.*

TACT.

To be able to say the right thing at the right moment is a great art, and said only to be acquired by those who have a natural talent that way. When a careless talker, who was criticising a young lady's father severely, paused a moment to say, "I hope he is no relation of yours, Miss B.?" Quick as thought she replied, with the utmost nonchalance: "Only a connection of mother's by marriage."

Few could hope to show such a readiness of speech in a dilemma of this kind. Yet in a more curious and amusing way this was matched by a cautious, old woman, who, when asked what she thought of one of her neighbors of the name of Jones, with a knowing look replied: "Why, I don't like to say anything about my neighbors; but as to Mr. Jones, sometimes I think, and then again I don't know; but, after all, I rather guess he'll turn out to be a good deal such a sort of man as I take him to be."

SELF-DENIAL.

When Agassiz visited Oken, the great German naturalist, the latter showed to the young student his laboratory, his cabinet, his magnificent library and all his varied and costly apparatus. At length the dinner hour approached. Oken said to Agassiz: "Sir, to gather and maintain what you have seen uses up my income. To accomplish this, I have to economize in my style of living. Three times in the week we have meat on the table. On the other days we dine on potatoes and salt. I regret that your visit has fallen on a potato day." And so the naturalist, with the student Oken, dined on potatoes and salt. If a student of science can practice such self-denial, what should we expect of him who labors to spread the gospel of a cross-bearing Jesus?—*Times of Refreshing.*

PROGRESSIVE KNOWLEDGE.

Some one says: At ten years of age a boy thinks his father knows a great deal, at fifteen he knows as much as his father, at twenty he knows twice as much, at thirty he is willing to take his advice, at forty he begins to think his father knows something after all, at fifty he begins to seek his advice, and at sixty—after his father is dead—he thinks he was the smartest man that ever lived.

Gleanings.

ROBIN, MY SWEETHEART.

Oh sweetheart mine, with the bonnie brown hair,
With eyes so merry and brow so fair,
'Tis a year to-day since you came to woo,
And never was lover more loving and true,
Robin, my sweetheart!

Yet I wonder, sometimes, as I fold you fast,
If love like yours can forever last,
How it will be as the years are told,
When you have grown wiser and I have grown old,
Robin, my sweetheart!

You have won my heart by your words and smiles,
You have won my heart by your witching wiles,
And I wish, oh, I wish I could hold for aye
The place in your heart that I hold to-day,
Robin, my sweetheart!

But when I am sadder and far less fair,
When the snows of time are thick in my hair,
When pain has furrowed my cheek and brow,
Will you love me then as you love me now,
Robin, my sweetheart?

You bring to my lips your young life's wine,
And promise, dear, to be always mine;
Yet still I wonder how it will be
When you are thirty instead of three,
Robin, my sweetheart!

But away with doubt! and with fears away!
You are mine to-day, sweetheart, to-day!
So we'll sing and be merry, and dance, care-free,
Nor dream of the time when you may not be
Robin, my sweetheart.

—Emma C. Dowd, in the Youth's Companion.

THE OLDEST KISSING STORY.

The oldest kissing story is probably that of the Hindoo herdsman who was walking along the road with an iron kettle on his back, a live goose in one hand and in the other a cane and a rope by which he was leading a goat. Presently a woman joined him, and they walked along together until they reached a dark ravine, when she shrank back, declaring she was afraid he might kiss her by force there in the dark. The man explained that by reason of his burdens he could not possibly do so.

"Yes," said the woman, "but what is to hinder you from sticking the cane in the ground and tying the goat to it, and then laying the goose on the ground and covering it with the kettle? And then, how could I help myself if you wickedly persisted in kissing me?"

"Many thanks," said the man. "I never should have thought of all that. You are an ingenious woman. May your ingenuity always succeed."

So they went on until they reached the darkest part of the ravine. Then he stuck the cane in the ground and tied the goat to it, and put the goose under the kettle by the cane, and then wickedly kissed the woman in spite of her great resistance.

CO-OPERATIVE HOUSEKEEPING.

"There is a man up town," said another man yesterday, "who has a unique idea about co-operative housekeeping. He has been going through some pretty deep waters lately with his servant experiences, and this has probably induced him to give the matter some thought. He proposes that some capitalist shall build a block of residences in the form of a hollow square, in the interior court of which is to be located the common kitchen. Small tracks connect this kitchen with the dining-room of each residence, and hampers properly fitted to hold entire meals, are run upon them. The cooking for the entire block is to be done in the general kitchen by a corps of competent cooks, under a commissariat or steward. At the hour desired by the householder the meal is packed in its hamper and instantly conveyed to his dining-room, whence it is served as if from his private kitchen. One servant, either man or woman, would thus suffice for every family, as only the routine duties of keeping the house in order and waiting at table would be necessary.—*N. Y. Sun.*

A SELF-SUPPORTING WOMAN.

L. P. Rodgers, of New York, was talking in the Colonnade last evening about self-supporting women, says the Philadelphia *Press*. He remarked:

Among the many occupations invented by impecunious women, perhaps the most original is that of a woman of thirty, who had been for several years at the head of her father's luxurious establishment. She learned thoroughly the art of entertaining, and one day, when suddenly left a penniless orphan, she determined to make this knowledge of some practical use. She was not much of a musician, and she didn't have either the knack or desire to teach what languages she knew. She couldn't write or paint, and in fact, found it difficult to find within herself any knowledge sufficiently great to be worth money enough to support her. "If I only knew one thing thoroughly," she cried, "but the only thing I know how to do is to give dinner parties. I know that exactly and completely; but the question is not how to give dinners, but how to get them to give." Thinking the matter over in every light, a sudden inspiration came to her. There were numbers of people who had the means, but not the knowledge for giving dinners; why couldn't she teach them?

She told her idea to friends, and they encouraged her by employing her on such occasions, thus relieving themselves of infinite care and worry. Her method was this: She went to the intending dinner-giver the day the invitations were issued, and discussed ways and means. On the day of the dinner she ordered the flowers, flavors and dinner-cards, arranging them herself; got the dinner-table into proper condition, saw that all changes of plates and silver were ready, and like a major-general, stood and gave her orders until dessert was served, upon which she drew a sigh of relief, put on her gloves, and slipped away.

Her patronage increased when her friends found what clever and original ideas she had, and realized how completely she lifted all the care and responsibility from their shoulders. She made a business of getting all the latest ideas from florists, caterers and shopkeepers, and applied them at once, while they were new. After she became interested in the work, she began to develop all sorts of original inspirations, which were popular and effective. She also made a point of hunting up clever little verses and quotations for dinner-cards, and wrote them out herself upon cards that she procured from various artist friends, who had dined sumptuously at her own table in the by-gone days, and who were willing to be obliging now. At present she has secured a clientile who keeps her occupied all through the season, and she manages to live very comfortably on the proceeds of her work. Naturally commissions on all the things she recommends come into her hands, and these added to her other earnings, make a sum sufficient for her needs.

CURE OF CORNS WITH CARBOLIC ACID.

Dr. Salemi has taken advantage of the escharotic property of carbolic acid to remove corns which several other remedies had failed to dislodge. He gives the following directions: After bathing the feet in soapy water, dry the affected part and surround the corn with a layer of collodion. Melt the carbolic crystals by a gentle heat and apply a thick layer over the softened surface of the corn, taking care not to touch the surrounding flesh. After a few minutes apply to the layer of acid a piece of wadding or blotting paper to absorb the excess of the acid. Repeated at intervals of three or four days, this simple remedy is stated to effect a complete cure.

SHE WAS JOKING.

"No," said she, "I—I can be only a sister to you."

"Very well," said he, "I must be going. I had expected a different answer, but—well, good night!"

"George," she faltered. as he started out into the night, "George!"

"What is it?" he asked, crossly.

"Aren't you going to kiss your sister good night?"

He did not go.—*Lawrence American.*

Our Miscellany.

LOVE'S FITFULNESS

You say that I am fitful. Sweet, 'tis true;
But 'tis that I your fitfulness obey.
If you are April, how can I be May,
Or flaunt bright roses when you wear sad rue?
Shine like the sun, and my sky will be blue;
Sing, and the lark shall envy me my lay.
I do but follow where you point the way,
And what I feel you doing, straight must do.
The wind might just as well reproach the vane
As you upbraid me for my shiftings, dear.
Blow from the south, and south I shall remain;
If you keep fixed, be sure I shall not veer.
Nay, on your change my changes so depend,
If ends your love, why, then my love will end.

ONE of the strongest characteristics of genius is the power of lighting its own fire.

MANKIND loves mysteries. A hole in the street excites more wonder than a star in the heavens.

THE use of travelling is to regulate imagination by realty, and instead of thinking how things may be, to see them as they are.

CALIFORNIA, unlike eastern states, is reported to have had a remarkably good year for fruit. The yield of prunes is estimated at fifteen million pounds.

AN English geologist predicts that within fifty years a convulsion of nature will sink the whole of New Zealand fifty feet below the surface of the sea.

THE United States is by far the largest consumer of stamped envelopes of any nation in the world, upward of 500,000,000 having been used during the past year.

"IT is very sad," she mused, "but Charley hasn't got a bit of romance. Last night I said to him, 'My king,' and he turned suddenly and growled out, 'Mike who?'"

FARMERS in outlying sections of northern New Jersey report a superfluity of rabbits this year. That game has not been so plentiful before in fifteen years, they say.

SHE—"Here, I've read the whole ten volumes of the romance and he doesn't marry her after all." "Well, if a lover doesn't get wise in ten volumes he never will, that's certain."

A VALUABLE AND INTERESTING CATALOGUE OF HOLSTEIN-FRIESIANS.—We have just received this, and would recommend all of our readers to send stamps for a copy.

It is made up largely of the Pietertje stock, formerly in the hands of Mr. Whipple, of Cuba, N. Y., under whom was made the wonderful milk record of *Pietertje 2d*, viz, 30318 lbs. 8 oz. in one year, but contains also many good cows imported by Mr. Alonzo Bradley and other good judges, as well as a number of Netherland Keyes and Promoter blood. Address The Hill Farm, Chatham, Morris Co., N. J.

TENNYSON, now past eighty-one, has recovered surprisingly from his recent illness. He takes a fair amount of exercise, is interested in current events and continues to write.

PROFESSOR—"Admiration is a form of love. Now, Mr. R., you may name the highest degree of admiration." Mr. R.—"I am not certain, professor, but I think it must be speechless admiration."

WHEN you squeeze a young lady—if you ever do—and she exclaims, "Oh!" do not think she is displeased. It is merely an involuntary action of the vocal organs—simply oh-ing to the pressure."

MATER—"Girls, we mustn't worry your father about going away next summer. His finances are extremely low, I know. I looked in his cheque-book yesterday and he had only one cheque left."

"DID any man ever kiss you before, darling?" "Before—to-day? No, Edward, you are the first." And the recording angel didn't need to drop a tear to blot out the fib, for he was the first that had kissed her that day.

DON'T flatter yourself that friendship authorizes you to say disagreeable things to your intimates. On the contrary, the nearer you come into a relation with a person, the more necessary do tact and courtesy become. —*Holmes.*

"HE who would eat the kernel must crack the nut; he who would have the gain must take the pain." Right judgment is the kernel of the whole great nut of life, but it is to be gained only by pain and diligence and the determination to know so much of the truth of things as we can get at.

IT is believed that the monument to be erected by the Italians to commemorate the 400th anniversary of the discovery of America will undoubtedly be a valuable ornament to New York. According to the plans of a Roman sculptor, the column, 100 feet high, of a granite from near Lake Maggiore, will be surmounted by a statue of Columbus in bronze. The whole will cost $200,000.

THE New Hampshire Historical Society is interested in what is supposed to be the grave of a Norseman of the tenth century, at Hampton. Three fourths of a mile north of the beach is an uncovered boulder, three feet long by two thick, which has scratches in the form of a cross at the bottom and top, and certain marks claimed to be of Norse origin. The "grave" is near by, but has not been opened.

HA! HA! SO THEY WATCHED FOR ME, DID THEY?

THREE OF A KIND.

Horace Greely once refused an increase of salary upon the ground that he did not think his paper could afford to pay it.

Mr. Bliss, president of the Boston & Albany railroad, has just declined an increase of his salary from $12,000 to $20,000, with the singular explanation that "I do not believe my services are worth any more than I am now receiving."

Mr. Powderly succeeded lately, with difficulty, in persuading the Knights of Labor to reduce his salary from $5,000 to $3,500.

There are a great many peculiar men in this world.—*The Cincinnati Enquirer.*

AN EXTRAORDINARY JOURNEY.

An opportunity will occur within a few months to make a trip around the world under novel conditions, and in a manner not likely to be repeated. Advantage will be taken of the early sailing of the new and magnificent twin-screw steamships, now being built for the Trans-Pacific Service of the Canadian Pacific Railway Company, to afford to the public a "'Round the World" excursion of a most extraordinary character.

The steamship "Empress of India" will sail from Liverpool for Hong Kong, about the 15th January, 1891. At Hong Kong she will take her place in the trans-Pacific line, for which she has been built, sailing via Yokohama to Vancouver, the Pacific termination of the Canadian Pacific Railway.

On her voyage to Vancouver she will call at Gibraltar, Naples, Port Said, Suez, Colombo, Penang, Singapore, Hong Kong, Shanghai, Nagasaki, Kobe and Yokohama, stopping a day at each of the ports named, and at Port Said sufficient time will be allowed to enable passengers to visit Cairo and the Pyramids.

In connection with this voyage tickets will be issued "Around the World," including choice of Steamship lines across the Atlantic and a rail trip over the Canadian Pacific Railway from the Pacific to the Atlantic.

The rate for this wonderful journey will be $600, including meals and berths. Program, with maps showing the route, and giving full information as to stop-overs, etc., can be had at any of the Canadian Pacific Railway offices, or by addressing D. MCNICOLL, Gen'l Pass. Agt., Montreal, Canada.

The second and third steamships of this line will leave Liverpool about the 15th February and the 15th March, 1891, respectively, taking the same route.

HER AMBITION.

A Kansas City school teacher was one day asking her scholars what they wanted to be or do when they were men and women.

She received various answers. One child wished to be a farmer, another a merchant, another a banker, another a school teacher, another a musician, and so on. Some of them answered simply, "I don't know."

Finally, she came to Susie Benley, a nice, little girl of eight years.

"Well, Susie, what do you want to be when you are grown up?"

Susie arose and demurely replied, to the amusement and astonishment of the teacher, "I want to be a married lady and keep house." —*The Youth's Companion.*

THE entire forest area of Germany, according to a work recently published by one of the state foresters of Prussia, now amounts to 34,000,596 acres.

Smiles.

THE OLD YELLOW PUMPKIN.

How dear to this heart is the old yellow pumpkin,
When orchards are barren of stuffing for ples!
When peaches and apples have both been a failure,
And berries of no kinds have greeted the eyes.
How fondly we turn to the fruit of the corn-field—
The fruit that onr children are tanght to despise—
The old yellow pnmpkin, the mnd-covered pumpkin,
The big-bellied pumpkiu that makes such good pies!

Oh, golden-hued pumpkin, you surely are "in it,"
You jolly old rascal, so recently spurned;
We ask your forgiveness for thus having wronged you,
When from your dear presence we scornfully turned.
Come rolling down hili, till we meet you and greet you,
Your bulk is a feast to our fruit-hungry eyes.
We love you, old pumpkin, so well we could eat yon,
For you are a "dandy" when made into pies.

—*Punxsutawney Spirit.*

COSTS IN THE CASE.

AN amnsing scene was recently enacted in a court-room in a small country town. The magistrate, a high, pompons official, with a voice like a trombone, took it upon himself to examine a witness—a little, withered, old man, whose face was as red and wrinkled as a smoked herring.

"What is your name?" asked the justice.

"Why, squire, said the astonished witness, "you know my name as well as I know yourn."

"Never you mind what I know or what I dou't know," was the caution, given with magisterial severity. "I ask the question in my official capacity, and you're hound to answer it under oath."

With a contemptuous snort, the witness gave his name, and the questioning proceeded.

"Where do you live?"

"Well, I declare," ejaculated the old man. "Why," he continued, appealing to the laughing listeners, "I've lived in this town all my life, and so's he," pointing to the justice, "an' to hear him go on you'd think—"

"Silence," thundered the irate magistrate. "Answer my question or I'll fine yon for contempt of court."

Alarmed by the threat, the witness named his place of residence, and the examinatlon went on.

"What is your occupation?"

"Huh?"

"What do you do for a living?"

"Oh, get out, squire. Just as if you don't know that I tend gardens in the summer season an' sell coal in winter!"

"As a private citizen I do know it, but as the court I know nothing about you," exclaimed the perspiring justice.

"Well, squire," remarked the puzzled witness, "if you know somethin' outside the court-room an' don't know nothin' in it, you'd better get out au' let somebody try this case that's got some sense."

The advice may have been well meant, but it cost the witness five dollars.

HE IDENTIFIED HER.

There is a pompous cashier in a certain San Francisco bank who lost all his pride the other day.

"You must be identified," he said to a tall, hook-nosed woman in green, red and blue, who brought in a check at a time when his window was crowded.

"Well, I--I—why—I—no, it cayn't be! Yes it is, too. Ain't you Henry Smyth?"

"That's my name, madam," he replied, coldly.

"An' you don't know me, Hen? I'm changed some, and so air you; but I jist knowed I'd seen ye. You've got that same old cast in your eye, your nose crooks a little to the left, an' you're a Smyth all over. An' you don't know me! Dou't you know Salindy Spratt, that you useter coax to become Salindy Smyth? 'Member how ye useter haul me to school on your sled, an' kiss me in the laue, au' call me your little true love? 'Member how ye cut up 'cause I gave ye the mitten? Land, Hen, I could stand here all day, talkin' over them old times. You kin l-dentify me, now, cayn't you, Hen?"

"Hen" did so, but lu a mood that produced apoplexy.—*San Francisco Wasp.*

AN UNCRUSHED ANANIAS.

A certain club man, whose stories are always told in the first person, has at last become a decided bore to his friends, and one of them resolved to call him down. Soon the occaslon came. The self-laudatory club man had told a story of being held up by highwaymen in Kansas. Hc represented it as a cold, rainy night on a muddy road lu the country, and wound up hy stating that the robbers escaped.

Here was a chance, and his friend said:

"If it were muddy, I should think you could have followed them the next morning. They must have left plenty of tracks."

This seemed to be a poser that wonld have downed any ordinary man, but it did not daze our hero. He rose to the emergency and said:

"I thought so, too, hut when I looked the next morning, I found that the robbers had left no tracks. You see, the mud out there ls so sticky that their tracks stuck fast to their feet and they carried them away with them."

BETTER THAN A STRING.

"I want something," said a farmer as he entered a Michigan avenne drug store the other day.

"Well, what is it?"

"I didn't tie a string around my finger, hnt I guess I can get around to it all the same. What's the name of the lake helow ns?"

"Lake Erie."

"Exactly. What's the name of the bay which the boats run to?"

"Put-in-bay."

"Correct. Now, then, who pnt in there?"

"Perry."

"Straight as a string. I want ten cents' worth of perygoric. My old woman said I'd he sure to forget it, but here's the proof that I didn't."—*Detroit Free Press.*

INCREDIBLE.

Bob Hopkins, a confirmed Bohemian, bent on a little gunning, called on an artist friend equipped in a hrand-new pair of hunting-hoots.

"Well, I'll bet you can't guess how I got them," was his reply to the artist's natural reference to his new possession.

The latter went over the long list of expedients known to the seedy hrotherhood to get what they haven't got, but was at last forced to give it up.

"My dear boy, you're not in it. I'd wager doughnuts to dollars, every time, that you couldn't guess. Why, I paid for them."

NATURAL HISTORY.

A class in natural history was called up for recitation. The teacher talked to them a while about the relations of friendship between man and animals, and then asked a girl:

"Do animals really possess the sentlment of affection?"

"Yes, almost always," said the little girl.

"Aud now," said the teacher, turning to a little boy, "tell me what animal has the greatest natural fondness for man?"

"Woman!" said the boy

A SECONDARY QUESTION.

Real-estate man—"Well, I'm going west next week to locate the town of Hopkins."

Investor—"Why, my dear man, what do you mean? I've bought aud paid for two blocks in the center of the town."

Real-estate man—"That's all right. I'm going out there now to find a good location for it. All the lots are sold."—*New York Herald.*

PEACE WAS RESTORED.

Mr. Tangle—"Maria, I'm going to make it warm for yon."

Mrs. Tangle—"You are a perfect brute! I shall go right back to mother's—"

Mr. Tangle—"Now, don't be too hasty, my dear. I'm golng to buy you a sealskin sacque."—*Light.*

THOSE TERRIBLE RUSSIAN WORDS.

Bronson—"Did you hear of the sad fate of poor Offaloffski, the Rnsslan?"

Johnson—"No, what was it?"

Bronson—"He got into an altercation with a fellow countryman, and the other fellow pulled a revolver and made Offaloffski eat his words. It killed him."—*Light.*

ASKING THE IMPOSSIBLE.

American—"What is it the Irish want England to do?"

Irishman—"They wants England t' give th' Oirish th' power to goovern thimsilves."

American (after reflection—)"Only Heaven can do that."—*Puck.*

A wee resident of Le Roy has been taught to save a piece of everything nice for "papa." It is not seldom that when the last blte has been taken papa's portion has been greatly abbreviated. The other day when a quantity of castor oil was heing administered a bright thought struck the youngster as he tasted it, and he said, "I dess I'll save the rest for papa."—*Le Roy Gazette.*

Selections.

FIT A DRESS SO THAT IT FITS, YOUR FORTUNE'S MADE.

THE woman who knows how to fit a dress properly can dictate her own terms, keep a carriage, wear "purple and fine linen," and recreate three months of the year, luxuries, by the way, in which this skillful artiste is able to indulge.

Mme. Mary Ann Connelly has made dresses for all the wealthy women in New York, and to-day she owns a valuable corner on Fifth avenue and three of the handsomest cottages in Long Branch—cottages to which the Pullman, Childs and Drexel estates are not to be compared—argument and proof that dressmaking is a good paying business, the possibilities of which are not appreciated by the intelligent women of New York, who have their way to make in the world.

Now for some figures. Any woman who can cut and fit a dress-waist—not botch it but fit it to the figure—can command a salary of $3,000 in any large city in the Union. More than that, she can be as pert as she likes, have all the privileges she wants, scold the help, boss the customer, and pad her back, sboulders and chest with hair cloth and cotton batting.

The forewoman who is able to take charge of an establishment and originate designs can get a $2,500 position any day in the week, with a transatlantic voyage and all expenses paid for a Paris visit to see the styles.

A girl who can take a waist, after it is fitted, and trim it, gets $30 a week, and works from 8 till 6, with an hour for lunch.

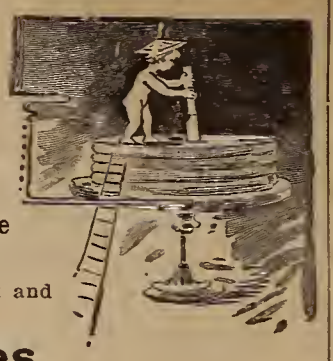
Skirt cutters, who never sew a stitch, are paid from $20 to $25, which is a much better salary than the average teacher in the public or private school gets, and not anything like as hard on the nervous system. Drapers earn from $18 to $20 a week; waist finishers, from $10 to $15; skirt makers, from $5 to $10; and sleeve hands are in demand at $8, which is a better salary than thousands of typewriters in down-town offices are getting. —*New York World.*

WOMAN THE MORAL ARBITER.

The morals of a people depend on the virtues of its women. Upon the firmness of their morality society stands. Modesty is incomparably more marked as a natural virtue in their sex than among the men, and, apart from religious motives, whatever of continency and purity exists in human society is due almost exclusively to female firmness and delicacy. This purity gives woman influence. It creates the sacredness of the family relations. It gains the respect and appreciation of husbands; it hallows in the minds of children a mother's inculcation of right principles. When the women are strictly modest, the men will rise to a corresponding standard of self-respect. They will be chivalrous and honorable; home will attract them, and social reputation will rise to paramount importance. When woman places but little value on her own purity, men cannot be expected to hold her in exalted esteem; her good opinion is of comparatively small importance, men grow careless of their reputation; they fall into vice and vice entails extravagance and extravagance begets speculation, swindling, fraud, forgery, dishonesty of all kinds. Man is the intellectual, but woman the moral arbiter of this world.—*Morning Star and Catholic Messenger.*

FOR 1891. A LARGE AND VALUABLE FOR 1891.

COOK BOOK FREE



To any one sending only 80 cents for the Farm and Fireside and the Ladies Home Companion, both papers one year.

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320 Pages, Over 1,200 Recipes, Hundreds of Illustrations.

The recipes are the choicest selections from 20,000 tbat were received from practical housewives living in all parts of the United States, to which were added hundreds of tbe newest, best and most practical recipes of this progressive age, all of it set in new and large type, and the whole book bandsomely illustrated.

IT HAS A BEAUTIFUL, ILLUMINATED COVER.

It is an elegant and admirably arranged volume of recipes for practical, every-day use. Among its points of excellence are the following:

SOUPS. Tells how to make 46 kinds. With many snggestions and hints, valnable alike to old and yonng honsekeepers.

BREAD, Biscnit, Etc. To enjoy good health we must have good tread. Here are given thoughts and advice invaluable to beginners and very nseful to any one of experience; followed by nearly 100 recipes for yeast, bread and biscuit making.

VEGETABLES 96 recipes and a valuable table giving time needed to cook varions vegetables, with exceedingly useful items of advice on the care of them.

COFFEE, Tea, Etc. Directions for economically getting the best results in making coffee, tea, chocolate, lemonade and other beverages, inclnding refreshing summer drinks

Directions for making over 100 different kinds of pies, puddings, etc. All of real practical value and the result of ripe experience. Will save yon from poor pastry.

MEATS. Over 100 recipes for sausage, veal loaf, calf's-foot jelly, croqnettes, and the best methods of cooking meats. Also, how to bny, prepare and care for them.

POULTRY and Game. How to properly clean and cut np fowls, to keep game in warm weather, and points about garnishing, followed by a large number of practical recipes on stuffing and cooking all kinds.

FISH. Tells how to bny, what kinds cook best, and gives 47 recipes for cooking fresh and salt water fish, oysters, eels, clams, etc., etc.

PRESERVES, Jellies, Pickles, etc. To properly make these is an art of itself. Easily learned and success sure when these directions and suggestions are followed. 50 recipes.

UTENSILS necessary in the kitchen. A chapter of especial valne to those abont "to build a nest." Good work cannot be done with poor tools. No more can good cooking be done without the proper utensils; and it is the aim of this chapter to provide a complete list of necessary kitchen-ware, together with items of advice about their care, etc.

INVALID COOKERY. Directions for preparing many palatable, healthful and strengthening dishes and drinks for the sick. Invaluable to every honsehold.

SALADS, Sauces, Catsups and Relishes. 119 recipes, to fit all wants, at all seasons.

PRACTICAL SUGGESTIONS to Young Honsekeepers. Exceedingly valuable hits of experience boiled down to the fewest clear words that will express the thonght. These "Suggestions" are really clear and distinct statements of cause and effect in sharp, clear-cut words by one who has been a close observer. The value of experience snch as this cannot be estimated, but yon now have it in your power to reap all the advantages of this knowledge with none of the difficulties incurred in gaining it.

CAKES, Cookies and Fritters. Nearly 100 of the choicest, tested recipes, that are sure to give satisfactory results.

EGGS, Omelettes, Breakfast and Tea Dishes. Perhaps in no one department of cooking has so great an advance been made as in the preparation and nse of oatmeal, cerealine, rye and graham flonr, etc., and this chapter gives special attention to these articles, as well as eggs, fried bread, toasts, etc., etc.

CUSTARDS and Desserts. Explicit directions for making 50 kinds of desserts.

Also, recipes for making choice Candies, chapters on Carving, Folding Napkins, the Laundry, and Bills of Fare for Holiday Dinners as well as for every-day Family Dinners. A Table of Weights and Measures is included. A complete and well-arranged index enables any one to easily find anything that is wanted.

As far as possible, the ingredients of the recipes are given in tabular form, a happy arrangement that is appreciated by all and found in no otber cook book.

It is the Latest, Best and Most Practical Cook Book Published, More Nearly Meeting the Wants of American Homes than Any Other, and it would be Cheap at One Dollar.

OUR SPECIAL OFFER The Cook Book will be mailed to any one sending 50 cents for this paper one year and 5 cents extra for postage and packing, 55 cents in all. Or, it will be mailed Free to any one sending only 80 cents for the Farm and Fireside and Ladies Home Companion, both journals one year, tbus offering you $1.50 value for 80 cents.

For $1 we will send you both papers one year, tbe Cook Book, and either **one** of the Grand Pictures offered on this page, giving you $2.25 value for only $1. Or, the Cook Book will be given as a premium to any one sending one **new** yearly subscriber to this paper.

All mailed, postage paid in each case.

CHOICE PERFUMERY.

A Splendid Christmas Gift.

Premium No. 133.

This handsome package contains four bottles of sweet-scented Handkercbief Extracts, guaranteed to be the very purest. The odors, selected for their delicacy and lasting properties, and representing the popular choice of the ladies, are as follows:

WHITE ROSE, HELIOTROPE, NILICA, ARBUTA,

The last a product of tbe fragrant Arbutus, the gem of early spring flowers. They have been specially prepared for us by a distinguished chemist, and are absolutely pure. In stores where extracts of equal purity are sold (many of them do not have it), two of same size bottles cost as mucb as we ask for all four bottles. Besides you get a neat and valuable box to keep tbem in. It is a strong, wooden case, as shown in cut, lined inside with cork, and divided into four compartments, insuring safety in the mails. The bottles are neatly labeled. Every young lady needs this extract package, as well as every rising young man. It is not out of place even with older people who appreciate a most fragrant atmosphere.

Given as a premium for 1 new yearly subscriber to this paper.

Price, inclnding one year's subscription to this paper, 70 cents.

We offer it for sale for 25 cents. Postage paid by us in each case.

$1.75 FOR ONLY 75 CENTS.

Any person sending 75 cents within 30 days from date of this paper, will receive the Ladies Home Companion one year, the Farm and Fireside one year, and a copy of either ONE of the following Magnificent Pictures, sent by mail, postpaid.

MUNKACSY'S FAMOUS COMPANION PIECES,

"CHRIST BEFORE PILATE" AND "CHRIST ON CALVARY"

Said to Have Sold for $120,000.00. Said to Have Sold for $125,000.00.

Both Pictures Reproduced in the Colors of the Original Paintings.

Premium No. 100.

"CHRIST BEFORE PILATE." Size of Picture we send, 21 by 28 inches.

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"CHRIST ON CALVARY." Size of Picture we send, 21 by 28 inches.

At an expense of several thousands of dollars, the publishers of this jonrnal last year reproduced and offered its readers accurate copies of the great painting, "Christ Before Pilate," in the original colors. The matchless excellence of our reproduction, and its truthful likeness to the original painting, agreeably surprised those who secured copies, and the demand was unprecedented. Thonsands of letters of approbation were received, many of the writers expressing a desire that we should also reproduce the great companion piece, "Christ on Calvary." Although a compliance with these requests involved an expenditure of thousands of dollars, a corps of experienced artists were engaged many months in engraving the stones. No expense or labor has been spared to accomplish the very best results possible, insuring a picture equal to that of "Christ Before Pilate" as a Work of Art.

Millions of people, in this country and Europe, have travelled many miles and paid an admission fee to get a view of these remarkable paintings. They are pronounced hy critics to be the most notable pictures of the present century, truly grand and wonderful as works of art beyond the power of language to describe.

It is stated that Postmaster-General Wanamaker paid $125,000.00 for the original painting, "Christ on Calvary," that he might place it alongside of the masterpiece, "Christ Before Pilate," for which he had previously paid $120,000.00.

These princely snms are mighty tributes to the wonderful genius of Munkacsy, the born artist, and emphasize the wonderful triumph achieved in placing an artistic and magnificent oleographic reprodnction within tbe reach of all classes.

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WE GUARANTEE SATISFACTION or will refund the money to any one who is in the least dissatisfied, if the picture is returned in good order.

No cash commissions or premium allowed club raisers when subscribers take advantage of the above special offers.

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The Atlas and Paper mailed to any address, postage paid by us.

The Atlas is new, greatly improved and enlarged. More new Maps and Handsome Illustrations.

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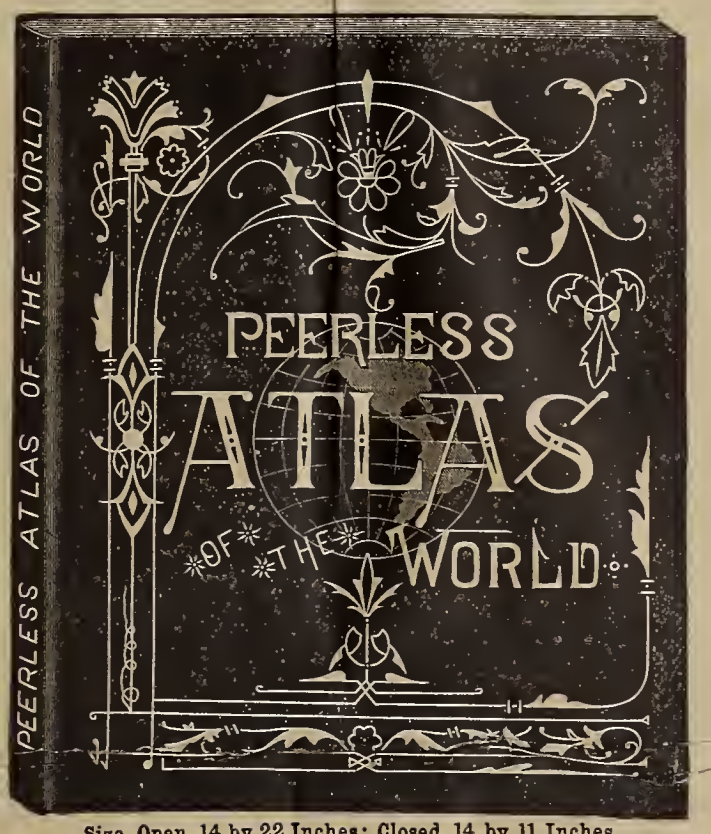

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The maps are handsomely colored, most of them in 6 colors.
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All Countries on the face of the earth are shown.
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All the Large Cities of the World are shown on the maps.
The Important Towns and most of the Villages of the United States are given on the maps.
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A Condensed History of Each State in the Union.
Number of Miles of Railroad in Each State.
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FARM AND FIRESIDE Is a large, 16-page, 64-column journal, issued twice a month. It is the handsomest, best and most popular agricultural and home journal in the United States, leading all others in circulation and influence, with nearly **250,000 Subscribers**, and is recognized by leading agriculturists as an authority on all that pertains to the farm.

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No commissions or premiums allowed club raisers when subscribers accept any of these special offers. These liberal offers are limited to 30 days from date of this paper.

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A NEW subscriber must be a person who is not now on our subscription list, and whom you have solicited to take the paper. It must not be a change from one member of a family to another, but a genuine NEW subscriber. Sending your own subscription, or in the name of your wife, husband, or any member of your family, is not sending a NEW subscriber in the sense we intend it, and will not entitle you to a premium.

93 New Style Stamping Patterns

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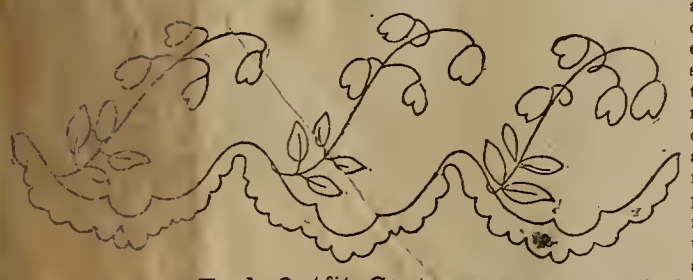
Premium No. 418.



The pretty designs of this large and valuable outfit are of our own selection, put up for our exclusive use. It is the best stamping outfit ever offered for the price. Every lady who already has an outfit, either large or small, will want the Gem, as its patterns are new. All are made on the best of government parchment bond paper, can be used over and over hundreds of times, and at retail price in the stores would be worth fully $5.

Each Outfit Contains All of the following:

1 Gray Butterflies. 1 Anchor.
1 Spray Violets. 1 Daisy.
1 Double Rose. 1 design Clover.
1 Spray of Leaves. 1 Star.
1 Cartwheel Pink. 7 Butterflies.
1 Spray Apple with Leaves.
1 Design [illegible] inches high.
1 Design, Forget-me-nots, 4 inches high.
1 Design, Flowers, 4 inches high.
1 Bird, 4 inches high, 5 inches across.
1 design Wild Roses, 5 inches high.
1 Boy with Bouquet, 7½ inches high.
1 Rosebud with Leaves.
1 Small Scallop, with eyelets.
1 Design Forget-me-nots.
1 Design Pitcher for Apple Cloth.
1 design Rosebuds and Forget-me-nots.
1 Handsome Bird, 4 inches across.
1 set of 10 Figures, each 1 inch high.
1 design Pansy, 2½ inches high.
1 design for Lawn Tennis Case.
1 design for Flannel Skirt, 1½ inches wide.
1 design for Napkin, Peach and Leaves.
1 design for Forget-me-nots.
1 design Bachelor's Buttons.
1 design Plums for Napkins, 3½ in. high.
1 design Daisies and Forget-me-nots, 4 inches high.
1 Fancy Alphabet, 26 letters, each 1½ inches high.
1 Vine Rosebuds and Leaves, 1½ in wide.
2 designs for Silk Embroidery, 2½ inches wide.
1 design for Flannel Emhroidery, 1 inch wide.
1 Braiding design, 1 inch wide.
1 Poppy, and 16 other designs.

Also 1 box best Powder, 1 good Pad and 1 illustrated book on Kensington Embroidery, with instructions for stamping. The whole packed in a neat box.

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Either, including one year's subscription to this paper, 75 cents.
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For premium article on this page, address letters to FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Premium No. 218.

600 POPULAR SONGS All with the WORDS and MUSIC.

A collection of the world's most popular songs, comprising American, English, Scotch and Irish songs of all kinds—Sentimental, Comic, Operatic and Ethiopian. Words and music with every song. 256 pages. Why pay 30 to 50 cents for one song, when you can get this large book with **600 songs** for only 30 cents?

It Includes the Very Latest Popular Songs.

The following is a partial list of the titles. We have not room to name half of the songs contained in this book:

600 MULTUM IN PARVO SONGSTER 30c.

Little Annie Rooney
Annie Laurie
Baby mine
Bay of Biscay
Canaan
Captain Jinks
Dandy Pat
Danube River
Eureka
Fisher's child
First love
Gaffer Grey
Galley Slave
Huldy Ann
Janet's choice
I Whistle and Wait for Katie
Little Fisher Maiden
Katty darling
Lilly Dale
Lottie Bell
Lorelei
Mary Blane
Mary's dream
Nelly Gray
Old arm-chair
Pesky Ike
Ranordine
Shamrock
Tread-mill
Vicar of Bray
Washing-day

Arsby's daughter
Auld lang syne
Bachelor's fare
Bacon and greens
Beautiful bells
Beautiful Bessie
Be gone dull care
Bell Brandon
Ben Bolt
Bessy's mistake
Betsy Baker
Beware
Birds in the night
Blue-eyed Mary
Blue-eyed Milly
Black-eyed Susan
Blue tail fly
Bold privateer
Bonnie doon
Bonnie Dundee
Brave old oak
Broken yoke
Brose and butter
Bruce's address
Bryan O'Lynn
Buy a broom
Caller Herrin
Castilian maid
Charity
Chevalier's lament
Clare de kitchen
Coal black rose
Colleen Bawn
Come back to Erin
Concealment
Darby the blast
Dearest Mae
Departed days
Dermot Astore
Ding, dong, bell
Don't come late
Dream is past
Emerald Isle
Ever of thee
Fairy tempter
Farewell ladies
Farmer's boy
Finigan's wake
Flee as a bird
Flying trapeze
Garibaldi hymn
Ginger's wedding
Girls and boys
Give a kiss to me
Green sleeves
Gumbo chaff
Hail Columbia
Highland Mary
In the starlight
I wish you well
I won't be a nun
Jim along Josey
Jim Brown
Jim crack corn
Jim Crow
Johnnie Cope
Johnny Sands
Jolly darky
Jolly raftsman
Jonny Boker
Juanita
Kathleen Aroon
Katty darling
Katy's letter
Killarney
Kitty of Coleraine
Knight errant
Lancashire lass
Lanigan's ball
Law
Life let us cherish
Little barefoot
Little bo-peep
Little boy blue
Little sunbeam
Long tail blue
Love's ritornella
Lubly Dine
Maggie Lauder
Maggie's secret
Maiden's prayer
Mary Morrison
Mary of Argyle
Medical student
Mellow horn
Men of Harlech
Miniature
Minstrel boy
Minstrel's return
Miss Lucy Long
Miss Wrinkle
Modest bachelor
Molly Bawn
Molly Malone
Murmuring sea
Mush, mush
Musical wife
My ain countrie
My country
My heart is true
My Nannie, O!
My pretty pearl
National debt
No one to love
Old Dan Tucker
Old Grimes
Old Ireland for'er
Old Joe
Old King Cole
Old King Crow
Old kitchen clock
Old maid's ball
Old oaken bucket
Old Tubal Cain
Ole gray goose
Ole peedle
O Mr. Coon!
Organ of the harp
Our little queen
Over there
Past
Pilot
Poachers
Polly
Poor old maids
Queer little man
Quilting party
Reel o' Bogie
Red, red rose
Resolve
Robin Adair
Robinson Crusoe
Rock-a-bye baby
Rollicking rants
Roslin castle
Rural felicity
Seaside cottage
Setting on a rail
Shanty genteel
Shule agrah
Solomon's temple
Squeak the fife
Standard-bearer
Standard watch
Stopdat knocking
Sweet Kitty May
Sweet long ago
Swiss boy
Ten little niggers
Three blind mice
'Tis midnight h'r
Twig of Shillelah
Twilight dews
Virginia rosebud
Warblings at eve
Watchman
Whisper of love
Widow Malone
Willie Riley
Work, niggers
Wounded hussar
Yankee doodle
Ye merry birds
Zelma Lee

AND NEARLY 400 OTHERS.

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