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EASTERN EDITION

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THE FARM AND FIRESIDE

Pioneer Homes of the West

BY H. A. CRAFTS

Now and then we read of the great hardships and privations of pioneer life in the West; but I imagine that generally they are mere creations of the overwrought fancy of the story-writer, for I have lived for nearly twenty years in close touch with the advance-guard of civilization and have yet to discover the midnight horrors that have been so vividly depicted by some of our Western romancers. On the contrary, I have seen those who, weary of the burdens and exactions of city, town or neighborhood life, have pulled up stakes and emigrated to the untamed prairies of Wyoming or the mountain fastnesses of Colorado, taking with them in a farm-wagon or two all of their earthly possessions, and in their new surroundings prospered exceedingly. Some of them I have seen return to the scenes of their former trials and tribulations for a temporary visit, and look upon their old neighbors and friends who have remained, to drag out a mere existence, with sincere commiseration. They seem to have lived well and accumulated wealth even though deprived of some of the advantages of so-called civilized life. They have managed to enjoy life very well, after all, for all about them were the wide and generous plains, or the blue hills and pleasant valleys, and a wealth of sunshine. Suppose for a year or so they were even obliged to live in a dugout! A dugout that is well built and all paid for is better than a marble hall

Then a front and roof are constructed. The front may be of boards, slabs or logs, according to circumstances. If of either of the first two, the cracks may be battened; if of logs, they may be chinked up with mortar or wet clay. The roof may be made of poles sloping slightly toward the rear. Over the poles should be spread some straw, grass, sage-brush or green boughs. Then cover all with earth to the depth of a foot or two, and one has a roof that will withstand heat, cold or any amount of rain. A chimney may be constructed of sods, cobblestones or broken sandstone laid up in moist clay in lieu of mortar. The door is usually situated about midway of the front, with a window on either side. If sawed lumber is scarce, a door may be made from puncheons split and hewn from logs, or if these are not easily obtainable, a blanket or a piece of sail-cloth may be hung up. If window-sash are unobtainable, a screen made of empty flour-sacks may be hung over the openings. Some air, however, may come in, but the habitation is warmly constructed and needs good ventilation.

The finish of the interior must depend largely upon the lumber supply. If floor-boards are not to be obtained, the native earth may be packed down and gradually hardened, so that a fair kind of a floor may be made without the use of any lumber at all. Or if lumber is at hand, the floor may be laid in either rough boards or matched stuffs, and the walls covered with ceiling-boards. When ceiling stuff is not to be had, and a fastidious taste taboos a wall of dry, virgin soil, mural adornments may be improvised from cheap muslin or chintz. If well kept, a dugout, even of crudest construction, makes a comfortable temporary



THE COW-BOY

cious sod, else the proper-sized blocks cannot be obtained, and the walls of the house will not stand the action of the elements, but will crumble and fall to the ground. The sod house usually has a shed-roof. If quite broad the roof may be hipped, but in both cases it must be quite flat, because it is covered with dirt. Even on the open prairies there are occasional groves of cottonwood

being much larger than the red kiln-dried article. The Mexican adobe-house is long, low, rangy, with a flat roof and few doors or windows. Earth floors prevail almost universally, and the Mexican housewife endeavors to conserve the compactness of her floor by a daily sprinkling of dish-water.

The "grout" building was quite common in the pioneer days of Colorado, and many



TYPICAL GROUP OF COLORADO FARM BUILDINGS

that is roofed over with a mortgage or a cutthroat trust deed.

I presume that the most primitive among human habitations is the dugout. Yet if properly located and properly constructed it is both a cheerful and comfortable abode. The first requisite is a dry piece of ground on a slope, with a southern exposure. Then an excavation is made of the height, width and length of the proposed dwelling-place.

abode. If additional room is needed, the front of the dugout may be extended indefinitely along the face of the slope. The structure is warm in winter and cool in summer if properly ventilated.

Next in the architectural scale is the sod house, built entirely above ground, and usually located far out on the open plains, where lumber cannot be easily obtained. Of course, it is necessary to find a thick, tena-

from which poles may be cut with which to form the foundation of the roof. The poles are covered with a layer of wild grass or straw, and upon this the dirt is laid to the depth of about a foot, and is confined about the edges with a curbing of poles. The heaviest rain-storm will not wet this roof through.

The claim-shanty, which the law requires of the settler who takes up land under the homestead act, must be twelve by fourteen feet on the ground; but I once heard of a homesteader who built his claim-shanty only twelve by fourteen inches, and proved up on his claim all the same. The claim-shanty is usually of frame, and built quite flimsily for several reasons. One is that it is frequently used by the settler for a lodging-place only so many months in the year, when the law requires him to reside on his claim. As soon as he proves up he may either sell his land or use it for grazing purposes only. The permanent homesteader frequently builds his home on another part of his claim, where the claim-shanty is moved bodily to be used as an outbuilding or a part of the home dwelling. The shanty constructed merely to fulfill the requirements of the law is a slim affair, built of the cheapest kind of lumber, with a shed-roof, a single door and a window.

There are yet other classes of primitive dwellings that properly come in the same category with dugouts and sod houses. First is the adobe, or "doby," as it is pronounced in the West. These structures are quite numerous in southern California and New Mexico, and are generally built and occupied by Mexicans, or "greasers." They are built of sun-dried brick, the adobe brick

of the original structures may yet be seen. "Grout" is simply a concrete mass of sand, gravel, cobblestones and lime. The building is reared by the use of molds extending around the entire circumference. The molds are made just as wide as the walls are to be thick, and are first laid upon the ground in just the form of the ground-plan of the proposed building. Then they are filled with grout, which is allowed to stand until well set. Then the molds are raised up just to the top of the dried "grout" and again filled. This process is repeated until the walls are up to the required height; then the roof is put on, and may be either a shed or hip roof. This makes a very substantial building, and is almost impervious to both external heat or cold.

Many of the pioneer ranchmen who settled within reach of the timbered mountain ranges built log houses, not a few of which are still occupied as dwellings, or if abandoned by their former human occupants, are utilized as stables and cow-sheds. Some were built low, with flat roofs, while others were reared to a story and a half and aspired somewhat to architectural pretensions. In many parts of the Rocky mountains there are forests of pine growing tall, straight and thickly, and by selecting those trees of about six inches in diameter very excellent building material may be obtained, and when laid up with a due regard for the square and compass, make a very neat-looking wall. Of course, the joining must be neatly done and the cracks between the logs nicely pointed up with white mortar.

[CONCLUDED ON PAGE 8 OF THIS ISSUE]



THE BETTER CLASS OF RANCH-HOUSE

FARM AND FIRESIDE

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IN HIS annual report Secretary Wilson reviews the subject of seed distribution as follows:

"The original intention of Congress in providing for the distribution of seed undoubtedly was to do for the producers a class of work they could not do for themselves—to search the various localities of the Old World for seeds and plants, and distribute them in the United States to the several regions where they would be most likely to succeed. The department at present is endeavoring to bring back the practice, as much as possible, to the original intention of Congress. Quite a large percentage of the \$130,000 appropriated is now spent in finding, purchasing, importing and distributing rare seeds and plants.

"The department is in receipt of letters from seedsmen throughout the country urging the discontinuance of this work, and there is an uneducated sentiment here and there co-operating with the seedsmen along this line, which prompts ill-informed individuals to concur with these representations. I am well satisfied that the introduction and distribution during the last two years of seeds and plants rare or not found at all in the United States has been worth more money to the people of the country than all the expenditures of Congress for seed distribution to date. To the extent to which the distribution by the department competes with the sales of seedsmen and others distributing precisely the same kinds of seed, with no experimental feature and no intelligent direction regarding the use of the seeds beyond that which is provided by dealers, the practice is questionable.

"But the furnishing to the people of the United States of sugar-beet seed of the most approved quality, for experimentation, to ascertain where beets can be grown sweet enough to produce our own sugar, is justifiable; the introduction of drought and rust resisting grains from foreign countries,

which are urgently needed by people in the United States who are losing heavily from drought and rust, is justifiable; the rehabilitation of the Western ranges that have been destroyed and in many cases reduced to desert conditions by injudicious grazing is justifiable; the encouragement of tea-growing in the states along the Gulf of Mexico, where labor is as plenty and as idle as anywhere in the world, is justifiable; the inquiry into the several plants that produce rubber, the gathering of the seed of these plants, their germination and preparation for setting out in such localities in the new island possessions of the United States government as may be best suited for producing the \$30,000,000 worth of rubber now purchased from foreign countries, is justifiable; the introduction of the date-palm from Tripoli in Arizona, establishing a new industry in that region, which may extend to other localities in the same latitude, is justifiable. The introduction of these and many other seeds and plants, entirely beyond the ability of private individuals to compass, in order that such seeds and plants may eventually enter the commercial class and be handled by seedsmen, is the aim of the Department of Agriculture in seed distribution at the present time."

IN HIS annual report Secretary Wilson gives strong reason for a general study of the subject of irrigation. He points out the wide difference in laws and methods prevailing in the different states dependent upon irrigation, and states that most important rivers have streams supplying irrigation to half a dozen states. Inevitably, under these circumstances, differences will arise calling for legislation by Congress, which should, therefore, be put in possession of all the facts on the subject as early as possible.

"It is not possible at the present time," he says, "for the owner of an irrigated farm to know exactly what his right is. The nation has made no provision for the distribution of either the natural flow of the streams or the stored water. The states vary greatly in their enactments regarding the use of water. If the control of this element of production is to be left to the states, there should be a definite declaration to that effect. If it is to be assumed by the general government, it should be done at once.

"The usefulness of this investigation is not limited to the arid region. On the contrary, there is no question but that irrigation can be profitably employed in the cultivation of large areas in the Eastern and Southern states. A hundred thousand acres of sugarcane are being irrigated in Louisiana. Irrigation of the rice-fields in the Carolinas is very extensive. The market-gardener could profitably use irrigating waters. Irrigation is being experimented with in the growing of tea in South Carolina.

"More than one third of the country depends upon the success of irrigation to maintain the people, the industries and the political institutions of that area, and future growth will also be measured by the increase of the reclaimed area. In a region which, in the extent and diversity of its mineral wealth, has no equal on the globe, the richness of the mines in the hills are already surpassed by the productions of the irrigated farms in the valleys, and the nation at large is at last awakening to the fact that the development of the use of the rivers and arid lands of the West will constitute one of the most important epochs in our increase in population and material wealth."

COMMENTING on the statement that the war in South Africa is a race war the "Times-Herald" says:

"In all the English possessions, Natal, Cape Colony and Rhodesia, native Boers have helped the invaders. That fact cannot be blinked. The war is undoubtedly a race war, so far as these disaffected Boers can make it one.

"As for the so-called loyal Dutch, they understand perfectly well that Great Britain purposes to maintain just such supremacy as she has had hitherto in her colonies. She is fighting for this alone in the three districts mentioned, and has no intention of establishing a tyranny on the ruins of civil liberty. Taking into consideration, therefore, the plain sense in which the term race war is used, it will hardly make foes of

prosperous subjects. There is a clear distinction between it and virulent abuse of the Dutch as such, which would be impolitic in the extreme.

"Beyond the English domain in the Free State and the Transvaal the mincing of terms would be ridiculous. Substantially the whole Boer population has united against England. It was pledged to a race war from the moment of its challenge, and what is more, the Transvaal Boers have been preparing to force the issue for seventeen years, as set forth by Theodore Schreiner, a brother of the premier, in a recent letter to the Cape 'Times.' They have been making a vast magazine of their country with that purpose in view, their men have been put through a Spartan drill and have dwelt like soldiers among helots. We can explain their action, which has been essentially aggressive rather than defensive, on no other theory than that they proposed to take the leadership in a Dutch uprising, which should spread throughout the southern part of the continent.

"Now, we may admit their right to do this, but when we have done so we must admit the right of the British to secure their own dominions against attack. All questions of Uitlanders and the franchise become at once of minor importance. They were a pretext on both sides which hid the greater design.

"That this fact will ultimately have its effect on international and historical opinion cannot be doubted."

THE serious reverses at Stormberg, Magersfontein and Tugela River made a "Black Week" for the British, the blackest week in their military history for a half century. Commenting on the effect of this series of reverses the New York "Tribune" says:

"Several thousand men and nearly a score of guns have been lost, and not an inch of ground has been gained. Prestige has been lost. Disaffection in Cape Colony has been increased. Sympathy with the valiant Boers has been increased. From the British point of view the scene is one of unrelieved gloom. The personal heroism of the British soldier is, of course, untarnished and unquestioned. But the discretion and skill of some of Great Britain's most trusted generals are in eclipse.

"Not only these British generals, but the whole British government and people have been led, or misled, into a trap. We do not mean that they have been misled as to the general principles of the cause in which they are fighting, but as to their own strength and the strength of the antagonist they are fighting.

"England has set her hand to the plow and she does not look back. Her bravest and her best are sacrificed. Her choicest regiments are decimated. Her households are made desolate. But her resolution is unshaken. What though her 'wounds are never healed' and her 'weary race is never won?' What though Cromwell's England must indeed 'yield for every inch of ground a son?' She falters not. There is no wild cry of 'We are betrayed!' There is no clamoring for a scapegoat, no railing against government or staff or commander. All that can wait for after-dealings. The present duty is to retrieve disaster and to win the victory. To that, and to that alone, is her every thought now given. It is a dreadful price to pay, and it is all the harder to pay because it is not so much the price of empire or of freedom as it is of unreadiness and blundering. But the proud and steadfast and self-reliant manner in which the British nation rises up to pay it will command general admiration."

SPAKING on the subject of trusts in his annual message President McKinley says:

"Combinations of capital organized into trusts to control the conditions of trade among our citizens, to stifle competition, limit production, and determine the prices of products used and consumed by the people, are justly provoking public discussion, and should early claim the attention of the Congress. . . .

"The subject is one giving rise to many divergent views as to the nature and variety or cause and extent of the injuries to the public which may result from large combinations concentrating more or less numerous enterprises and establishments, which

previously to the formation of the combination were carried on separately.

"It is universally conceded that combinations which engross or control the market of any particular kind of merchandise or commodity necessary to the general community, by suppressing natural and ordinary competition, whereby prices are unduly enhanced to the general consumer, are obnoxious not only to the common law, but also to the public welfare. There must be a remedy for the evils involved in such organizations. If the present law can be extended more certainly to control or check these monopolies or trusts, it should be done without delay. Whatever power the Congress possesses over this most important subject should be promptly ascertained and asserted."

Referring to the failure of state legislation to give full relief from the evils of trusts he says:

"This is probably due to a great extent to the fact that different states take different views as to the proper way to discriminate between evil and injurious combinations and those associations which are beneficial and necessary to the business prosperity of the country. The great diversity of treatment in different states arising from this cause, and the intimate relations of all parts of the country to each other without regarding state lines in the conduct of business, have made the enforcement of state laws difficult.

"It is apparent that uniformity of legislation upon this subject in the several states is much to be desired. It is to be hoped that such uniformity founded in a wise and just discrimination between what is injurious and what is useful and necessary in business operations may be obtained, and that means may be found for the Congress within the limitations of its constitutional powers so to supplement an effective code of state legislation as to make a complete system of laws throughout the United States."

THE Boston "Herald" recently published reports from the industrial centers of New England on advances in wages, and the pay-roll figures tell a story of unexampled prosperity. In reviewing the reports the "Herald" says: "The two great industries that lead the procession of prosperity are the cotton and the woolen, and in both of these the advances recently made carry the wages of the employees beyond the boom rates of 1893. The result is that millions of dollars more will be paid to the working people next year, and there appears to be no indication of any disturbance of the existing conditions for some time to come."

"Bradstreet's" says: "Increased wages usually follow in the wake of any wave of industrial prosperity, so that the advances in this respect, which have been accorded workers generally, may be looked upon as nothing more than were to be expected. Yet the fact remains that in most lines wages responded more promptly in 1899 to the touches of prosperity than ever before. Of course, those branches of industry that have taken a longer time to convalesce from the depressing effects of the adverse conditions of a few years ago have not been able to keep step with other more favorably situated industries in advancing wages. Two such industries are those of cotton and woolen goods, both of which had long been sufferers from the baneful effects of divers adverse conditions. But happily these industries are now once more on a paying basis, as is attested by the fact that upward of one hundred and ninety-five thousand operatives engaged therein have had their weekly wages swelled to the extent of ten per cent. . . . Never since the industries of the country assumed proportions worth speaking of have wage advances been so general, strikes and lockouts so infrequent, or hours of labor so short as during the past year.

"That present favorable industrial conditions do not exist only on paper or in the minds of theorists is proved by the statement of a no less competent authority than President Samuel Gompers, of the American Federation of Labor, an organization of some eight hundred thousand persons. In the course of his annual report, which was read in Detroit the second week in December, he observed that it is beyond question that the wages of the organized workers have been increased, and in many instances the hours of labor either reduced or maintained."



ABOUT RURAL AFFAIRS

To Plant or Not to Plant The people who buy and use up most of our fruit crops year after year should be expected to have a pretty good idea about our future chances of selling these crops. So I asked this question at the Cobb canning-factory: Is it advisable to set out apple and pear trees again, especially in view of the facts that some of the older orchards have become unproductive, either in consequence of age or of neglect, and that little planting has been done for the past eight or nine years? The answer was a decided "yes!" The Cobb people have bought many thousands of bushels of Bartlett pears every year, and naturally they are interested in getting good stock in full supply and at reasonable prices. But they tell me that in their estimation the demand for this pear will always be brisk, and the present outlook seems to be that the supply will not keep pace with the demand. The lowest price I have ever been paid by this canning firm for my Bartletts was one and one eighth cents a pound, which means sixty-seven and one half cents a bushel (sixty pounds), as they come from the trees, only the culls being thrown out. This is about as easy a way of making money as any that I know of in farming operations.

One of the firm said to me: "The man who will set out ten acres of Bartlett pears on the right soil and in the right location now, and take good care of his orchard right along, will in a few years have a big competency for the rest of his natural life. It will bring in thousands of dollars every year almost without fail and with comparatively little expense. But, of course, the orchard must be cultivated properly and the trees must be fed, and above all else thoroughly sprayed, to keep them in health and free from insects. You can grow Bartletts even in sod, and under neglect. But the pears that we are after, and that will sell at any time, even when fruit is in oversupply, are the fine, large specimens which can only be produced on trees that are properly taken care of." All this is unquestionably true. We have abundant proof of the fact here that well-tended pear orchards give the big fruit and the big crops, while the neglected trees give under-sized, gnarly specimens which can hardly be given away. I have some young trees standing next to a piece of ground which has been kept under high culture for some years almost up to the tree-line, the other side being left in sod; and then next to them other trees standing entirely in sod. The difference in the size and amount of fruit on the trees which received cultivation on one side and on those which are entirely left in sod was really remarkable; and it is so impressive a lesson to me that I am now plowing the sod in the whole orchard, and shall never again fail to keep them under good and thorough cultivation.

Some of the clay loams in this vicinity are admirably adapted to pear-growing. One of my neighbors has a few acres in Bartletts which have received hardly any manure for the past twelve years. All that was done was to plow the orchard in spring and cultivate once or twice during spring and early summer. Yet this man has had as fine pears and as many of them as were grown in any orchard of the same size in this vicinity. He usually receives one eighth or one fourth of a cent a pound more for his fruit than what is paid to most others. This, with the largest crops, makes a big difference in the aggregate returns. It shows, too, that some soils are better adapted to the crop than others. Fruit crops require a good deal of potash. When one can grow a dozen big crops of pears in as many years on the same trees it proves that the soil must have been well supplied with potash at the outset, and it lends color to the teachings of Professor Roberts (of Cornell University), who claims that tillage alone is needed on many of these soils to furnish all the potash and perhaps all the phosphoric acid to fruit and potato crops that may be needed. I believe that it is only in exceptional cases, however, when the occasional application of manures (whether farm manure or chemicals) would not show some good results. I know I need such applications on my land, and on every piece and patch of it.

Apples for Revenue It may also be time again to resume the setting of apple-trees. The canning-factories now take any good apple. Later on, possibly, they may begin to discriminate in favor of high-flavored cooking varieties. Of course, they have use for late fruit only, as they cannot think of putting up apples until the pears are out of the way, which usually is in October or nearly November. No doubt such varieties as Greening, Spy, Spitzenberg, etc., will continue to be called for. The grower has to make his selection with regard to the peculiarities of his own location. If he sees that Greenings are doing well in his vicinity, the Greening is one of the varieties which he should plant. I believe that quality in the fruit will become more and more a leading consideration with apple buyers in future. As to the new and untried sorts, no matter how highly spoken of by the nursery trade, we have to go slow, and plant experimentally mostly. Although I am much pleased with the outcome of the late apple business, this year as well as last, and while the returns from the crop sold to the canning-factory have been satisfactory, I have even done better with earlier apples which were sold in the near city markets. The Duchess (Oldenburg) is quite reliable as a cropper, and the trees thus far have remained in perfect health, with most magnificent foliage, when other varieties were badly spotted with leaf-blight. This apple is one of our best early cooking-apples, and I have not found much difficulty in selling it at acceptable prices.

Summer and Fall Apples Another apple to which I pin a great deal of faith is the Gravenstein. It makes a large, rather spreading tree, which is not much subject to scab, and a reliable annual bearer. In point of quality it stands at the head of all apples, and when properly kept and ripened it is also a most beautiful fruit. It should never be left out of the home grower's list. I have this apple now in greatest perfection, and shall have it so up to Christmas. Too much cannot be said in its favor. While still a little green, it is one of our best summer and fall cooking-apples. As a table-apple I handle it as follows: The fruit is picked with greatest care to avoid bruising, as some of the specimens grow quite large and heavy. Each specimen is wrapped singly in a piece of waxed paper, which I buy of just the right size for twenty cents a ream, and usually in another piece of tissue-paper or common newspaper, and then packed in a barrel, keg or box, with alternate layers of oats. The apples are now coming out in splendid condition, crisp and fresh as when put in, beautifully colored with rich golden yellow, and with a red cheek, and an aroma that permeates a whole room. Two years ago I mentioned in these columns a new fall apple of superior quality, the (Walter) Pease. I have a tree of this growing, but it has not yet borne fruit, so I cannot tell whether it is a good and regular bearer or not. The apple will sell well enough when we get it. While at the county fair at Lockport, New York, this fall, Mr. J. S. Woodward showed me an apple graft (of two years' growth) loaded with fine specimens of the new Rome Beauty. I secured one of the specimens, wrapped it in waxed (paraffined) paper, and now have it before me on the desk. It is a handsome apple of medium size and regular form, if anything even more beautifully colored than my Gravensteins and of about the same fine aroma. Mr. Woodward tells me that it is equal to the Gravensteins in quality. I believe this apple would create a sensation in our markets and sell at fancy prices. I need hardly mention the Twenty-ounce apple in this list, as it is well and favorably known.

In a general way I have faith in the profitability of apple-growing if rightly managed. It is a good time to plant apple-trees, at least for the right man in the right place. The majority of orchards set thirty or forty years ago will have to go. The trees were set by far too close, and they will soon be useless, worthless, unless from two to three trees out of every four are cut down to make room for the remaining ones. Even that remedy will not help much in all cases. Severe pruning and thorough spraying will have to be practised in these orchards if sat-

isfactory results can be hoped for. Start young orchards, by all means, and be sure to set a block for the very purpose of grafting over, when five or more years old, to some of the new sorts that in the meantime will prove of especial merit. Don't imagine, however, that you can plant apple-trees or any other fruit-tree and have them give satisfactory crops if they are left to grow in sod, or if you sow wheat, rye or oats on the same ground. For a few years you may plant hoed crops among the trees. I would prefer small fruits, especially strawberries; but manure and good tillage should never be withheld. When the trees begin to bear, let them have the exclusive use of the well-tilled soil, and you will have your reward in due time.

T. GREINER.

SALIENT FARM NOTES

Farming With and Without Plans After the holidays are over the thoughts of the farmer naturally turn to the coming spring, and he who has determined to do a little better this year than he did last begins to look about to see where he will commence operations. It is not a good plan to let one's thoughts soar away over and above the thousand and one little details which often lie at the very foundation of success, and consider the one great idea only. It is better to consider all these little details first and see if the grand idea is practicable. Only yesterday a neighbor of mine declared that he proposes to raise thirty acres of corn in 1900 that shall exceed in yield any field in this locality. "I have rented the land," said he, "and I'll raise the crop! It has been in grass two years, and I'll put it in number one fix, and I'm sure to get a 'whalin' good yield' of number one corn." I asked him what variety he intended to plant, and he said he hadn't yet decided. Would he plant in hills or drill it in? That was not yet settled. How did he intend to cultivate it? He would decide that point later on. The fact is the man expects to do something extraordinary, but has not yet decided on how he will do it.

I once heard the wives of two farmers discussing matters and things pertaining to their own affairs. Finally one of them said: "I do want a silk dress so bad, but I see no chance to ever get it. John sells a great deal of stuff, but it seems like he had all the money spent before he gets it. Anyway, he never seems able to let me have enough to buy the dress."

"What does he spend all his money for?" asked the other.

"Oh, I don't know. All I do know is that at the end of the year we come out about the same hole we went in at. It seems to me that it costs about all he makes to make what he does make!"

The other laughed at this. "I should think he would get rather tired of working hard year after year just to make his receipts equal his expenses. But don't you raise chickens? What do you do with the money you get for them?"

"Why, that goes for groceries and other living expenses."

"Well, what in the world does he pay for?"

"Why, he pays the cost of running the farm!"

"Yes," said a farmer's wife to me when I called to assess the property, "Byron is so very busy these days that he actually hasn't time to eat a full meal! We get up at four o'clock every morning, and never get to bed before nine, and offener ten. There is so much to do that he is on the jump all the time."

"He surely must be making lots of money," I remarked. "Generally men do not work like that just for mere fun!"

"Well, it seems like he ought to, but he doesn't. It seems like he has such bad luck with the crops. Last year the wheat turned out only seven bushels to the acre, and his corn only made about twenty-five bushels. It seems like he works hard enough, but he has such poor luck with the crops. Now he hasn't got much over half a stand of corn this year, the seed was so bad. He ain't a bit lucky with his crops, some way!"

The fact is these men farm without any definite plans. They make a mighty effort to grow record-breaking crops, but neglect all of the many little details necessary to success. They try to bore a large hole with a gimlet, and then ascribe their non-success to bad luck. If we are going to try to do a little better this year than ever before, the first question to ask ourselves is, What

preparation have we made along that line? Have we laid our plans carefully and gathered the materials necessary for carrying out those plans? Have we planned to half do the work of two men, or only as much as we can do thoroughly? While we are preparing to increase our receipts, are we also preparing to cut down our expenses? Have we decided whether it will be best to have the hard field-work done by hired men, while we do the brain-work and look closely after the smaller but equally important matters, or to do all the hard work ourselves and let the planning and all the little matters take care of themselves?

There is this much about it. If we undertake to do the field-work ourselves the smaller matters will have to go by the board. If we hire men to do the field-work we must make the smaller matters—caring for the stock and poultry, gardening, etc.—pay us as much as we pay a good hand. One can do all this detail work and have time to think and plan and work out for himself the problem of making these small things pay. I have heard many a man who worked hard in the field early and late say, "If I ever have time I will have as good a garden and as fine poultry as anybody!" But the years pass and they still work in the field. As the woman said, "It costs about all he makes to make what he does make!"

Some farmers detest the details of farm-work. They are contented only when cultivating broad acres and doing "a slashing business." The smaller jobs, the chores, as they are termed, are irksome, and they do as few as possible, and these few in a manner that would give a thorough man fits. I know several such men, and they are on the ragged edge of bankruptcy all the time. There are a great many farmers who would be only too glad to attend to the details if they felt sure they could afford to do so—could afford to hire a man to do the greater part of the field-work. These men never will know that very often such spending is really saving unless they give the matter a trial. The sooner they tackle the problem the better off will they be. To have the yards cleaned up, the buildings and fences repaired, the fruit-trees and plants pruned and properly attended to, the stock carefully fed and watered all the time, a first-class garden and a fine flock of pure-bred fowls, with all the conveniences necessary for handling them properly, would make many a farmer feel like he had suddenly become a nabob.

Why not make a trial of this proposition this year, and for one thing have a first-class garden? It takes work—timely work, and lots of it—to make a good garden, but the reward is great; an abundance of the very best and most healthful food that the land produces. Let a man supply his table one season with an abundance of the many good things that a garden will produce, and never again will he be satisfied with the meager supply of poorly grown stuff usually found in the farmer's garden. The principal articles of food we usually find on the table of the farmer who has no time to attend to a garden are bread, meat and potatoes. Now contrast that brief list with the following, found on the table of the farmer who believes that his own land should produce the greater part of his food, and that of the best quality and largest variety: Apples, pears, plums, strawberries, cherries, raspberries, blackberries, currants, gooseberries, grapes, melons, tomatoes, potatoes, parsnips, salsify, cabbage, beets, turnips, onions, squash, celery, sweet-corn, butter and snap beans, asparagus, peas, spinach, radishes, lettuce and rhubarb.

How many farmers have cool, delicious watermelon for a regular dessert during the hot months when the system craves something of the sort? Yet they are not difficult to grow. How many have a continuous supply of small fruits in their season, or even of our best vegetables? Could the owner of a farm afford to spend his time in growing a list of food products like that above, raising fifty to one hundred dollars' worth of poultry, and giving his stock the best of care? These are the details of farming. Will it pay to give them the greater part of one's time and attention and hire one or more men to do the field-work? These are the questions to be considered now, and they really are the most important of the year. It is hardly possible to hire a man to do this detail work as we would want it done, so the question resolves itself into, Shall we do it ourselves or stick to the field-work and let it go undone? FRED GRUNDY.



FARM THEORY AND PRACTICE

BALANCED RATIONS FOR STOCK.—We know that the food best adapted to the needs of any animal contains the various elements for the making of muscle and fat in their proper proportion. The food that contains unduly large quantities of the elements that make heat and fat is usually lower in price than that which contains relatively large quantities of muscle-making material. It is the latter—the protein, or albuminoids—that costs. We know this from experience even if we know little of scientific terms. Oats make muscle faster than fat in an animal. Corn makes fat faster than muscle. The oats are rich in protein, and therefore make a costlier ration than corn. Fat and heat in a food are easily obtained—are cheap. The stock does best when the food is balanced—when the proportion between muscle and fat is right—for the animal.

American feeding-stuffs taken as a whole are very deficient in the muscle-making element. This is true because corn and timothy hay form the major part of it. They are lacking in protein, as the practical farmer has learned in the feeding of young animals, milk-cows and other stock that are not fed for fat. Oats and clover hay are better balanced, giving muscle and growth. But the cheapness of corn, both the grain and the stalk, must continue to make it the most important of our feeding-stuffs, and we are learning to balance up the ration given our animals by the use of such by-products as bran, oil-meal, gluten, etc., which are rich in protein, or the muscle-making material.

USING COMMON SENSE.—Usually the scientist insists that enough of these by-products must be bought to make the ration have a fixed ratio between the protein and the heat and fat elements. This seems all right, but experience shows that when there is abundant and cheap supply of corn and hay, and the bran, etc., are very high, it may pay the farmer to use a ration not fully balanced, allowing the stock to consume more pounds and waste the heat and fat elements in securing enough pounds of the protein for its needs. This practice must not be carried too far, but the cost of the by-products is a factor to be considered, and the so-called nutritive ratio may be left rather wide in many cases with profit. That is to say, we balance the ration in part only when the muscle-making foods are excessively high in price.

On this point Professor Voorhees says to the Jersey dairymen: "In all our tests the cows receiving balanced rations have given the most milk, but when the nitrogenous foods upon the market rise in price greatly a wider ration may be the more economical. I have found that I can best afford a nutritive ration of one to seven under present conditions simply because the pencil shows that it is more economical to waste some of the carbohydrates in the farm feeding-stuffs than to balance up with costly feeds to the standard ratio."

CONDITIONS OF SUCCESS.—The following summary of some of the points made by Professor Voorhees in a dairy talk may interest many readers:

"Dairying is a manufacturing business, converting raw material into a product for market. To make a success we must understand the conditions under which the work must be done.

"The cow should be a special-purpose animal, whether the product for market be milk or butter.

"The kind of feed is a most important consideration. Casein can be made only out of albuminoids (protein), while fat can be made out of albuminoids, carbohydrates and fat.

"There is sometimes a waste of good food—a limit beyond which there is no profitable increase in yield of milk. The feeding must be regular and the foods should be uniform. Variation in feed causes variation in the amount of product. There is much in keeping a cow up to her capacity."

USING THE PENCIL.—I do not give other points in the address, my purpose being to emphasize the thought that the feeder must learn for himself what his most economical ration is, using the cheap farm feeding-stuffs as a basis and balancing them up with

bran, gluten, oil-meal, etc., to the point of most profit—not necessarily to the ratio given in feeding tables, but to the point nearest that ratio that gives the most net profit. The cost of the low-priced and abundant heat-giving foods of the farm is a prime factor. To such foods we add the costly by-products like bran, but let experience determine the amount, the cost of the ration deserving consideration as well as the nutritive ratio.

SERVING SCIENCE.—A service is done science when a recognized authority in station work recognizes the actual conditions prevailing on most farms, and points out the fact that our feeding standards are guides to be followed only so far as the pencil shows profit. The standards show what is best for the animal regardless of cost. The practical man considers cost also. The tables are right for the animal. The standards will be trusted more fully as they are seen to be only standards to be approached as nearly as prices of feeding-stuffs permit with economy. Most farmers depend too exclusively upon farm feeding-stuffs that are deficient in muscle and growth and milk. Balance the rations up, by huying protein or raising clover, peas and oats, to the point of greatest profit. Square the rations with the scientific nutritive ratio as far as profit will permit. That is all the true scientist asks, and that is the demand of the animal and of common sense.

DAVID.

1

THE QUESTION-BOX AT FARMERS' INSTITUTES

What can one afford to pay for running water in a barn? Mr. John Gould, of Ohio: The water in my barn costs me three dollars a cow, and I think it was a good investment.

What grain ration would you advise feeding with dry corn-stalks? Mr. Geo. A. Smith, institute conductor: Wheat-bran and gluten-meal; also buckwheat middlings.

Does feeding Buffalo gluten injure the quality of the butter? Mr. Smith: Not to any great extent, unless fed in large quantities.

Do the different brands of cottonseed-meal differ in value? Mr. Smith: Yes; one sample analyzed at the New York experiment station contained nearly \$20 worth of protein, another only about \$9 worth.

Would you sell oats for one cent a pound and buy gluten-meal for the cows in milk? Mr. Smith: At the usual price of gluten-meal you can get more nitrogen for your money by exchanging the oats for it.

What is the value of hominy-meal for feeding cows giving milk? Mr. Smith: As compared with other foods it is now worth about \$15 a ton. The manurial value is about \$8 a ton.

Is it not a mistake for farmers to buy so much fertilizer? Not many farmers can afford to buy nitrogen, and the dairy-farmers should buy but little fertilizer of any kind.

Is the short rotation—that is, corn, oats, peas and clover—profitable for most dairy-farmers. Mr. Smith: Yes, if their farms are adapted to the kind of farming.

Does it pay to buy Canada wood ashes? Mr. Smith: The elements in one ton of ashes, as they will average, are worth to buy on the market about \$6.65. You can buy muriate of potash, South Carolina rock and lime, and make a ton of ashes for that amount.

Can one always get a catch of clover when seeding in August after oats and peas? Mr. F. E. Converse: In a dry season it may sometimes fail, but one year with another you will get a better seeding by sowing in August after taking off the crop than you will to seed with the crop.

How long should the floor of the cow-stable be from manger to gutter? Mr. Gould: The floor should vary in length to accommodate the animal, and should generally be from four to five feet.

How often should cows be salted? Mr. Smith: Three times a week.

Would it pay to build a silo for only two or three cows? Mr. Converse: I would not build a silo for less than five cows.

When drawing out manure in the winter, would it be better to put it in piles or spread it on the ground? Mr. Smith: Spread it when you draw it. If it is level land you will lose nothing by spreading it; it will save you time, and your land will be better for being covered in the winter. The ma-

nure, especially if coarse, should be plowed under. You will get more humus in the soil in this way.

How would you raise a calf when you have but little milk? Farmer: Feed sweet milk three or four days, then linseed-meal porridge containing one quart of milk for six weeks; afterward feed dry wheat-bran and ground oats. Oats and bran make bone. Clover tea is good for them.

What is best for killing lice on cattle? Farmer: Tobacco-dust is good; also a mixture of lard, sulphur and carbolic acid.

What is the difference in the feeding value of dry corn-stalks and ensilage? Mr. Converse: There is the same difference between dry stalks and ensilage that there is between hay and grass. Experiments have been made where cows were fed alternately on dry stalks and ensilage, and the results were always in favor of the ensilage. It is the water in the ensilage which makes it more valuable. You cannot feed dry stalks with water and make as much milk from the cows. The cows to do their best need to be provided with succulent food in the form of ensilage or roots. I can also make more and better flavored butter from the ensilage, but of course the ensilage must be of good quality. Condensories do not allow their patrons to feed ensilage, because some of them are liable to have poor ensilage.

What will prevent abortion? Mr. Witter: Do not have a hull with your cows that has been with cows which have aborted, and use disinfectants. These should be brushed over the mangers twice a week. The prepared disinfectants cost too much. They cost about three dollars a gallon, and it costs only a few cents a gallon to make them. I have used lime-water and carbolic acid and have had no abortion.

Are thoroughbreds more profitable for farmers who sell milk than grades? Mr. VanDreser: A grade may give as much milk as a thoroughbred, but it is the thoroughbred blood in the grade that makes her valuable. If you keep thoroughbreds, you have animals in which the type has become fixed, and you know "where you are at."

If a cow has a cough, how shall I know if she has tuberculosis? If a cow has a cough, is running down, and continues to do so, she probably has tuberculosis, and you can do nothing for her. Sometimes a cow will cough when there is nothing serious the matter with her.

What is the best ration for a cow giving milk? Mr. Witter: Forty pounds of ensilage, four pounds of gluten-meal, five pounds of wheat-bran and eight pounds of mixed hay. This is a balanced ration, and has the ensilage to provide the succulent food needed.

W. H. J.

2

DILUTION CREAM-RAISING

Considerable is being said at the present time about cream-raising by dilution, and if we were to believe the promoters of the sale of certain newly named cream-cans embodying old and well-known but discarded ideas one might think the acme had been reached in cream-raising methods. But farmers and dairymen, don't be fooled by this sort of stuff; for the fact was long ago established by science and confirmed in dairy practice that any method in creaming milk which dispenses with ice in gravity raising or separation by centrifugal force is faulty and wasteful.

The name "separator" as applied to these wares which are being sold about the country, and by which the farmers are being gulled out of hard-earned cash, is a misnomer and has no application in the sense in which the term "separator" is used in the connection of creaming milk, as the idea conveyed from common usage is separation by centrifugal force.

One of these miscalled separators is simply a can similar in all its essential features to the common cans used in the Cooley and other systems of cold, deep setting. While a patent is sometimes claimed on the process, it is a false claim, for there is no patent on mixing water with milk.

As to the patented features of the process the New York Cornell station investigated the matter, and as a result of the inquiry it is held that the patent granted on these cans covers unimportant details of construction, and that "any one desiring to use this process of doubtful utility is perfectly free to do so without let or hindrance from the holder of any patent-right whatever."

The method in and of itself, outside the expense of the vessels, is wasteful and slovenly, and does not lead to good results in the manufacture of butter, besides lessening the value of the skim-milk for feeding purposes.

Ten years ago Cornell University station tested the process of cream-raising by dilu-

tion of the milk under scientific conditions, using both hot and cold water to aid in its creaming, and found that neither, if the milk is set deep, comes up to setting in ice-water, and that the hot and cold dilution are of about equal merit; but neither is so effectual as shallow setting at 64 degrees, or in deep cans with ice.

In eleven trials with deep setting where ice was used for cooling, the temperature was about 44 degrees, and the per cent of fat left in the milk less than one fourth of one per cent. In the same number of trials with milk diluted by its own weight of cold water, the per cent of fat left was 1.28. Six trials with 20 to 30 per cent of cold water added left in the milk 1.24 per cent of fat.

Ten trials with hot water dilutions of 20 to 100 per cent, using water at 135 degrees, left 1.11 per cent of fat in the milk. Two trials by deep setting without dilution, the temperature at 60 to 63 degrees, obtained all but about four fifths of one per cent of the fat.

A two weeks' trial of a dilution "separator" made at the Michigan station, using 40 pounds of milk diluted one half with water at 60 degrees, and allowed to stand twenty-four hours, gave an average fat content in the skim-milk of 0.7 per cent, calculated for undiluted milk. The report says: "Not only was the loss excessive, but the skim-milk thus diluted with so much water could not be fed to advantage, and the cream soured rapidly."

Similar and even more pronounced unfavorable results were found in one hundred and twenty trials of the same "separator" at the Vermont station.

From such testimony it must be apparent to the reading, thinking farmer that the dilution theory is a delusion and a snare.

L. F. ABBOTT.

3

GREEN MANURING

The advantages of green manuring seem to be underestimated by the majority of farmers. When leguminous crops are used the following objects are gained: The physical properties of the soil are improved, the content of humus is increased, and consequently the water-holding capacity of the soil plant-food is brought from lower to higher levels, and the most expensive plant-food—nitrogen—is not merely procured from the air, but is added to the soil when the plants decay. When given a dressing of potash and phosphate these crops are especially valuable for renovating worn and barren soils, and upon better land, combining with rational soiling, they furnish large quantities of stock-food, thus permitting of a larger number of animals being kept and of a considerable saving of manure. If used as catch-crops they prevent the loss of plant-food by leaching and protect the soil from washing in times of heavy rainfall.

Grasses and other non-leguminous plants are less valuable than leguminous for green manuring, since they are usually shallower feeders, do not obtain their nitrogen from the air, but from the upper strata of soil, which they practically rob, since when turned under much of their vegetable matter is but slowly made available to the roots of the succeeding crop, and except for this humus they return only what they draw from the thin layer of surface soil. They are also less valuable for stock food, and with but few exceptions yield a smaller quantity of fodder to the acre.

M. G. KAINS.

4

EARLY CUT FODDER

I have been a reader of the FARM AND FIRESIDE for four years, and I take considerable stock in what its writers say on different matters of agriculture. During the summer Fred Grundy wrote quite a lengthy article on cutting fodder. He said it could be cut as soon as it glazed. In this I was afraid he was a little off. I had one piece of nine acres of corn platted the eighth of June—rather late for the latitude of south-eastern Iowa. In the fore part of September it was very cool and threatened frost. Those who had late corn said it would be ruined. I went to work cutting mine up. It was just fairly out of the milk and looked very green. I cut six rows and left six standing. I got just one half cut that way when the thresher came into the neighborhood and I had to help thresh. It was a week or ten days before I cut the other six rows. I noticed the first half was dried nicely. I got it nearly all cut before frost came. I have just finished hauling and stacking it, and it is the nicest I ever saw—as green-looking as when cut, but perfectly cured. People passing stop to inquire how I saved it so nice. As a brother farmer I gave them the secret. I shall arrange my work to cut my corn in that stage hereafter.

W. E. C.

**NOTES FROM
GARDEN AND FIELD**

FALL PLOWING.—Never before have we done such an amount of fall plowing as we did last fall. And wherever you look on the farms and in the orchards around here you can see freshly plowed ground, and many of the old sod-lands and many of the orchards that had not been plowed for many years, presenting that peculiar clean appearance of sward turned down in straight and clean-cut furrows. It is a most excellent beginning and foundation for next year's operations. If conditions are similar over a wide range of country I believe it will mean a much smaller area than usual in meadow-lands, and possibly a great reduction of the country's hay crop; but on the other hand, the best possible prospects for a large output of spring grains, corn and potatoes. And if our scientific friends who write the big bulletins of our experiment stations are correct, the existing conditions will also mean a material reduction in the numbers of some of our most destructive insect foes, especially white grubs and wire-worms, which are so liable to infest old sod ground.

GRUBS AND WIRE-WORMS.—The white grub which we often find in such large numbers in old meadow-lands, and which live on the roots of grass and other plants, is the larva of the well-known May-beetle or June-bug. If the sod-land is plowed in warm or moderate weather the grub will soon find a new and comfortable resting-place, and live to feed on the roots of the crops planted thereafter on that ground. Should that crop happen to be strawberries, or cabbages, or onions, or even corn, a large portion of the plants may possibly be ruined or killed outright by the enemy feeding at their roots. The Ohio experiment station in a bulletin just issued recommends late fall plowing for the destruction of these grubs, and says: "As yet we have found but one practical way of dealing with these pests, and while that is not infallible, it seems to prove effective in the majority of cases. It consists in the fall plowing of grass-lands as a preparation for the grain crop the following year. While early fall plowing is known to be often effective, it is quite probable that late fall or winter plowing is much more dependable. The reason for this is that after the grubs have constructed their winter quarters (earthen cells) they are probably too stupid to construct others. If then the ground is broken the grubs within their winter quarters are either thrown up to the action of continued freezing and thawing, or if not thrown up, are exposed to the more direct effects of rain and frost, and thus killed by the winter weather. That this method is effective in the majority of cases there can be hardly any doubt." I am not positive about the degree of hardness possessed by this white grub. There is another grub, the larva of a larger beetle often mentioned among enemies of the grape-vine, which one often finds in old compost heaps, in the decayed wood inside of old trees and stumps, etc. This grub, like many other soft-bodied insects, will freeze and thaw, and freeze and thaw, and yet live on and come to its full development just the same.

Wire-worms also feed on the roots of grasses and other plants; and their life-history and habits are somewhat similar to those of the white grub, with this chief difference, that the wire-worms are frequently found in soils too cold and wet for the white grub. The Ohio station has found no more practical prevention of the occurrence of this pest than the fall plowing of sod-lands, and that, as with the white grub, it is quite probable that late fall or winter plowing will be preferable. While this does not, in all cases, insure absolute freedom from the attacks of these insects, there seems a stronger probability of their ravages another year being prevented in this way than in any other. So in consideration of all these circumstances I am especially glad of having had these fine opportunities for late plowing, and should the weather remain favorable for such procedure I shall keep the plow moving right along. Indeed, I would not stop until every foot of land that I wish to plant is turned over with the plow.

WATERING PLANTS.—What an expensive thing to us is our ignorance, especially when we imagine ourselves to be so "awfully smart." What is the cost of a dozen or

more of papers and books which we might use for our instructors compared with the price which we have to pay, day after day, for what we do not know! This matter of watering plants—in the hotbeds, the greenhouse, the conservatory or in open ground—is only a small example, but one of a great many, and perhaps of more important ones. For years I thought I was doing a smart thing by warming the water with which I supplied my crops in hotbeds, greenhouse and cold-frames. This job may not entail a great deal of labor or expense when you have only a few plants in the house, or a hotbed of a single sash or so. But where you use barrels of water for plant-watering purposes, it makes a good deal of trouble to warm it even moderately in very cold weather. But as I thought the plants demanded warmed water to do their best, I did not dare to omit the heating of it until about a year ago, when the pleasing discovery was made that cold water will do just as well. In experiments recently made at the Wisconsin experiment station, the plants receiving water at a temperature of thirty-two degrees grew as well and yielded as well as those watered with water at seventy degrees or one hundred degrees. The soil about the roots of the plants so quickly regains its original temperature that no check to growth is likely to result. The station comes to the conclusion that the growth of ordinary field and garden crops is not effected by the temperature of any water ordinarily available for irrigation purposes. And if I had used my reasoning powers properly, I might have come to the same conclusion long ago; for what effect can have the little heat stored up in a barrel of warmed water compared with that stored up in the large area of deep soil over which this barrel of water is applied?

FEEDING AND WATERING POULTRY.—Hens do not possess much love of cleanliness. If we give them the least chance they will befoul their drinking-water and muss their soft food (if such is given them in open troughs) all over with mud and manure. It has always been a problem how to feed soft food and give water during the winter, when it has to be done inside of a building, in such a way that food and drink are not mixed with dirt and filth, and that the food is not wasted to some extent. For feeding purposes I now use a long, plain box about eight inches wide and about three inches deep. The food is filled in, spread evenly, and the box is then covered with a slatted cover made of plastering-laths in the shape of a miniature roof, and with slats just far enough apart so that the hens can easily stick their heads and necks through, yet have to stay out with their bodies. This little roof is just large enough to fit nicely over the trough. Conveniences of this kind make the task of caring for poultry a far more pleasant one than it often is.

JUNE-BERRY UNDER CULTURE.—I have a communication from Benj. Buckman, of Illinois, giving his experience growing June-berries for market. He says: "I have nearly an acre of June-berries planted thirteen years ago in matted rows eight feet apart. It is the Success variety. The fruit is large, and the fruitage is heavy, say about one hundred and fifty-two quart crates to the acre, on an average. As to the birds, I find that the more you plant the more numerous the bird marauders become, until the shot-gun is the only remedy. That is all there is to this, the law notwithstanding. The June-berry is not a good seller, ranking lower than the white currant in this respect. I have tried the markets of Springfield, Peoria, and a dozen smaller towns in this state, also of St. Louis, Mo. They will not sell in large quantities. A few can be disposed of, but not many. Yet they may be cooked with currants or gooseberries to advantage. Alone the June-berry is usually called insipid. I know of no insect enemies, but the foliage is sometimes attacked by a leaf-spot or rust, in which case spraying is necessary." This report probably gives the true inwardness of the June-berry question, and yet I cannot help being greatly interested in the subject, and would like to hear from any other reader who may have experimented somewhat more extensively with this fruit. T. GREINER.

INQUIRIES ANSWERED

BY T. GREINER.

Grubs on Rhubarb—Market-gardeners' Paper.—C. H., Eureka Springs, Ark., writes: "My rhubarb is badly eaten by the large white grub or some other insect. They hatch out in the manure put in the hill. Can I put anything on to kill them?—Is there a paper published for market-gardeners? Where can I get it?"

REPLY:—I do not know what enemy could do this mischief. Plant on a new patch that is free from grubs if it is the white grub.—The only paper in the United States published for the market-gardener only is the "Market Garden," Minneapolis, Minn.

Growing Lettuce for Northern Markets.—D. B. W., Blackville, S. C., writes: "Will some one inform me how to grow lettuce on a large scale for shipping, how to handle it, what variety is best, and what time to plant, etc.?"

REPLY:—I hope that some of our readers in the Southern Atlantic coast states who make a business of growing lettuce for Northern markets will give us some information on the points inquired about.

Squash-bugs—Sweet-potato Culture.—C. W. B., Deshler, Ohio, writes: "Please give me a reliable way of freeing squash-vines from bugs.—Also tell how to raise sweet-potato plants."

REPLY:—I have frequently told that I use tobacco-dust or bone-meal, or a mixture of both, applied in large quantities, to make my vines reasonably safe from the bugs. I lose the plants sometimes, however, in spite of these applications. For the black squash-bug I resort to hand-picking.—Procure sound sweet-potato tubers. In March make a strong hotbed; put a thin layer of sand or soil on the heating manure; then put down a layer of sweet-potato tubers, as closely together as possible without actually touching. Cover with four inches of sand, and put on the sashes. Keep watered and aired when necessary. When the sprouts are a few inches high they may be pulled like cabbage-plants and planted out on ridges, say eighteen inches apart in the row, and the rows three to four feet apart.

**ORCHARD
AND SMALL FRUITS**

CONDUCTED BY SAMUEL B. GREEN

TOP-WORKING OLD ORCHARDS

Luther Burbank, the well-known originator of new fruits, on account of his very surprising results has been called the wizard of California. His home is at Santa Rosa, to which place he came from Massachusetts, using for the purpose the money he received from the introduction of his first new variety, which was the Burbank potato. He originated it in 1873. In a recent letter he incloses circular advising the top-working of old orchards with better kinds and giving some practical advice to California planters on this subject. This advice will fit any section of the country with the exception of his notes on the time for grafting.

BEST TIME FOR GRAFTING.—Commence in January if much is to be done. February is probably the best month on most of the Pacific coast. March is as good if the grafting-wood has been well kept. April is not too late, and May sometimes, and for some things, is a good month.

SIZE OF BRANCHES TO BE GRAFTED.—One and one-half to two and one half inches in diameter is the best for old trees. If cut back to where the branches are thicker the tree receives too great a shock, the grafts do not take hold as well, and the tree forms a close, bunchy head, which is not ornamental or profitable. Graft the branches where you wish them to grow to form a new top, and have many twigs and smaller and unimportant branches to keep the sap up until the grafts have made one season's growth. All suckers near the grafts should be pulled off as soon as they appear.

CARE AFTER GRAFTING.—It is very important to watch and cut back a part of the new growth early in the season, else the wind may get too great a leverage and break out the grafts before fully healed over. It is also often best to reinforce them for awhile with a small twig or stick tightly tied to the old branch and lightly tied to the new growth.

BEST GRAFTING-WAX.—Take one pound of tallow, two pounds of beeswax and four pounds of rosin. Slowly melt all, stir well, and when partially cooled pour into pans which have been moistened or oiled to keep the wax from clinging too tightly to them. When thoroughly cold break into convenient pieces. For use it should be applied carefully over all exposed cuts and open cracks around the grafts. A small paint-brush is most convenient for this purpose. It can be safely applied much warmer than can be borne by the hand, but care should be used not to have it very closely approaching the boiling-point of water.

Fruit which sells for five or ten cents a pound usually costs no more than the one-cent-a-pound variety; often much less.

ORCHARD INQUIRIES

Peach-borers.—H. B., Sandidges, Va. There is no well-known preventive for the peach-borer. The best treatment is to go over the trees in the fall and spring and take out the borers with a knife; and this treatment is depended upon by the greater number of successful peach-growers. However, some growers have adopted a plan of using some deterrent on the trunks of their trees made up about as follows: Whitewash made with about one third plaster of Paris; Paris green, about one tablespoonful to twelve quarts of the wash; carbolic acid, perhaps one teaspoonful to twelve quarts. Such a wash as this given to the trunks early in the summer will make it rather unpleasant for the moths, and they will be deterred more or less from laying their eggs, and will probably spend more time with your neighbors' trees. Another favorite wash is made by adding soft soap to whitewash, making it the consistency of thick paint. Coal-tar would be an almost perfect preventive, but it kills the bark of the trees, and on that account is not safe to use. The advantage of using plaster of Paris in whitewash is that it makes it stick to the trees longer than lime wash. I think by using the wash first spoken of, and looking the trees over in the fall and spring for borers, you need not fear them greatly.

Grafting the Cherry and the Plum.—J. O. P., Lakin, Kan., writes: "When is the best time to graft the cherry and the plum in southwest Kansas? How are the scions kept through the winter? Can they be grafted on peach roots?"

REPLY:—The cherry and the plum are best grafted early in the spring, before they start to grow. The scions of each are rather difficult to keep through the winter in good condition. In case of hardy varieties of plum, I should prefer to cut the scions in the spring and not try to carry them through the winter. In case of the cherry it would probably be best to cut the scions in the autumn and carry them through the winter mixed with leaves in a cold cellar. My practice is to always work the cherry by budding in July or August, which with me is so much more certain than grafting that I have given up grafting entirely as a method of propagating it. However, in case of the plum I get most excellent results by grafting with scions cut early in the spring. I have found that where plum scions are put into the cellar and treated in the same manner as apple scions they are apt to lose their buds early in the winter, and although the wood appears to be in perfect condition for grafting, yet the scions will not grow, owing to the fact that the buds are killed. The plum can be worked successfully on peach roots, but I think that it is far better in the case of our native plums to use native plum roots, and in the case of the European plum to use Myroholan roots. The cherry does not do well on peach roots, but cherry stocks are best for this purpose, and can be purchased of most of the larger nurserymen. For this purpose the Mazzard is used for the sweet cherries, and the Mahaleb for the sour cherries. Where it is practicable to do so, it is a much better plan to propagate the cherry from suckers, and this is often practicable in the case of sour cherries which are not grafted or budded.

Wrapping Young Trees.—G. A. H., Van Wert, Ohio, writes: "With what kind of material would you wrap or protect a young orchard set out last spring, to keep the trees from being killed by extreme cold? The orchard is on a high, exposed piece of ground. Would old carpet, straw, hay or corn fodder tied around them be a good thing or not? The handiest thing I have is old carpet and corn-stalks. My trees are apples, pears, peaches, plums and cherries."

REPLY:—If you have plenty of old carpet, it is as good as anything for wrapping trees to protect them from winter injuries. However, on high land it is not the cold that is so apt to kill trees as the injury due to the blowing off of the snow during the winter, and it is generally far more important to put up wind-breaks to hold the snow than it is to protect the trunk of the tree by carpet or similar material. It is my opinion that you would get more good out of a mulch of straw or corn fodder around the trees than from tying them up. Many amateurs have a wrong idea as to the relative value of high and low land for trees. It is a well-known fact among orchardists that high land, providing the trees are not liable to suffer from drought, is far better adapted climatically than low land for a successful growth of some tender trees. It is well known, too, that the temperature on the tops of hills is not as low as in the valleys, for the reason that the cold air from the hills falls as it cools into the depressions, and the warm air from the valleys rises to take its place, so that frequently there will be a difference of several degrees in favor of the top of the hill as compared with the valley below. The place where winter injury is most likely to be serious is in what is called a warm, sheltered spot, where the air warms up a good deal in the middle of the day, and cools off very much at night. In such a place trees are subjected to the greatest extreme. In very exposed situations it may be a great advantage to have a wind-break protection. This is especially true in the Western states bordering on the prairies, where the intensely dry wind in cold winters is apt to seriously injure the tree; but in a general way the foregoing statement is correct.

PIONEER HOMES OF THE WEST

[CONTINUED FROM FIRST PAGE]

The cheaper ranch-house of the present day is of frame, the outer walls being of rough boards set upright and battened. Inside it may be lathed and plastered or it may be sheathed with building-paper. To be rendered perfectly comfortable during the coldest days of winter they are sometimes filled in with brick and mortar between the studding. But in the older settled communities there are, of course, up-to-date farm-houses designed by experienced architects and composed of frame, brick and stone, but those are so common all over our great land that a description of them would simply be the repetition of a twice-told tale.

A complete description of the various kinds of farm and ranch buildings and inclosures to be seen in the West would require a chapter by itself, and only a general idea will here be attempted to be conveyed. The great generality of them are crude and primitive, characteristics usually to be observed anywhere in so new a country. But the climate has not a little to do in the matter. The housing of either stock or crops is not considered essential. When barns are seen, and they are not often seen, they are usually located on some fine breeding-farm. The great majority of the farmers stack their grain and hay in the field, and shelter their stock in board or straw-covered sheds. Their corrals are usually of posts and poles, occasionally of boards or barbed wire. One of the illustrations is very typical of the farm buildings to be found on the newer lands. To the extreme right may be seen the large circular water-tank and windmill which fills the tank by pumping water from a well. Just back of the windmill and half hidden by a row of sheds is the farm dwelling, which is of the cheap frame class just described, with its two stove-pipes projecting through the roof in lieu of chimneys. Next come the cattle-sheds and the granary, which stand in the middle of the picture. To the left are more cattle-sheds of a somewhat temporary character, being of straw and in a state of bad repair. Over the top of the fence to the left may be seen a stack of alfalfa hay in course of construction, with a team and hay-wagon near it. In the foreground, extending from side to side, are to be seen the fences of the farm corrals, which for wild confusion and dilapidation, we are sorry to say, are quite illustrative of the ways of the happy and easy-going Colorado ranchman. The rank growth in the near foreground is a vagrant collection of alfalfa-plants. In the background may be seen the raw Colorado prairie, freckled with clumps of sage-brush, and beyond the cloudless Colorado sky. And this latter, I am inclined to think, is really the key to the secret of the Colorado ranchman's contentment and loyalty to his newly made home; for where there are three hundred clear days out of a possible three hundred and sixty-five, it is easy to see that there must be much personal and physical enjoyment.

THE BREEDS OF SWINE

In the quarterly report of the Kansas Board of Agriculture devoted to pork production, or the hog in America, Secretary Coburn has given a terse history of or comment on each of the breeds having any prominence in the United States. Some of his expressions will not please everybody, especially those who are inclined to believe that the use of the leggy and lardless sorts, as represented by certain English types, is essential to the Yankee hog-grower's salvation.

His idea is that the best type of general-purpose hog that the world has yet seen is the one evolved by the American farmers, or if not, the American farmers will make it so, and further, that the American hog-raisers, whatever their shortcomings, know infinitely more about pork production than any presumptuous outsider can tell them. He says:

"The Poland-China breed originated in the Miami valley, in Butler and Warren counties, Ohio, between 1838 and 1840, in the crossing of various families there known as Big China, Byfield, Bedford and Irish Grazier, the offspring being a large and somewhat coarse black-and-white-spotted swine called by various names, for which a national convention of swine-breeders, in 1872, selected that of Poland-China. These were crossed with imported Berkshires to give refinement and propensity to early fattening, and incidentally they acquired much of the Berkshire's conformation, black color and white markings. The progress made in that region and at that time was in a measure due to the nearness of Cincinnati, which in those days was the greatest pork-packing point in the

world. This popular breed, pre-eminently an American product, probably now numbers as many individuals as all other breeds combined in the United States.

"The Berkshire in its improved form originated, as did the Essex, in England—Italian and Spanish swine being crossed with the coarser native stock between 1780 and 1800. Although first introduced to North America about 1830, it did not obtain general or permanent favor until after 1870. The breed is widely disseminated in America, and justly a favorite, both to breed pure and to cross with other breeds.

"Chester Whites are the result of mating some large white stock from Bedfordshire, England, with the white hogs common in Chester county, Pennsylvania, about 1818 to 1830, the descendants being swine that were gradually improved by selection, and have maintained their popularity in North America better than any other of their color. In later years hogs of a dark color are most largely reared because of a belief that they are hardier and less susceptible to affections of the skin incident to sudden changes of temperature, and the muddy quarters, severe winds and burning suns to which they are too often continuously subjected.

"The Duroc-Jerseys are a breed of large, sandy hogs that are the result of a blending in recent years of families that first attracted prominent attention in New Jersey, where they were known as 'Jersey Reds,' with the possibly somewhat different type common in Saratoga county, New York, and locally known as 'Durocs.' The best of them are very easy feeders, full of quality, and in many instances carry extreme weight firmly on bones astonishingly fine.

"The Essex are from England, and entirely black. Few of them are raised in the United States, and they are but a very limited factor in the pork production of this country.

"The Yorkshires are entirely British, and in England three families of them are bred, known as the 'Large White,' 'Middle White' and 'Small White.' The Small Whites so nearly resemble what Americans have known as Suffolks that an expert is unable to tell one from the other. The Large Yorkshires, or Whites, and the Tamworths are the breeds so much doted on by the English and the Canadians as 'bacon' hogs, yielding possibly not more lean meat, but less fat, than is common to the swine of the corn-producing regions. They cut no appreciable figure whatever in the pork production of the United States.

"Tamworths are a slab-sided, long-legged, big-headed, lardless, unlovely, red, rusty or sandy, half-civilized sort from England. Like the Berkshires, their admirers in the United States are at present by no means numerous.

"The Victorias, a modern composite sort, were originated in Lake county, Indiana, twenty odd years ago, are white, of medium size, and comparatively unlovely and unsung.

"Poland-China, Chester Whites, Duroc-Jerseys, Berkshires, Large Yorkshires, or Whites, and Tamworths are properly classed as large breeds; the Essex and Victorias and Middle Yorkshires as medium-sized breeds, and the Small Yorkshires and Suffolks as small breeds. As a matter of fact, few Americans are engaged in rearing any of the small breeds, preferring those producing animals suitable for slaughter at an early age, yet capable of further growth to any size wished."

CORRESPONDENCE

FROM MISSOURI.—I have lived in Barton county about five years. There are no mosquitoes in the summer-time, and the nights are always cool, so that any one can sleep. It is a good place for cattle, sheep and hogs. The winters are mild. All kinds of grain can be raised. Land is still cheap—From \$18 to \$40 an acre, according to location and improvements. H. P. Irwin, Mo.

FROM CALIFORNIA.—The poor farmer here is terribly squeezed by the railroads and commission men. We have had a very dry year and a short crop, but good Muscat grapes were shipped from this point in car-load lots at \$10 a ton—one half a cent a pound—the same grapes that you pay eight to ten cents a pound for in Springfield, Chicago and Cincinnati. The producer is "getting it in the neck." The railroads are running and ruining this grand country. A. M. H. Rochester, Cal.

FROM IOWA.—Land here in the Missouri bottom is nearly level, sloping just enough to be drained by ditches. Raw land sells at from \$28 to \$35 an acre; improved farms, according to distance from town and improvements, from \$32 to \$65. Crops were good last year. Corn yielded 45 to 50 bushels an acre; wheat, 18 to 24; oats and barley, 40 to 75. Wages are from \$18 to \$22 a month; day-hands, \$1.25 to \$1.75 a day. There is a marked scarcity of hired help. Farms are rented by the first of September, and usually for a term of three to five years. The soil is a rich, black loam. L. G. Sloan, Iowa.

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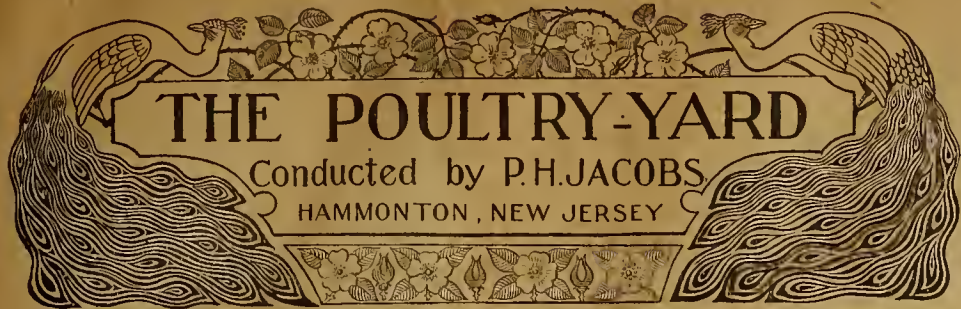
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FOWL HITS

For the average breeder one breed of fowls is enough; more than one kind makes too much work, for the amateur especially. If you can, procure some unthrashed wheat, oats and rye, mix, and tie them in bundles; give one to the hens occasionally during the winter, and they will repay you by increasing the egg yield. They need just such exercise.

Wyandottes and Plymouth Rocks for general purpose, Langshans, Brahmans and Cochins for meat, Leghorns and Minorcas for eggs, form my catalogue of breeds.

It is well to remember that too many chicks crowded in one coop make it a hotbed for disease and death. "Cleanliness is next to godliness" in poultry culture; make this your text, and scare out cholera and kindred diseases.

Give the fowls a warm house, plenty of grit, green bone, meat and cut clover during the winter, and how nicely they go through, and how rapidly the egg-basket will fill.

Feed only what the hens will eat clean; scatter their grain in chaff or other litter, and make them scratch for it.—Herbert Johnson, in Poultry Monthly.

SUPPLYING EGG-MAKING FOODS

L. A. Worthington says, in "Poultry Monthly," that if one fact is established in henology, it is that the fondness of fowls for bugs and worms is not an unnatural taste. The animal matter thus secured supplies a most important element in the fowls' food. It is largely because the hens cannot procure this food in winter that they cease to lay eggs. Another reason for few eggs in winter is that the hens are not only not in the best physical condition, but the food they get does not contain the proper elements for egg-making. Food containing the necessary elements must be supplied if we are to have full egg-baskets. It is for this reason that the feeding of green cut bone has become so popular among money-making poultry men and women. Green cut bone supplies this needed element, and at a less expense than grain can be fed. It keeps the fowls healthy, it makes eggs, and is indispensable.

GOOD ADVICE

A duck which had laid several dozen eggs during the season complained that while her working record was better than the hen's, the latter had books and poems written in her honor, while no one had a word of praise for the duck. A wise old rooster standing by said, "You lay an egg and waddle off without saying a word, while that sister of mine never lays one without letting every one in the neighborhood know it. If you want to cut any ice around here you must advertise."—Rural New-Yorker.

HOT MESSAGES

As winter comes on avoid giving your poultry hot messes. We mean it. Cook the food if you wish, and feed it warm. Warm the grain you feed them, too. Take the chill off their drinking-water. But don't give hot food, nor hot water.—Farm Journal.

INQUIRIES ANSWERED

Incubation.—W. R. R., Media, Pa., writes: "When should early hroilers be hatched to secure the highest prices?"

REPLY:—From now until February will give good results—the earlier the better. The highest prices are during April and May.

Turkeys.—H. C., Kelley, Kau., writes: "Which is the best breed of turkeys where size is desired?"

REPLY:—The Bronze is the largest and is also considered very hardy. Those who endeavor to add vigor use a half or one quarter wild gobbler one year in three, which makes a wonderful improvement.

East Indian Ducks.—S. E. T., Natick, Mass., writes: "Is there a breed of ducks known as 'East Indian' which are said to be better layers than many others?"

REPLY:—There is such a breed—small in size—but they probably do not excel some others as layers. There is also a breed known as "Indian Runners," for which superior claims are made.

Profitable Geese.—H. B., Sandiges, Va., writes: "Which are the most profitable geese to raise, and what conditions are required?"

REPLY:—Some breeds, such as the Embden and Toulouse, are large, but the China geese are better layers and foragers. Where geese are intended for market it will be an advantage to use ganders of the Embden variety with Toulouse females. If given the run of a pasture, with shelter at night, they will need but little assistance.

FRESH BONE AND BONE-MEAL

BONE-DUST for mixing in the poultry food should, on an average, be about the fineness of oatmeal. There are usually large pieces interspersed, but these need not be taken out, as any that are large will be accepted, though the meal may be sifted from any of larger sizes than peas if desired. The price never being much more a pound than good corn-meal, it should be used liberally with all soft food, and about one ounce of bone-meal with every half pint of dry corn-meal before adding milk or water. In small yards cut grass or clover hay must be liberally supplied as well as the mixture, and on such food the birds will grow wonderfully and acquire a constitution which in confinement they will not be able to attain in any other way. Burnt bones pounded have not by any means the same effect, being reduced to mere phosphate of lime with some amount of animal charcoal. It has been demonstrated, by a very simple experiment, that raw bones will hasten laying in the pullets, and furnish material for feathering out to maturity in the cockerels, as might be expected from the amount of nitrogen they contain; hence, while excellent in moderation for laying stock, or during a limited time in forcing cockerels, they are not adapted for the regular food of chickens whose period of maturity the breeder for exhibition rather desired to postpone, because its effect is immediate, which is not always desired in exhibition birds. That this postponement, with its continuous growth, is effected by bone-meal can be fully proved, as in the case of weakly breeds, to which it is fed for its quality of giving strength without increasing the size of the fowls. Changing it at the proper time for raw bones will produce the desired effect.

INCUBATORS AND HENS

To care for the number of hens necessary to hatch as many chicks as a three-hundred-egg incubator entails more than double the time and expense. It has been difficult to raise chicks hatched in incubators with most farmers and others, and at the present time such work is easier and surer than heretofore. A greater profit can be derived from poultry for the capital invested than from any other pursuit on a farm, and chicks hatched in incubators are easier to raise, stronger when coming out of the shell, and less subject to disease, than when hatched and cared for by hens. If any person accustomed to raising poultry will make a memorandum of the number of eggs placed under sitting hens, and then afterward note the number of chicks on hand when they are ready for market, the percentage of chicks will be so small as to excite surprise, as many will have been lost from unknown causes. With all that may be said of the failures of incubators a comparison will show that hens fail to a greater degree than may be supposed.

COCKERELS FOR CROSSING

There would be a good field for the sale of cockerels for breeding purposes if they were advertised as "culls" instead of as prize-winners. Hundreds of farmers do not care for the prize-winners, but they are disposed to buy pure-bred cockerels, that are off color or deficient in points (provided they are pure-bred) if the prices are reduced accordingly. For that reason this is a hint to breeders, and to advise them to advertise their surplus cockerels as "culls," which simply means that two or three of the best marked birds have been picked out for the show-room, while the others, though brothers to the prize birds, are equally as good in purity of blood and probably much better for crossing.

PREVENTING SITTING

When a hen becomes broody it means that the egg-producing capacity of her system for the time being has become exhausted, and that recuperation is needed. The first step to such recuperation Nature indicates to be "rest." You can induce even an exhausted animal to exertion beyond its natural capacity by using stimulants of various kinds—the

whip, for instance, will drive even a tired horse—but the use of such stimulants is generally and rightfully defined as cruelty, and in the end nothing will be gained. Give the hen one egg and let her sit on it for a week, feeding her once only in two days (as she will need very little food on account of no exercise), then place her in a slat coop (with slat bottom) raised from the ground for two days, and she will abandon the attempt and soon begin to lay.

SOFT FOOD

In eating soft food the hen is unable to make selection of kinds, but must bolt the whole, wet or dry, and take the consequences, only to be condemned as worthless for not producing eggs from food which, in the judgment of her owner, is just what all hens should have in order to make them lay. Domineering hens take more than their share from the trough, keeping the timid ones away. Such hens become overfat, while the others do not receive food enough. When the food is scattered far and wide each hen secures her share according to her industry. The more industrious the hen the more she will receive, and the more eggs she will lay. The lack of exercise when fed soft food as largely given induces the vices of egg-eating and feather-pulling. Idleness begets vice in hens as well as in human beings. Nothing is gained by grinding all the grain for fowls. Even chopped meat may be scattered over the ground.

FATTENING GEESE

Geese, like other fowls, by proper management may be easily fattened; but it is well known that unless they are killed and put into the market at their fattest period they do not long hold their flesh, and rapidly become lean. The French method of fattening these fowls consists in plucking the feathers from the under parts, in giving them abundance of food and drink, and in cooping them up more closely than is practised with common fowls, cleanliness and quietude being above all things indispensable. The best time to begin fattening is in the month of December, or as soon as cold weather has fairly set in; if it is longer delayed the pairing season sets in and prevents them from becoming fat. On a mash made of buckwheat, ground oats or Indian meal, with milk and boiled potatoes, they can be made ready for market in from three to four weeks.

DARK AND LIGHT EGGS

There is no breed that produces uniform eggs: The Cochins, Brahmans and Langshans are claimed to lay dark eggs, but there will always be some individuals that will lay eggs of both light and dark color. If you hatch a dozen pullets (with the same sire) from a hen that lays very dark eggs, you will not find two of them to lay eggs of the same shade, although they will be full sisters. Take a hundred hens of one breed, compare the eggs from each, and there will be at least some difference—no two alike—varying like the leaves on a tree.

FEEDING YOUNG BIRDS

The young of all wild species of birds are fed by their parents chiefly on animal food, even when they are seed-eaters, until near maturity. They are thus forced in order that their period of helplessness may be shortened, during which they are liable to become the prey of voracious enemies of many sorts, both birds and quadrupeds being fond of young birds. Poultrymen can take a leaf out of Nature's book and supply their young birds in part with animal food if their range does not supply an abundance of insect forage, or if closely confined in winter.

TABLE SCRAPS

Carefully gather the scraps from your table and give them to the fowls. There is no kind of food that produces a more liberal supply of eggs. There are hundreds of families who throw these scraps into the waste-basket, and buy corn for the fowls, when the former is far the best for egg production.

The Egg Harvest

is now. Hens will keep in best condition, assimilate most egg-making food, and lay most eggs while eggs are high if you feed them **SHERIDAN'S Condition Powder** One pack, 25c.; large 2-lb. can \$1.20; six \$5.00, prepaid. Full particulars "How to Feed for Eggs," and a sample best poultry paper, free. **I. S. JOHNSON & CO.** Boston, Mass.



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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE 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 inclose 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. Querists should not be written on paper containing matters of business, and should be written on one side of the paper only.

Fire-brick.—F. J. P., Newmarket, N. H. Fire-brick, crucibles, stove-linings, etc., are made of natural clay suited to the purpose, called fire-clay. The factories are located where it is found in abundance, as in the belt of rocks of the crataecous age extending across New Jersey.

Alfalfa.—M. U., Lynn, Wis. Alfalfa should be sown in the spring, a little earlier than corn-planting time, on a thoroughly prepared seed-bed. Send to Secretary of Agriculture, Washington, D. C., for bulletin on alfalfa culture. Nearly all seedsmen list alfalfa. Send for some of their catalogues.

Beet-sugar Industry.—P. A. C., Cleveland, Tenn. The manufacture of beet-sugar cannot be done profitably on a small scale, nor in localities where soil, climate and other conditions are unfavorable. On application the Secretary of Agriculture, Washington, D. C., will send pamphlets on the beet-sugar industry.

Gypsum.—G. Y., Pembine, Wis., asks if it is advisable for him to use land-plaster on his land.

REPLY:—The best way to determine this is by experiment. Applications of land-plaster, or gypsum, to clover, corn, etc., have given good results on some soils. Apply it to a clover-field this spring in alternate strips, for comparison, and note the results.

Cow Manure—Ashes.—J. R. G., Brownsville, Tenn., writes: "Should droppings from the cow-stalls be hauled out daily and spread over the land or piled up in a heap and applied in the spring?—How can I best use wood-ashes?"

REPLY:—If the land to which stable manure is to be applied is not subject to "wash," haul it out and spread it as fast as made. For garden crops, however, it is better thoroughly composted.—Use the wood-ashes in your garden and around your fruit-trees.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Querists must be received at least two WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE:—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Water Thick and Yellow.—F. V. D., Fischer, Wash. Without any further information than the simple statement that the water of your horse is thick and yellow I cannot comply with your request. There are too many possibilities.

Eating Too Much Corn.—P. J. E., Olathe, Kan. If your sheep died from eating too much corn, the best you can do is to see to it that in the future your sheep do not get any more corn than is good for them, and thus make any treatment unnecessary.

Probably an Extreme Case of So-called Warbles.—L. H., Moline, Kas. What you attempt to describe may possibly be an extreme case of so-called warbles, for notwithstanding that I find it rather strange that in that case the presence of all the larvae of the gadfly of cattle beneath the skin of your calf should have escaped your observation, I can find no other interpretation to your statements. See answers headed "Warbles" in recent issues.

Morbid Hoofs.—E. A. B., Riverside, Cal. Since the morbid condition of the fore hoofs of your horse is due to an existing morbid condition, or rather partial destruction of the tissues which produce the horn, caused by having been wounded (burned) with a rope, I do not see any possibility of restoring the hoofs to an approximately normal condition. All that can be accomplished in such a case is a little improvement effected by suitable shoeing, and now and then a little judicious paring by a good horseshoer.

Swelled Legs.—W. McR., Boisblanc, Mich. You say your draft-horse is used in the winter only for skidding logs, and during the summer has a run at pasture. This, I think, plainly indicates why his legs swell. The only way to prevent it is to see to it that the feet and legs, but particularly the posterior surface of the pasterns below the pastern-joints, are every evening, as soon as the work is stopped, thoroughly cleaned and rubbed with a dry rag until they are dry. If, in spite of this, small sores, cracks or so-called scratches should make their appearance, make to them three times a day a liberal application of a mixture composed of subacetate of lead, one part, and olive-oil, three parts. It is the continued

and daily repeated exposure of the lower extremities to snow, water and slush that causes the trouble. During the night the horse must have a dry floor to stand on. If the horse has hairy fetlocks, like a Clydesdale, the hair must not be cut away, but be left intact, notwithstanding that they may make the cleaning a little more difficult; because if the hair, which is there for protection, is cut away, the snow, water and slush will more readily enter the pores of the skin.

Looks Like Mange.—P. E. McD., East Brookfield, Mass. According to your description your cats appear to be affected with mange, and if so, it is very difficult to properly advise you, not because mange is absolutely incurable, for it is not, but because the remedies that can be relied upon to be efficient are about as rough on the cats as on the mange mites, so that energetic remedies are out of the question; and where the disease has made as much progress as it appears to be the case with your cats, others will not answer, or at any rate make the treatment very tedious.

Perhaps Tuberculosis.—M. M., Clay Center, Kan. Symptoms like those you describe are frequently observed in cases of pulmonary tuberculosis of cattle, in which the disease very often finds its first and most conspicuous development in the retropharyngeal lymphatic glands, and then just such symptoms as you describe will be the most conspicuous ones. I advise you to have your cow examined by a competent veterinarian or subjected to the tuberculin test. If you write to your state veterinarian, in Manhattan, he will, I have no doubt, advise you how and by whom you can get it applied. Meanwhile I advise you not to use the milk.

A Hard, Scabby Sore.—D. Q., Glenn Ellen, Cal. All the description you give of the ailment of your mare is contained in the words, "A hard, scabby sore, causing the hair to come off and leaving the skin bare, and after healing up, some small, hard scabs." I hardly know what to make out of it, because the above may be applied to several different ailments. Possibly it may be nothing but a case of so-called ringworm, which usually disappears if painted over once a day, for several days in succession, with tincture of iodine, and then the swelling of the leg will yield to a good rubbing and thorough cleaning every night and morning, combined with some exercise during the day.

A Terribly Hard Cough.—M. A. H., Moro Bay, Ark. No wonder that your horse, being smoked with pine-tar, leather, feathers, rags, etc., while suffering from distemper, has "a terribly hard cough." If the animal, in spite of such a treatment, is yet alive when this reaches you, and you cannot consult a veterinarian, and are thirty-two miles from the nearest drug-store, keep the animal in a cool and clean place that is perfectly ventilated without being exposed to draft, where the horse has pure air to breathe; feed sound food easy of digestion, give pure and fresh water to drink, exempt the animal from all kinds of work until fully restored to health, and leave the rest to nature.

Diseased Tendons.—T. S., College Springs, Iowa. From what I can gather from your rather inaccurate description I must conclude that the flexor tendons have been contracted and diseased for two years, and that the animal is very lame. If such really is the case, a restoration to a healthy condition is excluded, and the best that possibly can be done will be to straighten the affected leg by a surgical operation, which, however, is feasible only if every trace of inflammation has disappeared. It must be performed, if performed at all, by a competent veterinarian, and then will compel at least eight weeks' strict rest. If the horse had been given rest when the lameness first made its appearance probably no lameness would exist now.

Plica Polonica.—H. C., Unity, Wis. The ailment of your horse constitutes what is known as "plica polonica." Cut off the whole mane, give the whole crest of the horse's neck a thorough wash with soap and warm water, and then once a day, for several days in succession, provided the weather permits it, either a wash with a five-percent solution of creolin or a six-percent solution of nitrate of silver in water. If the weather is too cold, you may once a day, for a few days in succession, apply a mixture of equal parts of iodiform and tannic acid by dusting it on the skin between the hair-stubs with an insect-powder "cyclone" to be had in any drug-store. After the exanthema of the skin has been cured, and the mane is growing again, all that is needed will be a daily application of a good brush.

Worms in Pigs.—C. D., Seymour, Mo. It is impossible to ascertain the identity of a worm from a few dried, broken and crushed pieces wrapped up in a piece of paper and inclosed in a letter. Worms to be sent for identification must be put into a preserving fluid—alcohol, for instance—and must be intact and not be broken up into small fragments. Two species of large worms are of frequent occurrence in the small intestines of hogs, and those you found undoubtedly belong to one of them. The one is known as Echinorhynchus gigas, and the other as Ascaris suis. The former is armed, and fastens itself to the wall of the intestine by burrowing with its armed proboscis into the mucous membrane. It is a blood-sucker, and as it often changes its place, makes many wounds and causes considerable damage, especially if present in large numbers, for then it not only causes an extensive inflammation and considerable loss of blood, but also more or less severe constipation by filling up the whole width of the intestine. The eggs of this worm pass off with the dung of the hog, and it is claimed that they are taken up by the larvae of the May-bug, and that the hogs, but particularly the young pigs, infect themselves by eating the larvae. Hence, the

prevention would consist in a frequent and thorough cleaning of the hog-yard, and in destroying the bugs and their larvae. The mature worm, feeding on blood and having its head in the mucous membrane of the intestine, cannot be dislodged and be expelled by ordinary worm remedies. Possibly a good stiff dose of calomel—say from five to thirty grains; according to the size of the animal, to be given mixed with a piece of boiled potato—may be worth trying. The other species, Ascaris suis, if present in large numbers, causes constipation and colic pains. According to the best authorities it is best expelled from the intestines of hogs by mixing decorticated castor-beans with the food of the animals. One to two drams are considered to be the proper dose. The larvae of these worms, it seems, hatch in water and mud.

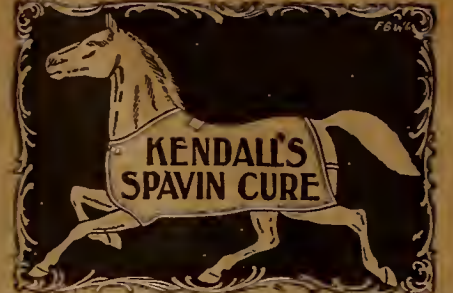
Corn-cobs—Feeding a Brood-mare.—E. K. A., Portage, Wis. Corn-cobs, although perhaps not directly injurious to horses, are surely of no benefit because being almost absolutely indigestible by the digestive organs of horses, they only add to the volume of the food and not anything to the nutrient properties of the same. —As to your brood-mare, twelve or fourteen years old, and for the first time with foal, the only advice I can give you in regard to the food to be given her, not knowing anything about the animal except her approximate age, is not to feed her too much bulky food, particularly when she is getting heavy, and to make up the deficit in nutrient material with some additional grain while fed in the stable. As she will foal on the ninth of June, she can probably have one month of good pasture before her time is up. If she can it will very much lessen the danger attendant upon foaling, at least in her case.

Foot-evil (?).—G. P. H., Bane, Va. It is not clear to me what you call "foot-evil." Parties sending inquiries to which they desire a satisfactory answer will do better by giving a fair description of the case they inquire about by simply using a local term, perhaps well enough understood in one part of our big country, but not known in others. If you mean an ulcerative and destructive inflammation of the lower extremities, having its principal seat in the cleft between the hoofs of cattle, so-called foot-rot of cattle, you can effect a cure if you first trim away all the loose and separated horn with a sharp hoof-knife, remove all decayed and dead tissues, and then dress the sores with absorbent cotton saturated with a mixture composed of liquid subacetate of lead, one part, and olive-oil, three parts. If the destruction is not extensive, and the animal can be kept on a dry and clean floor, it will suffice to press a small bunch of cotton saturated with the above mixture into the cleft between the hoofs. If, however, the ulceration is extensive and not limited to the cleft, it will be necessary to protect the dressing with a bandage. It is best to renew the dressing twice a day. That the animal must not be allowed to go out where it is wet, muddy, rough or stony, but must be kept, if not in a stable, at least on dry and level ground, is self-evident.

Infectious Abortion.—M. E. G., Paradise, Kas. 1. It will not be safe to breed the same cows again unless they have been disinfected and are removed to non-infected premises, and even then it is possible that one or another will not carry her calf the proper length of time. 2. Other cows are very apt to become infected if taken into the infected place or places immediately after abortion has ceased (immediately after the last of your cows has aborted), unless the infected premises have first been thoroughly cleaned and disinfected. 3. I cannot tell you how long a time it will require to free infected premises from the infectious principles if a thorough cleaning and an artificial disinfection have not taken place, because this depends upon the prevailing conditions—whether they are favorable or unfavorable to the preservation of disease-producing germs in general, and of those producing infectious abortion in particular—and upon the vitality of the germs themselves. In regard to the latter hardly anything positive is known, and as to the former, the favorable or unfavorable conditions, I can only say that a free exposure to sunlight and fresh air is inimical, and that shade (protection against sunlight by some kind of covering, but particularly by organic substances) and moisture are favorable to the preservation of nearly all kinds of disease-producing germs.

Probably a Fistula.—L. T., Pearl, Kan. What you call a running sore on the jaw of your horse is probably a fistula leading into the socket of a tooth. Have the "sore" carefully probed, if possible, by a veterinarian, to find out where it goes and where it leads to. If it is found that it penetrates into the mouth, that the inner opening comes out at the side of a tooth, and that the tooth itself is not diseased, a cure is possible without extracting the tooth. If, however, it is found that the tooth is diseased, its extraction will be necessary, and this operation, as well as the operation probably required to put the fistulous canal in proper shape for treatment, will have to be performed by a competent veterinarian. If the fistulous canal has an upper opening in the mouth, if the canal is rather straight and free from crooks, branches and pockets, you may possibly succeed yourself in bringing it to healing if you (temporarily) plug the upper opening with a small plug of cotton, and then inject from below a little pure carbolic acid; or if the canal is perfectly straight (if the same is too narrow it is easily widened by a common gimlet) by inserting a stick of nitrate of silver clear up to the cotton plug. An injection of carbolic acid will probably require one or more repetitions, while one insertion of a stick of nitrate of silver (provided the stick is left in the canal to melt away) will probably suffice. The wound or sore until healed must be kept clean.

Spavins, Ringbones, Splints, Curbs, and All Forms of Lameness Yield to



Works thousands of cures annually. Endorsed by the best breeders and horsemen everywhere. Price, \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse." The book free, address DR. B. J. KENDALL COMPANY, ENOSBURG FALLS, VT.

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CUT BEETS, MANGELS, Turnips, Carrots, and all other roots and vegetables for stock feeding. CUT FINE.

Choking Impossible.

Run easy, have self feeder, separate dirt from cut feed. Five sizes, hand and power.

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QUAKER CITY GRINDING MILLS

meet all these requirements and more. Having two hoppers it mixes all kinds of grain as it grinds. Minimum power. Guaranteed. 31st annual catalogue, free.

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PAGE

THE OPEN DOOR POLICY

sounds all right, but the open field had better have Page Fence around it, with one or two Page Gates.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

"CORED TO DEATH"

is the startling headline of many a news paper article. Hornless animals are safe, done with the

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causes less pain than any device made. Cuts on 4 sides at once—clean and quick, no crushing or tearing. Fully warranted. Circulars &c. FREE.

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Either from Habit or Sore Tests

By mail 50 cents. Also **WART CURE**

Guaranteed to remove Warts from horses, cows' teats or man. Post-paid at 25 and 50 cents. Send for circulars. Agents wanted. HENRY BASSETT, Salem, New Jersey.

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Build strong. Chicken-tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalogue Free.

COLLED SPRING FENCE CO. Box 18, Winchester, Indiana, U. S. A.

THE GRANGE

Conducted by MRS. MARY E. LEE, New Plymouth, Ohio

THE NEW-YEAR

How glorious it is to catch the inspiration of the New-Year. How the wine of hope and zeal warms and invigorates us. It is a privilege even to breathe. The very air is resonant with anthems and hallelujahs, martial music and the sonorous roll of the drum. For one day in the year there is a universal instinct to achieve yet greater deeds. More so is it to-day, this first day of 1900. We have been making eighteens so long. Each new year that was ushered in promised us great things. But the promises somehow were not fulfilled. We became almost superstitiously suspicious of our old friend. We distrusted him and began to build our hopes on the lusty youth soon to be born. We have promised him many glorious deeds of chivalry, and now he is here, a hearty good fellow, strong and vigorous, perfectly aware of our promises and ready to exact the payment. We have been telling him about our marvelous growth as a nation; of the railways we have built and equipped; the palaces we have erected; the libraries, museums, hospitals, homes for the aged, infirm and incapable; of our lodges and societies for self-improvement; of our fine farms and pedigreed stock; our printing-presses, and our schools and churches. We have told him that all this prosperity was material, but that we were going to convert it into spiritual blessings for mankind. And the fellow believed it all, and here he stands, feet apart, hands in his pocket, and a mingled look of superiority and doubt of our abilities, and coolly asks, "What are you going to do about it?" What would we not give to get back with our old friend eighteen again. He was, no doubt, a bit slow, but he didn't tread on our corns. He looked leniently on our broken promises. He knew we had made more or less gallant attempts, and he gave us credit for our intentions rather than our achievements. But this nineteen is so vigorous and hopeful, so full of life and buoyancy! He has so much to do that he hasn't time to sit down and listen while we tell him all about what we hope to be and do. He looks as if he rather doubted our sincerity, and thought our good resolutions were traceable to the turkey we had for dinner. I really believe he is going to enforce even more stringently than eighteen the law of "the survival of the fittest." We thought eighteen was too rigorous in the execution of that decree, but nineteen is far more exacting. Well, here are tears and blessings for the friend of so many years. And here are loyal hearts in sturdy bodies ready to solve the problems the new brings to us. We will love him after awhile, I doubt not; if we rise to the full stature of manhood and womanhood he will have laurel wreaths and roses for us.

THE NEW BOOKS

Nineteen has given each of us two books. We open them and find the pages beautifully pure and white. On the title-pages we find our name and 1900-2000. As we turn the pages of one of our books we come to pictures of rocks and hills, and great muddy rivers to be crossed. On the top of a high mountain stands a statue. In its hands is a blazing torch. As we look the word "Success" spells itself in letters of gold. We open the other and find the same picture. We turn again to the first, and idly thumb the pages. Unconsciously we turn a leaf. We see a path strewn with jagged rocks and cruel briars. We turn to the other book, but here is a pleasant road begirt with beautiful flowers and swaying trees. In the branches are birds of every description discoursing sweet music. There is a spring which bubbles and sparkles. We see the statue on the mountain waving its torch of living light. We kneel at the spring and drink the rich nectar. It lulls our excited fancies, and we sleep. It is the first drink of wine. We are exhilarant. But as we look the statue shrinks. Again we turn the pages. Again we see a rough road, but the mountain is not so high. Again we see beautiful fields and hear entrancing music and drink of the enchanting spring. And the mountain frowns ominously. Once more we turn a leaf. But what a change. In the first the stony, thorny path is smooth and even. The frowning mountain has shrunk to a mere sand-hill. We stand on the summit by the statue. The torch is in our hands. The victory of achievement is on our brow. We do not tremble. We stand erect and hold the great flash-light on high. Far off are

multitudes of people gazing and pointing upward. For the first time we realize that we are a statue holding aloft the torch of success. We turn in our humility and self-abnegation to place the torch in the hand of him who last held it. "Keep it," said a deep voice. "He bears the torch who does best, lives noblest, and blesses his fellow-man. The torch-bearer is ever changing, but the light endures forever. You fixed your eyes on the light. Storms and sickness, disasters, scorn and jeers, ridicule, even ease and pleasure itself could not win you from your stern purpose of using nobly the life God gave you. The obstacles you have met were but trials to prove your courage and fidelity. Henceforth God will use you as a mouth-piece to speak his will. Men will listen to you, and revere you, and through you learn lessons of self-sacrifice and unflinching determination. The years of your trial were few, but you are rewarded a hundredfold." The voice ceased. We turned the leaf of the other book. The landscape was drear and bleak. The mountain looked black and forbidding. Scattered about were men in all degrees of wretchedness. Hope and courage and strength were gone. A stern voice was heard, saying, "Curse not your fate! You had time and strength, the only opportunities given any one. You wasted the one in seeking flowery paths and what you called pleasure. You mortgaged the other to gratify the lower element in your nature. You have your reward. You deliberately made your own choice. You had history to tell you, and your experience confirmed it, that everything in this world has a price; that the reward is sure, and is measured only by the individual's limitations. You knew that you were placed here, with the divine spark of life within you, to multiply the riches and beauties of this world. You have failed. You are fit for but one purpose, that of warning to others. Possibly your miserable example will restrain others from following a life that brings no good to the individual or the world. Happily you will soon be forgotten." Nineteen stood by my side. I came for one of the books. "Which one shall I leave with you?"

Which book did you hand him?

MAGAZINE FUND

Several granges have what they call a "magazine fund," a fund set apart for the subscription of certain magazines, and the purchase of numbers containing articles of special interest to them. At the end of the year the magazines are bound and put into the library. By subscribing through an agency they get the magazines at reduced cost. We would commend this plan to all granges that have not a reading club. The best current thought on topics of general interest is given in the leading magazines. The farmer must keep in touch with the best thought in order that he may decide intelligently upon the problems confronting him. It is not enough that he doggedly denounce certain measures. He must back up his denunciation with reason. The trust question will be of paramount importance during this session of Congress. Both parties will be gathering ammunition for the next campaign, so that "my paper" will hardly be a trustworthy guide. On the other hand, under cover of the intense feeling that will be engendered innocent-appearing laws will be enacted that will be wide-spread in their effects. The most hurtful measures are those seemingly harmless ones that are grafted on our statutes while the public mind is at fever-heat on some important topic. It behooves every grange to put itself in a position, through the medium of magazines, trustworthy newspapers and farm journals, to intelligently handle the various questions that will arise.

GRANGE WORK

Many things point to a prosperous year in grange work. The lecturers are becoming aroused to the dignity and responsibility of their office. They will see that the literary work is carried on energetically and systematically. The deputies are coming together at their different state granges, and are enthusiastically laying plans for a splendid year's work. Michigan set the pace with seventy-five good granges organized in 1899. The other states will not be far behind in 1900. In some states the deputies have agreed to organize at least one grange each. The weak states are to be assisted in building up the order within their borders. The granges are learning that a live, energetic grange, one that means business, has far more influence in building up the order than a whole string of eloquence. They realize that example is better than precept. But the

greatest good will result to those who do the work. The farmers know that they cannot evade the trust and transportation questions. They must be solved, and they have to do their fair part in the solution of these vexing problems. Altogether the indications are that 1900 is going to see a wonderful revival in grange work.

The same qualities that are essential in a successful career for an individual are just as necessary in the grange. Pluck, prudence, perseverance, honesty, energy and an unyielding determination to succeed will surely reap a rich reward.

My young friend, it doesn't pay to take an unfair advantage of any one. It doesn't pay to be dishonest. The best way to get even with an enemy is to make of yourself a successful man or woman. Pure, conscientious motives joined to sound business judgment and a wide knowledge is sure to bring success of the kind that is of most worth and honor in the world. Be true to thyself, and it follows as night the day

Do not try to make the lecture work too elaborate. Make out a program that you can carry out successfully and gradually improve as the year rolls round.

RURAL FREE DELIVERY AND GOOD ROADS

In his annual report the First Assistant Postmaster-General, Perry S. Heath, says: "I take pleasure in acknowledging the very valuable aid which has been given the development of the rural free-delivery service by the co-operation of the several state granges of Patrons of Husbandry and similar bodies. From all parts of the country I have received from the masters of these lodges applications for information as to this service, and in return for the information thus supplied I have never failed to receive from them resolutions commending the system of rural free delivery and urging its continuous development.

"Those interested in the development of good roads throughout the country have also shown as strong a disposition to lend a helping hand to the rural free-delivery service, recognizing the fact that good roads and rural delivery are necessarily closely connected.

"On the 6th of October, 1899, a 'Good Roads Convention' was held at Des Moines, Iowa. Among the resolutions adopted by this representative gathering was the following:

"BELIEVING that the postal system of the general government was instituted upon the theory of serving without discrimination all the people in a just and liberal manner, and recognizing the many social and pecuniary advantages of rural free-mail service, not only to the rural population, but also to all classes, and that such service is dependent on good roads: Therefore,

"Resolved, That we are in favor of such an appropriation by Congress as will insure the speedy and permanent establishment of such service throughout the country where the conditions as to good roads and population will justify, and that we hereby respectfully request our members of Congress in both the Senate and House to vote for such an appropriation."

The following is an extract from an address to the convention:

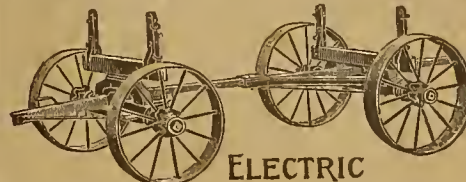
"The farmer located on a good thoroughfare, who sees the fine turn-outs rapidly hurrying by, the occupants handsomely dressed people, is surprised by the scene, steps quicker, thinks faster, and keeps his home surroundings in harmony with what he sees. A sense of pride prompts him to greater efforts to have for his family a good conveyance, to provide about his barn good drives, free from mud, and to have about his home good brick or cement walks. His children go to school over good roads; his family goes to church, to lectures, to town; they are in touch with the world's progress. The need of combining small country schools, the demand for township high schools, will increase the need of road improvements.

"Rural free delivery of mail, so much needed among our farmers, can never obtain except in localities possessing good thoroughfares, insuring rapid transit at all seasons of the year.

"Of all men the farmer needs the daily paper. He is enabled thereby to keep in touch with the world's advance, to be posted on current events, and to understand daily markets. Nothing, in my judgment, will do more to hasten this desired end than good roads."

BUY THE BEST

If you want the best low down wagon you should buy the Electric Handy Wagon. It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and rear hounds are made from the best angle steel, which is neater, stronger and in every way better than



ELECTRIC

wood. Well painted in red and varnished. Extra length of reach and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4000 lbs. anywhere. Write the Electric Wheel Co., Box 96, Quincy, Illinois, for their new catalogue which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.

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Simply for the purpose of acquainting you with the superiority of "Appleton Quality" we have built the best exclusive hand fodder cutter on the market and will sell it at an extremely low price. It is as complete a machine for its purpose as any of our "New Hero" Ensilage and Has 2 heavy 9-in. cut, etc. Everybody the supply is order at once to be Should you want a larger fodder cutter or shredder, horse power, wood saw, wind mill, steel tanks, etc., we can supply you "Appleton Quality"—which is the best—there also. 160 page convincing catalogue mailed free.

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| 1 Pkg. Earl's Emerald Cucumber. | 15c. |
| 1 " La Crosse Market Lettuce. | 15c. |
| 1 " Strawberry Melon. | 15c. |
| 1 " 13-Day Radish. | 10c. |
| 1 " Early Ripe Cabbage. | 10c. |
| 1 " Early Dinner Onion. | 10c. |
| 3 " Brilliant Flower Seeds. | 15c. |

Worth \$1.00, for 14 cents. \$1.00

Above 10 packages worth \$1.00 we will mail you free, together with our great Catalogue, telling all about SALZER'S MILLION DOLLAR POTATO upon receipt of this notice and 14c. stamps. We invite your trade, and know when you once try Salzer's seeds you will never do without. \$200 Prizes on Salzer's 1900—rarest earliest Tomato Giant on earth.

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And get the brightest book of suggestions and helpful hints on all kinds of planting published. It's absolutely FREE if you mention what you grow most—Flowers, Vegetables, or Small Fruits.

JAMES VICK'S SONS, 29 Elm St., Rochester, N. Y.

SEE AND WONDER

SEED DUE BILL FREE

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450,000 TREES

200 varieties. Also Grapes, Small Fruits, etc. Best rooted stock. Genuine, cheap. 2 sample cuttings mailed for 10c. Desc. price-list free. LEWIS ROESCH, Fredonia, N. Y.

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Choice kinds of Vegetable and Flower Seeds at 2c. per packet. Flower Plants, 5c. each. Many choice novelties. Don't buy until you have seen our new catalogue. Mailed FREE if you mention this paper.

IOWA SEED CO., DES MOINES, IOWA.



STYLES AND COURTESIES OF LETTER-WRITING



IT is a gentle courtesy to select paper of good quality, and we will take thought for this matter if we have any regard for the friend we are writing to. The richest style in paper this year is Holland linen, a cloth-finished paper in all the leading shades of Ghent blue, queen's purple, pistachio-green, Burn blue and ash-gray. Swastika pearl is another new paper, so named from its watermark of a mystic Indian symbol meaning good luck. It comes in a Swede finish, and is packed in boxes covered with all-over designs of East-Indian rugs.

It is a courtesy to address all business correspondents as "Dear Sir" or "Dear Madame," which simply means that we are a little removed from the barbarism of the Dark Ages, and in this dawn of the twentieth century are beginning "to love each other as they do in heaven rather than hate each other as they do in Florence." "Madam" sounds so harsh and curt—and is most likely to bring a reply in the same tone. Why start any wave of ill-feeling when there is already enough in the world.

When we write asking for information on any subject it is not only courtesy, but honesty, to inclose a stamped envelope for a reply. We cannot expect stranger correspondents to furnish stamps and envelopes to further our own affairs.

In friendly correspondence, "Most sincerely" or "Cordially yours" are good forms, and the simple words "Your friend" mean a great deal when they come from the heart. Some people have queer ideas as to the meanings of the closing words of a letter, and the story is told of a man who was offended at receiving a letter from some neighbors condoling him on the death of his wife, and signed "Yours truly." He thought they were entirely too familiar, but "Yours truly" means simply "This letter is truly yours."

While complimentary flourishes are always out of place in a business letter, it is rude to abbreviate the closing words. A letter written with poor ink on a sheet of bargain-paper, and signed "Yours, etc.," is an epitome of the writer's bad manners.

FRANCES BENNETT CALLAWAY.

1

THE YULE-TIDE THE CHILDREN'S TIDE

And why should it not be so? We celebrate the birth of the greatest child that ever lived, and desire to impress his personality on the minds of our children; what better season can there be than the holy Christmas-tide? We should not allow our time to become so fully occupied with the gaieties which are the usual accompaniment of this especial season that the little ones are neglected. Let them come in for a share of the festivities, not merely on Christmas day—of course, they will be remembered then—but during the entire week. And see to it that all the pleasure given them is but a means to an end. We ought to be able to fix upon their impressible minds lessons which they will never forget—lessons of kindness, unselfishness, gentleness and love. Let us live with and for our children, and make them out friends in an especial manner. They will not be little children long. Take this time to become acquainted with the peculiar characteristics of each one, that you may be the better able to guide and to train them the remainder of the year.

We should plan simple, innocent pleasures for our children. Nothing will so add to their happiness as to know that mama is interested in their little games, and their joy knows no bounds when she becomes a participant. And then what lovely moments can be spent together when tired with play talking of the Christ-child. We as mothers should seize every opportunity that offers itself to impress lessons of uprightness, truth and purity in the hearts of these immortal souls committed to our care.

A busy child is a happy child; innocent pleasures keep the child busy, hence happy. A truly happy child is usually a good child. By all means allow the children to have a simple little party all their very own during the holidays. Simplicity is the rule for children now, not the artificiality of some years past. They do not bold their parties "after early candle-lightin'" now, but from three or three-thirty until six o'clock.

Doll parties, where each guest brings her favorite doll, are favorites with little folks, but kitten parties, where the darling kitten is lovingly brought, and to whom an especial invitation was sent, affords no end of amusement, especially when a prize is awarded to the puss that drinks the most daintily from the prettily decorated bowl that is but one of the long row ranged in the middle of the nursery, where a pure white oil-cloth on the floor does duty as a table-cloth.

"Lo! what thou hast done for the children
For the Lord himself has wrought."

ELLA BARTLETT SIMMONS.

2

HINTS ON VARIOUS SUBJECTS

I have long been a reader of the many useful and instructive contributions found in the pages of the FARM AND FIRESIDE, and since I heard with "mine ears" M. M. M.'s sensible speech I'm induced to add my mite. I shall try her washing-fluid in the near future, but let me tell you another one still more simple. I wash in the same manner, only I add to my boiler of water two tablespoonfuls of kerosene-oil. I have found nothing equal to it in cutting the dirt.

Wash your windows in as clear hot water as can be used, and add a few drops of kerosene-oil. It evaporates, carrying the moisture with it, and you will be gratified with a shining glass and not half the trouble to get the polish. Try it the same way on your woodwork. It saves labor and soap, and no injury is done your paint.

Let me tell some of you who, like myself, and they are legion, have not the wherewithal to buy new furniture how to renovate the old, so when house-cleaning is done they may look new if old. Buy of your druggist any good braud of enamel for woodwork, and use it according to directions. I am sure you will be delighted. A twenty-cent can will put two coats on three chairs.

Will not some of the readers give some instructions on the making of crape-paper flowers? Give illustrations and outline of patterns of some of the simpler ones. They are beautiful for lace curtain decoration, and inexpensive.

One more "mite." Have any of you set away a nice row of golden pumpkin pies, and when again you beheld them, after they have cooled, found them cracked all around from the outer edge of crust? Just put one teaspoonful of corn-starch to each pie when you mix them, and presto, there they stay!

Mrs. W. H. C.

3

DIRECTIONS FOR CROCHETING PANSY

Abbreviations.—Ch, chain; st, stitch.

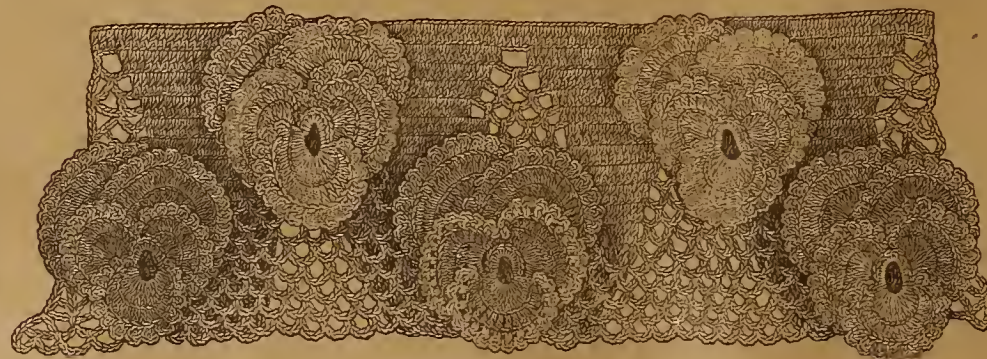
A No. O* steel hook should be used to obtain a natural-sized pansy.

Ch 5, join, making a ring. Ch 1, 13 singles in ring, slip st in top of ch 1, ch 4, slip st in fourth of ring, ch 4, skip 3 singles, slip st in next, ch 4, skip three singles, slip st in next; turn.

FIRST PETAL.—First row—1 single, 14 doubles, 1 single in first ch of four; turn.

Second row—1 single in single, 1 double in each 14 doubles, 1 single in single; turn.

Third row—Ch 3, 1 single in single, * ch 3, 1 single in double; repeat from * thirteen times, ch 3, 1 single in single, slip st on back of work to second ch of four on ring.



SECOND PETAL.—Work in second ch of four as in first ch.

THIRD PETAL.—Work in third ch of four as in first ch, then break thread. Let lower portion of first and third petals go under the second petal.

FOURTH PETAL.—Fasten thread in top single of first row of the third petal, ch 5, slip st in back of the seventh double of the third petal; turn.

First row—Work 1 single, 20 doubles in ch, slip st in back of the fifth double of the first row of the first petal; turn.

Second row—1 single in first double, 1 double in each of 19 doubles, 1 single in single; turn.

Third row—Work same as third row of other petals.

FIFTH PETAL.—Ch 5, slip st in back of fifth double of fourth petal; turn.

First row—1 single, 18 doubles, 1 single in ch; turn.

Second row—Work same as second row of other petals; slip st in back of ninth double in the second row of fourth petal; turn.

Third row—Same as third row of other petals; slip st in ninth double of second row of the first petal, break thread, and fasten neatly.

CENTER.—Fasten black, bright yellow or any color desired on back side of ring, put



hook through center or ring from right side, and draw thread through with loop on hook; put hook through space between ring and second petal, draw thread through space and loop on hook; repeat three times, making four stitches in all. This completes the pansy.

A single pansy alone may not look real natural, but will look much more so when grouped with several others. The lace back is easily understood.

FRANCES LAW.

4

THE COUNTRY HOME IN WINTER

"The country is well enough in summer, when everything is green and growing, but when the leaves turn brown and fall, the wind roars and moans through the bare branches, and winter storms come, it must be awfully dull. What do you find to amuse you through the long, dreary evenings? I am sure I should die of lonesomeness if I had to live in the country all the year."

After this expression of her feelings the city cousin yawned and looked pityingly at her country friends.

"Ob, we never get lonesome," was the reply: "How can we, when there is so much to do? When it is pleasant weather we make visits and entertain our friends, we take long walks in the woods, which are anything but gloomy, even if the trees are brown and bare. It is delightful to hear the brown leaves rustle under foot; then we discover many beauties and woodland secrets that one would never find in the summer. And when the pond freezes we have skating parties, and the snow makes jolly coasting and sleigh-riding possible. Sometimes we make up a party and drive to the city to hear a lecture, concert or opera. At home we sew, read, study, play games and practise music. I cannot begin to tell you all the things we find to do; indeed, the winter is always gone before we get through with all we had planned to do. Last winter I studied Spanish. You have no idea how much one can learn in a few months. When a big storm comes, the wind howls and snow

and look at the lovely things in the stores. There whenever you look out of doors you can see people passing on the street. I would rather look at people than at trees."

This last remark just explained the difference between the two girls. One was a lover of Nature and a person of resources within herself. She did not need to be everlastingly entertained, and did not consider amusement the chief end of life. The other had grown up in a city with a constant round of excitement and amusements until they were a part of her life. She depended entirely upon outside influences for her pleasure and happiness.

I confess that all country homes are not as pleasant and inviting as the one in question, and all country girls and boys are not so contented and happy as our young friend. Her father and mother had been determined to give their children every advantage possible. The father did not try to buy all the land "adjoining him," nor spend all his spare money in building new barns. He made the house comfortable and convenient, and beautified the place with small outlay by planting trees, vines and flowers. Plenty of good dry wood was on hand each fall, and in the winter heat and light were always in abundance. The parents were interested in the children's studies, and encouraged them to do their best. They grew up in an atmosphere of books, and the best magazines were always at hand. Later they were given higher school advantages away from home, but their humble, happy country home was the mecca toward which their hearts ever turned.

There are very few homes, in town or country, where money is so plentiful that every desire can be gratified, so the matter of choice and selection is all-important. All possible intellectual and artistic acquirements add to our resources. They make for culture. Children that are brought up to think more of a new book than of something fine to wear, of the privilege of listening to the best music in preference to having fine carpets and furniture, are laying up a store for future happiness. Because one lives in the country is no reason they should be denied all these things. Indeed, it seems to me it is a reason for baving and enjoying them.

MAIDA McL.

5

A PORTRAIT PARTY

Plan a few social gatherings for the long evenings. Save all the newspaper pictures of prominent men and women until fifty or more good likenesses are collected. It is well to have duplicates, so that in the final sorting only the better pictures need be saved. Usually a few local celebrities can be found, and serve to individualize the collection. Mount each picture on a separate card and number in regular order without the name; but keep a list in which the name shall be opposite the corresponding number of the card. If number 35 happens to be a picture of James K. Polk, a reference to the list will show that name opposite number 35. The mounting and numbering, by the way, will be excellent rainy-day work for the children when kept from school.

If there is to be a party of twelve, as many lists of numbers must be prepared, each guest being given a pencil and set to work to check off from the fifty numbers all that he can identify. It is well to have the pictures scattered about on several small tables to avoid crowding. It is surprising how many familiar faces one is unable to name, and probably not one of the twelve guests can check off the fifty numbers with the correct names.

To make the contest interesting time must be limited and telling prohibited. At the end of the given time cards are collected, judges appointed to compare them with the correct list, and results reported. If a prize is given, nothing is more suitable than a portrait or book, but neither should be expensive. The matter of prizes is easily overcome, and the very ones who most enjoy social evenings are kept from them by needless expenses which they think they cannot afford.

There need be no expense whatever in the mounting of pictures for this purpose. The backs of tablets or even lids of boxes are good enough. We too often defeat the object of entertainment by making it too elaborate.

A portrait party admits of endless variety. Instead of newspaper prints the baby pictures of the guests may be borrowed for the occasion, and much merriment follows.

The list may be confined to one class of celebrities or may include all prominent classes, but whatever the plan the guiding hand of the hostess will do most to determine whether the evening is to be a success or a failure.

BERTHA KNOWLTON.

fills the air, I think we enjoy home then the most of all. We gather around the fire, read and tell stories, sing, play on the piano, play games, pop corn, eat apples and nuts, and the 'long dreary evenings' you talk about seem anything but long or dreary."

The city cousin shook her head. "That all sounds very pleasant, but give me the city where there is something to go to every night, where I can go down town every day

MOTHER'S DUES

If mother would listen to me, dears,
 She would freshen that faded gown;
 She would sometimes take an hour's rest,
 And sometimes a trip to town.
 And it shouldn't be all for the children,
 The fun, and the cheer, and the play;
 With the patient droop to the tired mouth,
 And the "Mother has had her day!"

True, mother has had her day, dears,
 When you were her babies three,
 And she stepped about the farm and the
 house
 As busy as ever a bee;
 When she rocked you all to sleep, dears,
 And sent you all to school,
 And wore herself out, and did without,
 And lived by the Golden Rule.

And so your turn has come, dears;
 Her hair is growing white,
 And her eyes are gaining the far-away look
 That peers beyond the night.
 One of these days in the morning
 Mother will not be here;
 She will fade away in silence,
 The mother so true and dear.

Then what will you do in the daylight,
 And what in the gloaming dim,
 And father, tired and lonesome then,
 Pray, what will you do for him?
 If you want to keep your mother,
 You must make her rest to-day,
 Must give her a share in the frolic,
 And draw her into play.

If your mother would listen to me, dears,
 She'd buy her a gown of silk,
 With luttons of royal velvet,
 And ruffles as white as milk;
 And she'd let you do the trotting,
 While she sat still in her chair;
 That mother should have it hard all through,
 It strikes me, isn't fair!

TARTLETS

IT IS some years since tarts and tartlets went out of fashion, if fashion can be said to affect such an every-day affair as food. Still they certainly have been relegated to the background for some time, a position to which they are not entitled, as they are toothsome, easy to make and a very ornamental dish—far more attractive in every way than the baker's cake to which we are so often treated on festive occasions nowadays. The sticking-point is probably the puff-paste, and this is only difficult because most cooks will not take the time necessary nor expend the requisite patience. Here are three simple receipts for puff-paste. Personal experience has made me prefer the first receipt, as using lard and butter together seems to make the paste lighter than all butter.

No. 1.—One and one half pints of flour and one half pound of best lard well mixed. Add half a pint of lukewarm water and a little salt. Roll it out, and spread little dabs of butter all over it, then dredge with flour. Knead it a little, roll out again, and butter as before. This should be done three times, and is certainly better and lighter with five. Bake quickly.

No. 2.—Roll one pound of butter into one quart of flour, make it up very light with cold water, just stiff enough to be worked, and then roll it out; put a layer of butter all over, sprinkle flour over that, double it, and roll it out again. Repeat this seven or eight times. This ought to make a beautiful paste.

No. 3.—One cupful of butter, two cupfuls of flour, one half teaspoonful of salt and one half cupful of ice-water. Work the butter with the hand in a bowl until it becomes soft, and then keep it cold till you wish to use it. Mix flour and salt, and add your water till it is a smooth paste. Knead it as you would bread-dough, then get it thoroughly cold. When it is cold roll it out on a slab if you have one, if not, on a board, and fold your lump of butter inside, turning the dough carefully up all around it. Lay the folded side down, and roll it out in a flat strip, then double and roll again. Repeat this five or six times, always laying the turned-over part evenly on the lower part. If the paste sticks, chill it by laying on a plate which stands on ice. When you have rolled it the requisite number of times cut it in the forms you wish and put it in a hot oven.

The oven is a very important item in the success of all puff-paste, and should be very hot. The greatest heat should be at the bottom, so that the paste will rise before it begins to bake; therefore it is well to put your paste on the bottom and cover the shelf. Do not open the oven door for the first five minutes; after that watch so as to take out the paste when it is just a golden-brown. If you can make this paste successfully you have at your command what will serve you

at luncheons, dinners and suppers, and what will prove a crowning glory to any of these feasts.

To make pate-cases, cut out rounds from paste rolled one quarter of an inch thick; these are for the bottoms. Place on them other rounds from which the centers have been cut, and if you wish the tops shiny, brush them with egg. It will require twenty minutes to bake them. They may be filled with creamed oysters, clams, spiced meat, lobster farce, or anything you choose, and served as a course at luncheon or dinner. If you use a fruit or jam filling, prepare your cases and bake them first. In some cases the paste and filling are baked together. Below are a few ideas for novel fillings.

CHEESE TARTS.—Melt together in a saucepan four ounces of butter and eight ounces of sugar. Stir slowly, and when well melted and mixed add the juice and grated rinds of two lemons. When these have been well stirred in add the beaten yolks of two eggs and the white of one beaten stiff. When this mixture has been stirred till it is smooth, fill your paste-cases, and bake in a hot oven.

ALMOND CHEESE TARTS.—Blanch four ounces of almonds, and pound them in a mortar; add four ounces of sugar and four eggs well beaten. Rub the whole well together till it is frosty, fill your cases, sprinkle with sugar, and bake in a slow oven. These are very delicate.

PEANUT TARTS.—Since it has been decided that nuts are so healthful, even the peanut takes a place in society and is no longer relegated to the top gallery and the circus tent. These cakes are very nice and cause a genuine surprise when first tasted. Blanch one pint of small, freshly roasted peanuts; beat them fine, adding a little brandy (a teaspoonful) to prevent their getting oily. Four eggs, one pound of sugar and one pound of butter are then beaten well together, peanuts added, the cases filled and baked in a slow oven.

APRICOT TARTS.—These are particularly tasty. Remove the apricots from the can, and drain them. Press out each half with a spoon, lay it between two rounds of puff-paste, and bake quickly. Other kinds of fruit may be used the same way. When the cases are baked beforehand, a filling made of gooseberries stewed very sweet or black currants are delicious, particularly when served with cream.

ORANGE TARTS.—Take the juice of one orange and the juice and grated rind of one lemon. Beat three eggs well together, add one half cupful of milk, one cupful of sugar, one tablespoonful of flour and a little salt, and stir all these ingredients well together in a double boiler till thick and smooth. If you bake your crusts first dust a little macaroon over the filling. NANNIE MOORE.

SOUPS—ECONOMICAL AND SAVORY

What can be more appetizing on a cold day in midwinter, or a damp, drizzly day in early spring, than a plate of hot soup? It seldom makes its appearance on the farmer's table, however, as his wife regards it as both expensive and troublesome. Trouble? A thick soup is very little, and the expense is more or less, as you choose. Consomme and bouillon are the only soups that the country housewife can afford to dispense with. They are more of a stimulant than a nutrient.

Recent scientific investigation declares the potato to be our most valuable vegetable, furnishing us starch in a cheap and easily digested form. The homely tuber comes before us in some shape every day, the skilful housewife playing many variations on the theme; and the fact that science bears her out in this upsets a popular notion of the unhealthfulness of the potato.

"Let good digestion wait on appetite, and health on both," said Shakespeare; and as soup undoubtedly aids digestion, its frequent substitution for the heavy meat diet of the average family is to be commended. The potato here, as in many ways, comes to our relief, where a cheap and palatable article of food is wanted.

MOCK CHICKEN SOUP.—Cut up two small onions and six potatoes into three quarts of water; boil until soft, then remove, mash, return to the liquor, and add a pint of milk, a lump of butter, seasoning, and flour mixed to a paste with a little cold milk. Pour into a tureen and stir in one beaten egg. If eggs are plentiful, slice a couple of hard-boiled ones over the top before sending to the table.

VEGETABLE SOUP WITHOUT MEAT.—Put a half cupful of Lima beans on to cook, the same quantity of dried corn previously soaked for a few minutes, and a generous cupful of finely chopped turnip. When these

show signs of becoming tender add a pint of diced potatoes and a sliced onion. Let simmer for an hour, stirring occasionally, season, thicken with browned flour, add a lump of butter and some chopped parsley, and serve.

VEAL SOUP.—Boil a knuckle of veal until the meat falls from the bone, remove, chop fine, and return to the kettle, add a half cupful of rice, and when done a pint or more of bread-crumbs.

MILK SOUP WITH NOODLES.—Put the milk on to heat, then add the noodles. Melt a lump of butter in a skillet, and stir in as many stale bread-crumbs as it will fry. When delicately browned turn into the soup, season, and serve. MARY M. WILLARD.

TATTED LACE

The side rings of the clover-leaves each contain 5 d (doubles), 6 p (picots), separated by 3 d, 5 d; the middle ring contains 5 d, 7 p, separated by 3 d, 5 d. After the first clover-leaf is made, with two threads make a ch (chain) of 12 d, 3 p, separated by 3 d, 6 d, 1 p, 6 d; join to center p of side ring of clover-leaf, 6 d, 1 p, 6 d. Now make a small ring of 5 d, join to sixth p of middle ring of clover-leaf, 5 d, 1 p, 3 d, close. Make a ch of 6 d, then a clover-leaf joining the first side ring by first p to the p of small ring. When clover-leaf is finished make a ch of 6 d, then a small ring of 3 d, join to first p of side ring of clover-leaf, 5 d, 1 p, 5 d, close. Work a ch of 6 d, join to p of opposite ch; 6 d, reverse work and make 1 p. This makes the p on the inside of ch, reverse work, 6 d, join to p on opposite ch, 6 d, 3 p, separated by 3 d, 6 d, 1 p, 6 d. Make the third clover-leaf, joining the center of 3 d, p, of first side



ring to the p that was made on the inside of ch, and join the middle ring by second p to the p of small ring. After this clover-leaf make a ch of 6 d, join to p of opposite ch, 6 d, 3 p, separated by 3 d, 6 d, 1 p, 6 d; join to center p of side ring, 6 d, 1 p, 6 d, then another small ring, and so continue the directions to the end of the lace. Take one number finer thread than was used for the tating, and crochet the heading thus:

First row—Ch 1 between 1 the 3 p, slip stitch to p, ch 5 between the large spaces.

Second row—Is made of ch 2 spaces.

Third row—Ch 5, * thread over hook twice; put hook in first treble, pull thread through two stitches on hook, then hook in next treble, throw thread over hook, and work off loops by twos, ch 2, 1 treble over the two trebles just made, ch 3; repeat from * to end of the row.

Fourth row—Same as second row.

MRS. J. R. MACKINTOSH.

A MAIZE SOCIABLE

An easily arranged as well as an appropriate entertainment at this season of the year is a maize sociable or party. The invitations and menu should be written on maize-colored note-paper; and if one is handy an outline or sketch of an ear of corn on the menu-card would be in place, and the menu written on the ear outlined. If liked the ear shape can be cut out, a fringe of soft paper attached by a minute portion of mucilage to simulate the silken tassel of the maize. A form should be placed at each plate, to be retained by each guest as souvenirs of the occasion. The following is a list of eatables suitable for supper; but it can be changed or varied to suit the wishes of the hostess:

- Corn Popovers.
- Corned Beef.
- Indian Corn Pudding.
- Corn-crib Cake.
- Popover Balls.
- Coffee.

Napkins having ears of maize embroidered in the corners, done in crimson or maize-colored silk, are in keeping. The table-scarf may be of felt or cheese-cloth in suitable colors. If the latter material is used place two thicknesses. The corn-crib cake is both unique and characteristic of the occasion. Make as

for roll jelly-cake, bake in long pans such as gingerbread is usually baked in; while warm cut in strips or slices an inch wide. Two lengths will be needed; for example, if the larger pieces are twelve inches long, then the shorter ones should be ten inches in length. Cover all sides of each slice of cake with icing, and arrange on a cake-stand (or a large platter may be improvised for the occasion) in the form of a cob house. The inside of the house may be filled with pop-corn, if desired. Arrange balls of pop-corn in the form of a pyramid. The cake and pyramid should be used as central pieces. Drape chandeliers or hanging-lamps with maize-colored cheese-cloth, festooning and looping gracefully. The cattail and goldenrod can also be used in the way of ornamentation with good effect. Ears of maize gilded add much to the beauty of the appearance of the rooms. One or more crimson ears of maize should be suspended from either lamps or ceiling, and the maid found under the crimson ear can be kissed according to the same law appertaining to the mistletoe. The character of the evening's amusement can be determined by the hostess.

MRS. A. C. MCPHERSON.

MENDING DOLLS

Well, Christmas has come and gone, and I wonder how many little misses are crying to-night over the broken heads or necks of their new dolls. Never mind; if the wreck is not too great perhaps the damage can be repaired and Seraphina Angelina made to be almost as good as new.

The breakage is quite apt to be at the neck or shoulders, and often the head and face are but slightly injured. Remove the head from the body, and of cotton cloth cut two pieces which sewed together would about fit the inside of the head, leaving three or four inches of cloth below the neck by which it can be sewed to the body of the doll. Push the cloth head inside the china or wax one, and fill it with sawdust, bran, excelsior or anything that can be pushed through the narrow space at the neck. When filled solid the china head cannot slip off from the cloth one, which can now be sewed to the body. A little extra filling may be required about the neck and shoulders. A whalebone or piece of steel inserted from the body inside the cloth head before the completion in filling will help to hold the head erect upon the body.

Perhaps if little miss is very good some one can be persuaded to buy a new head for that nice new body; and instead of cutting the cloth head off at the shoulders let it extend and make a whole body, placing the head inside the china one and filling just the same, except so much more is needed. Make the legs and arms separate, and after stuffing them, sew to proper positions on the body. Experience with little ones shows that a head thus solidly stuffed will stand more banging than when new and hollow.

GYPSY.

PUFF-CASE

A very dainty and convenient case for my lady's powder-puff is made from any pretty fancy handkerchief. Take one, say ten inches square, and spread it on some flat surface. Mark with a pencil a complete circle in the center of this square with the aid of a plate six or seven inches in diameter. Along this line of marking sew one-half-inch white ribbon, sewing both edges of the ribbon, leaving two small spaces or openings opposite each through which can be slipped drawing-strings of fine silk cord.

In this handkerchief-case, with drawing-strings pulled tightly, my lady's puff, downy side down, is quite secure, either for her pocket or for her bureau-top, where it is certainly ornamental.

Powder may be kept in it securely, and the uninitiated looking at the dainty creation would be very apt to think it only a pretty sachet. Any dainty fancy handkerchief, providing it has sufficient body, will do nicely; those of soft silk with embroidered and scalloped edges, of lineu with lace ruffles, of plain linen with scalloped edges, will make up almost equally pretty.

This suggestion is not meant to encourage the use of powder, but almost every one, male or female, at some time or other requires talcum powder—if of the masculine gender, after shaving; if of the feminine, for excessive perspiration, for roughened skin or to take that ugly shine off one's nose.

These little puff-cases are also a dainty addition to a baby-basket where the celluloid ones are not available.

EMMA LOUISE HAUCK ROWE.

THE STORY OF AN OVERFLOW.

By Pauline Shackelford Colyar

CHAPTER III.

OW, HONEY, do please try to look a little pearter," whispered Aunt Rindy, as she deposited her burden upon the guards of the boat. "Tain't no use to cross de bridge twell you comes to it, an' for all we knows, Mr. Lofton an' dat blessed lamb is settin' up somewhar, high an' dry, dis very minute, grievin' 'bout you."

Maggie Lofton did not reply, but she offered no further resistance to Aunt Rindy's wishes, and like an automaton, allowed herself to be led to the stateroom assigned her, where the old darky undressed her and put her to bed.

All the passengers aboard the steamer were (like the little band just rescued) refugees fleeing from the fury of the flood, but the other wives and mothers, with their loved ones near them, forgot the desolation of the homes they had left in their efforts to serve the woman who had lost both husband and child at one fell blow. There was indeed but little that she needed save the one great consolation which all of them were powerless to bestow; but they were untiring in their kind offices, and brought smelling-salts, camphor and eau de cologne, in the hope that by ministering to her bodily comfort they might at least bring the oblivion of sleep.

Aunt Rindy politely but firmly refused every offer to share her vigil, and like a faithful watch-dog, sat all night at her post. At intervals tired Nature asserted herself, and Maggie lapsed into troubled sleep, while Aunt Rindy's head drooped, and she dozed peacefully in her chair. But the old woman waked at the slightest call, and listened with ready sympathy to the iteration of the other's dream that there had been no overflow, and that she was once more at home in the little white cottage, with her husband and child. Once she could hardly be dissuaded from the idea that she had heard her baby cry, or that John Lofton's voice had spoken her name.

"Dreams is powerful confusin', an' dat's a fact," Aunt Rindy urged in extenuation of her own inability to interpret them. "De meanin' of some of 'em is plain as daylight, aa' den ag'in dey goes contrarywise, an' you's 'bleeged to guess at 'em; an' still ag'in you cyant make nuther head nor tail outen 'em."

The gray light of the early dawn was stealing in through the skylight when Maggie sat up in bed, and demanded, quite suddenly:

"Where are they taking me, Aunt Rindy?"

"Gawd knows, honey," the woman replied, with an emphatic shake of the head; "but dis heah is a up packet, an' she's gwine on to Vicksburg. Ain't you got no kinsfolk nor nobody what you kin stay wid twell—twell—"

"Till when?" asked Maggie, listlessly; and slinking back upon the pillows she closed her eyes as though the subject no longer interested her.

"Twell de high water is done fell, or—or—somethin'," continued Aunt Rindy, vaguely. "I done heerd you say you wuz fotch up in Georgy, but I 'lowed mebbe dar wuz some o' you kinny what lived in dese parts."

"Cousin Debbie's home is near Vicksburg," said the white woman, as though thiakiing aloud. "I haven't scen her since I was a child, but she used to be very foad of me."

"Den we better go right 'long dar," supplemented Aunt Rindy, decision in her tone, "stiddier—stiddier roamin' 'bout de conatry widout no money nor frieads, anther."

Inquiry at the landing revealed the fact that Miss Deborah Paul's farm was some three miles away from Vicksburg, and a tiny bag filled with quarters and dimes, which Aunt Rindy wore about her neck as good-luck pieces, furnished the requisite amount for hiring a hack to take them there. It was a dingy, antiquated affair, with creaking wheels, and rusty, bat-like curtains that flapped drearily in the wind; but Aunt Rindy hastened to explain that "it's de very best we kin git for de price, an' costs fo' bits apiece."

The driver's bepatched garments, brimless hat, and unkempt, woolly head were in keeping with his vehicle, while his superannated horse, with its accentuated knobby joints, added the finishing touch to the picture of dilapidation.

Despite her husband's vigorous protests, Aunt Rindy announced her intention of remaining in charge of her protegee as long as her services seemed necessary, and she saw that Maggie was comfortably tucked away on the back seat before she climbed into her own place beside Uncle Jake on the front one.

"Now drive keerful," she cautioned, as they started off at a jog-trot, "kaze we done had trials an' tribberlations 'nough to last a lifetime, let alone gittin' upstot in dis heah rickety ole rattlerap."

"Mind out now how you makes game o' yo' betters," retorted Uncle Jake, in a hoarse guttural. "Dis heah ain't noae o' yo' ketch-up, cheap-John, rigs, I'll have you to onderstan', but a rale, jimmywine quality kerrige, lemme tell you, what b'long to Knaael Woods befo' de wah."

"Look like it aought 'a' belonged to ole Noah euduhin' of de flood," Aunt Rindy rejoined, with an amused chuckle.

"An' as to ole Andy, dar," continued Uncle Jake, disregarding the ding, "he wuz nominated a notable pacer in his day, an' don't you forgit it."

With this tribute to former graadent the old man lapsed into a prolonged silence, which during the rest of the drive was unbroken save by occasional inquiries about the damage done by the overflow.

Interminable woru-fences, inclosing fields of cotton or corn, alternated along the way with iuvitiag stretches of woodland, where the lightest breeze stirred the loag gray streamers of moss on the trees, where the birds sang, and the yellow jasmine shook fragrance from its boldea bells.



HE WAS STANDING THERE FAINT AND TERROR-STRICKEN

"Heah we is at last," announced Uncle Jake, at a turn of the road, and he punctuated his remark by a sudden halt at the big gate. Inside the lawn, they passed up an avenue of cedars straight as sentinels that ended abruptly where the brick pavement began. The walks and flower-beds of the front yard were bordered with box-plants, and the air was odorous with camomile, lilies, roses and pinks. The house, with its broad halls and galleries, was typical of the ante-bellum style of architecture in the South, and back of it clustered the kitchen, storeroom, dairy, servants' rooms, smoke-houses, etc., like a little village of its own.

Aunt Rindy called lustily before eliciting any response, though the large double doors stood hospitably open. Uncle Jake in his "quality kerrige" was already jingling off toward Vicksburg, when a small black urchin, with eyes and teeth much in evidence, protruded a bushy head around a corner of the gallery, and then precipitately disappeared.

"Walk right in an' set down," said the same diminutive darky, entering the front hall a moment later, and bobbing a curtsy to the visitors. "Ole Topknot sbe done hatch out dis mawntin'—de aigs wuz a-pipin' yistiddy—an' Miss Debbie an' Granny, dey's takin' her off de nes'."

"Lay right on de lounge heah an' res' a spell," urged Aunt Rindy, "whilst I goes mysef an' tells yo' cousin we's doae come. Ain't no tellin' what dat crazy-lookin' gal is gwiate say."

Thus was offered an opportunity to inform Miss Debbie, out of Maggie's hearing, as to the details of their sad experience, and the faithful old woman made haste to take advantage of it.

Soon afterward the hostess made her appearance, bustling in from the hen-house, in a stiffly starched white apron and a cavernous blue sunbonnet, and welcomed her guest with effusive cordiality.

"Just to think of this being the sunny-haired little girl who used to come to see Cousin Debbie so long ago!" she cried, alternately covering Maggie's face with kisses, surveying her at arm's length, and again holding her in close embrace.

She was an emotional little creature, with ready smiles or tears, and her heart was already aching over Aunt Rindy's story of the flood. Dreading to touch upon the recent disaster, she hurried into a retrospect of happy days, gone by, and recalled scenes and incidents of Maggie's childhood that had escaped even her own memory. She had nothing else to offer save the priceless consolation of sympathy, but she gave that without stint.

Had the desolate young mother been less absorbed in her own sorrow she would have seen through the transparent deception of the little old maid's affected cheerfulness. But it is always easy to give credence to what one wishes to believe, and her reiterated assurance that both husband and child were safe brought her the one ray of comfort that penetrated her gloom.

It already seemed a lifetime since her loved ones had been snatched from her, when by

books—but dar ala't no better crapper aowhar dea him, an' he's a powerful good provlder, too." You see, 'taia't allus de purty men what makes de hest husban's."

Miss Debbie, from her vantage-ground of old maidenhood, smiled despite herself at this bit of homely philosophy, and recalled more than one of her male acquaintances to whom it might have been applied.

"Lan' o' Goshen! what you doin' projecklin' 'bout like dis, Tuck?" cried Aunt Rindy, with good-natured raillery, hailing her husband from afar.

"Better ax what kluder onmanerly way you's doin', tryia' to make a grass-widder outen me," retorted the old man, with a twinkle in his eyes that belied the gruffness of his voice.

He stood in the back yard, hat in haad, balancing himself upon first one foot and then the other, with his dwarfish, grotesque figure sharply outlined against the whitewashed kitchen, while Granny, who never unbent from her greadier-like stiffness, regarded him suspiciously from the open door.

No further greeting was exchanged between the oddly matched couple, not even so much as a hand-shake, but their air of good comradeship was unmistakable. Looking about in search of an available seat, Aunt Rindy led the way to the wood-pile, which was at the time in shadow, and sinking upon a convenient log, she demanded of her dilmlautive lord:

"Now, out wid it, Tuck! What fotch you heah dis mawntin'?"

"A ox-waggin fotch me part of de way, an' I took my foot in my han' for de balance of de road," replied Tuck, with an effort at facetiousness that met with no applause.

"Oh, go 'long, nigger," his wife retorted, with a grudging smile; "stop dat palaver, aa' say yo' say. Time I glimpsed you I knowed somethin' wuz up."

He stood for a moment rubbing the gray stubble on his chin, his eyes fixed on vacancy; then with meditative mien he announced:

"Dat's so, Rindy; I knows a pasel o' news as mought tickle you powerful."

It was not often that he possessed a secret, and he wished to make the most of this one, but noting his wife's expression of disapproval, he said, with sudden resolve:

"I done foun' him! He ain't never be'n drowaded!"

"Foun' who? Is you talkin' houten Mr. Lofton?" the woman cried, almost fiercely.

"Dat's him." And Tuck nodded complacently.

"Dea whar is he?" Aunt Rindy queried, shrilly.

"Same place whar he's be'n all de time," said Tuck, still provokingly non-committal.

"If you don't 'low to talk sense, an' tell a body de trufe, jest keep it to yo'se'f," retorted the woman, springing to her feet, with a show of impatience.

"Now set down, Rindy, an' don't be so quick to fly off de handle. I'se gwine ter tell you—dat's what I come for."

"Den out wid it," said his wife, with a return of good humor, as she resumed her seat upon the log.

Tuck elevated one foot on a pine-knot near by, and began, with much deliberation, to whittle a bit of wood which he held in his hand. His blue cottonade trousers reached to his arm-pits, where they were held in place by a solitary "gallus;" his coarse unbleached shirt was open at the throat, revealing his black, muscular neck, and his hair (which was his special pride) huag Medusa-like, in stiff, unruly "wraps" almost to his shoulders. For a moment Aunt Rindy confronted him with eager, impatient eyes; then with suddea inspiration she veered to other tactics.

"Well, I allus knowed if any pussoa could git ou de track of Mr. Lofton ole Tuck wuz de man," she remarked, in wheedling tones; and by her husband's broad smile she saw that her flattery had scored an easy victory over his stubbornness.

Shutting his kaife with an andble saap, he deposited it in one of his capacious pockets, and dropped his role of Tantalus.

"Dar ain't no mighty much to tell, arter all," he began, speaking slowly and very earnestly, "scusin' de fact dat he's be'n powerful sick, an' is gittin' well ag'in."

"But how did you come to know it?" his wife persisted.

"Well, den, to commence at de fust startin'-pint," began the old man, with the circumlocution that characterized his recitals, "I made sho dar wuzn't no chance for him from de fust minute he slipt off dat levee. De las' I seed o' him he was rushin' 'long on dat foamun', bilin' water, same as a chicken-feder in a gale o' wind. But de Lawd, he wuz on his side, kaze jest when he done strive an' struggle twell he cyant do no mo', an' a limb done knock him senseless, dar come de gov'ment boat, an' pick him up an' tote him off."

"Deu how come somebody ain't notify his po' wife?" the woman demanded.

"How dey gwine ter notify nobody when he got de fever, an' talkin' outen his head all de time? Mose Riley, what come up to Vicksburg wid we all, he larnt de news from an-mudder feller, an' me an' him made sho it nuns' be Mr. Lofton from de favor of him, an' kaze he rave so much bouten 'Maggie an' leetle Mary,' so I written deastways, somebody done it for me) to de doctor what had done took him to his house, an' I ax him to

IT WAS A DINGY, ANTI-QUATED AFFAIR

the calendar but a week had passed. With the practical turn so characteristic of her, Miss Debbie strove to interest Maggie with little details of house-keeping, and assigned her such duties as feeding the chickens and collecting the new-laid eggs; but it was all to no purpose, for nothing aroused her from the dread lethargy which had crept over her.

The notices inserted in both the Vicksburg and New Orleans papers asking for information of John Lofton, and giviag his wife's address, had, after tea days of anxious waiting, elicited no reply.

Hope was at its lowest ebb in the little household, and Aunt Rindy voiced the opinion of the other members when she announced, with a dreary shake of her head:

"Tain't no use gwine on 'ceivlu' dat po' ehile no mo', kaze if Mr. Lofton wuz livin' we would 'a' heerd from him befo' dis."

"Yes," replied Miss Debbie, "I am convinced now that he was drowned while trying to save the baby, and as you say, it seems a mistaken kindness to hold out false hopes to poor Maggie any longer."

"But who's gwine ter break de news to her?" demanded the colored woman, almost savagely.

"Why, it seems to me that you are the one to do it," said Miss Debbie, laying down her sewing and looking up over her gold-bowed spectacles.

"No, ma'am, dat's somethin' I cyant do, Gawd knows," Aunt Rindy protested. "I done promise myse'f to stay wid her, an' wait on her jest as long as she need me, but—"

"Dar's a rusty-lookin', how-legged feller out yonder what say he want to see you, Rindy," announced Granny, thrusting her turbaned head through the half-open door.

"Dat's ole Tuck, I'll be bonn'!" Aunt Rindy burst forth, with loud guffaw; "done come to try to 'tice me back to town wid him, I reckon."

"And who is he?" queried Miss Debbie.

"Oh, dat's my husban'," she answered. "He's a Guinea nigger, Tuck is, an' he's powerful curl'us-lookin'—sorter like a pa'r o' pot-

please, sah, tell me plain an' simple, all he know. An' he done it. Rindy; he done it, honey. Dis heah's de letter what come las' night."

With small ceremony Aunt Rindy snatched the precious missive, and sped with it to Miss Debbie, who still sat sewing in her accustomed nook in the hall.

"Read it!" she panted, thrusting it into the old maid's hands. "Read it quick, Miss Debbie, so as I kin take it to dat po' chile in yonder."

"But what is it?" Miss Debbie asked, puzzled.

"It's from de doctor, honey—what found him—an' he ain't never been drowned—an' he's gittin' well—an' he written Tuck all hout-en him—" She was too excited to be coherent, and her words tripped over one another in her desperate haste.

"You don't mean Mr. Lofton?" gasped Miss Debbie, as with trembling fingers she drew the paper from the envelope. "It was through God's mercy that he was saved!" she murmured, devoutly, after learning the contents of the letter.

"The doctor says a sight of Maggie will do more to cure him than all his medicines," she added, "and we must be ready to start by the next train."

At Maggie's door Miss Debbie hesitated with her hand upon the knob.

"I am almost afraid it will be too great a shock to her," she whispered; but Aunt Rindy shook her head reassuringly.

"Good news ain't gwine ter harm her," she asserted, smiling through the glad tears that filled her own eyes. "Come on, Miss Debbie, we needn't be afeerd to break it to her now."

CHAPTER IV.

Every thought and feeling of the Bufords now converged to one point—to the tiny waif who had so mysteriously come into their lives. The appearance of her first tooth was an event in the little family, the first step essayed by the wee pink feet marked an epoch in the household, and the first word framed by her baby lips went straight to the hearts of the doting parents. As to the name the child should bear Taylor Buford was determined from the first.

"It must be Ellen," he said, decidedly, when his wife broached the subject; "no other name can ever be as dear to me as yours."

"But there will be such confusion with two Ellens in the house," she protested, though pleased at the compliment.

"Then we might compromise upon the diminutive Nellie," rejoined Buford; "but I insist that Ellen shall be her baptismal name."

"Well, a wilful man will have his own way," was Mrs. Buford's laughing retort, and as "Nellie" the little one was known in her new home.

But this difficulty was no sooner arranged than another of a more serious nature presented itself.

The Bufords were busy people now, working hard from sun to sun, and the evenings came to them as a season of well-earned rest. The husband sat enjoying his accustomed smoke on the front gallery, with his wife near him in her rocking-chair, when first he mentioned the momentous question. Little Nellie was asleep, and the house seemed strangely quiet without her prattle.

"Ellen," said Buford, suddenly removing his pipe from his lips, "what do you say to the baby growing up in the belief that she is our own child? You know nobody over here even suspects hut that she is."

"Oh, Taylor," replied his wife, speaking in low, tense tones, "don't add to my temptation. You little know how I have battled and prayed for guidance about this. Sometimes I grow rebellious, and feel that I can never do it—that it is asking too much—but my conscience—"

"There it is again!" interjected the husband, impatiently. "What on the green earth has conscience to do with this? Conscientious scruples are all well enough in their places, but I never did see the use of straining at gnats, making mountains out of mole-hills, and the like."

Mrs. Buford parted her lips as if to speak, hut remained silent.

"Now, look here, Ellen," the husband continued, veering abruptly in his chair, and facing his wife with a frown; "we had just as well settle this matter to-night as any other time. To all intents and purposes Nellie is our child—God knows I couldn't love her any better if she were my own flesh and blood—and in my opinion it is nobody else's business whether she is or not."

"But right is right, and wrong is wrong," urged Mrs. Buford, with gentle insistence, "and some day, when she is old enough to understand, we must tell her the whole truth."

"Not I," cried Buford, angrily. "I shall leave that duty to you, since you seem so greatly to desire it," and he cut short further argument by striding into the house.

Buford was all impulse, and spent about one half of his life upon the stool of repentance for what he did the other half; so to-night, according to his wont, he lay in bed listening to the monotonous thump, thump, thump, of his wife's rocker out on the gallery, and filled with contrition over his rash words.

"By George! I deserve a sound drubbing for the way I acted," was his last conscious thought before falling asleep, "but I wouldn't feel half as mean as I do if Ellen would bridle up and talk back at me. She was right about what she said, anyway—she always is—and I'll tell her so the first thing in the morning."

The first year on the farm in the hills was teeming with hardships and difficulties, but the Bufords were persistent in their efforts, and undaunted at failure. "Little Nellie" had already become a magic word in the household, and even the darkest hour was brightened by her presence.

"We are bound to succeed now that we have a daughter to bring up and educate," Buford more than once declared, with grim humor, and his wife's comforting assurances seemed almost a prophecy of what really came to pass.

As early as the second year they began to reap a profit from their labors, and each succeeding one their fortunes continued to mend. They were hardly two miles from the railroad, and near enough to Natchez to afford a convenient market for whatever they had to sell. The large market-garden and patent bee-blives were the husband's special care, while the poultry, eggs, butter and milk came under the wife's jurisdiction. Every morning except Sunday the farm-wagon met the early Natchez train which passed the station at six, and the first concern of the family was to see that it was loaded and off in time. While this was in progress all was bustle and hurry, and not until the team was well on its way did the tension relax.

"I hope everything gets there in good order," said Mrs. Buford, taking her seat at the breakfast-table, and fannlug vigorously with a palm-leaf fan.

"Well, it all leaves our hands in proper shape, at any rate," replied the husband, mopping his brow with a generous white handkerchief, "and to judge from the sales, nobody seems to have cause for complaint."

"I am genuinely proud of the little farm," Mrs. Buford went on, while she poured the coffee; "I never dreamed we could make it pay as it is doing."

"Little Nellie is our mascot, mother," Buford declared, beaming with paternal pride. "The good luck began the day she came into our lives, and if things keep on like this it won't be long until we can lay by a nest-egg for her. But what has become of her? I haven't seen her since—"

"Why, I thought she went to the orchard with you just before the wagon started," Mrs. Buford interrupted, in some alarm. "I declare, I never feel easy when the child is out of my sight, since those gipsies have been camping over in the woods."

"Oh, she may be out in the garden with Chloe, helping to gather the vegetables for dinner," said the husband, reassuringly. "Anyway, there is certainly no cause for uneasiness about the gipsies—except perhaps for your hen-roosts. They are a lot of harmless vagabonds, with more children than—"

"Well, all the same I am going to find out where Nellie is," said Mrs. Buford, with a smile, and suiting the action to her words, she left the room.

A few moments later she returned, and announced, with a scared, white face:

"Chloe hasn't seen her, Taylor. Nobody knows where she is, and I am sure something is wrong."

"Now, don't be uneasy, Ellen," the husband called back, with well-feigned cheerfulness. "I'll come across the little lady directly, I don't doubt."

He caught up his hat and started off at a swinging gait, leaving his wife keeping tearful watch at the front door. As soon as he was out of sight of the house he turned sharply to the right, and directed his steps toward Cole's creek, which formed the dividing-line between his place and the Miller plantation.

This same creek was scarcely half a mile distant, and had been a constant menace to him since their move to the hills. Even among the natives casualties were not rare, and hardly a year went by that some stranger, ignorant of his danger, was not submerged beneath its treacherous quicksands.

When he reached the public road Buford slackened his pace, and with bent head, began carefully to study the ground. There had been a shower over night, and the little footprints which suddenly confronted him were clearly defined in the moist earth. Until then a vague fear had haunted him that Nellie might have gone to the creek, but now there was little room for doubt.

During the summer months the water was seldom high, and it rippled along over its pebbly bed, not more than a foot in depth. What child would realize that death lurked there? There was one chance in a thousand that his darling had kept to the ford and reached the other side in safety, hut along the margin of the creek the broad expanse of sand lay smooth and unbroken—like an unwritten page—these quicksands leave no record of their crimes. He was standing there, faint and terror-stricken, when the crunching of wheels suddenly aroused him, and Dan Miller's cheery voice broke the silence.

"Hello, Mr. Buford, you are out early this morning," he said.

"I am in search of Nellie," came the reply. "Have you seen anything of her, Dan?"

"Why, yes, sir," answered the hoy. "I saw her over at Granny Betty's as I passed the quarters a few moments ago, hut I didn't kuow she had run off."

Buford cleared his throat in an abortive effort to speak, but his voice refused to do his bidding.

"Oh, she was having a great time, I can tell you," Dan went on, laughing. "She occupied the seat of honor, out in front of the cabin. Granny Betty was knitting on the steps near her, and the little niggers were swarming around as thick as mosquitoes over a water-harrel. But step in, and I'll cross you back if you'd like to see for yourself."

"Thank you, Dan, thank you," replied Buford, regaining both his spirits and speech over the certainty of his child's safety.

"I don't believe I enjoy wading as much as I used to, and remembering the old adage that one good turn deserves another, I am going to ask you to drive by home and tell my wife that we have found her little runaway."

Granny Betty was now clear-eyed and grizzled, but before the war she had belonged to the Miller family, and made them a valued servant. She still lived at the negro quarters on their plantation, and was a character of much note throughout all the countryside. Her own race accredited her with "knowin' kunjer," and stood in wholesome awe of her, but they nevertheless unhesitatingly trusted to her keeping any one of their picanninies who proved unmanageable at home, and paid her for her services in chickens, eggs, "garden truck" and quilt pieces. Thus the old crone made a comfortable living as a "teuder."

Not only her own neighborhood, hut many of the adjoining ones furnished her with recruits, and her muster seldom numbered less than a dozen. Her modes of punishment were as novel as effective. Her word was law—no higher temporal authority being acknowledged—and after a season of "tendin'" on her part even the most insubordinate showed signs of surrender.

When Nellie reached the cabin this morning she found two miscreants tied to the ends of a rope about two feet long, which was secured through the middle to an upright post set in the ground. Each one was provided with a stout, supple hickory switch, and Granny Betty, after an elaborate greeting to her diminutive visitor, hastened to explain that:

"Dem two is gwine ter rap jackets. I se too ole to whup 'em by myse'f nowadays," she added, while her gnarled fingers guided her knitting-needles, "so I ties 'em 'roun de pos', an' dey does de res'. Dey ain't rightly got down to bizness yet—jes' sort o' projeckin'—but drecky one of 'em'll tetch up de udder a leetle too lively, an' den look out." A wag of her turbaned head and a sardonic smile completed the picture.

The two offenders were not long in verifying her predictions, and the blows fell thick and fast, while they spun around the post like whirling dervishes, to an accompaniment of their own howls and shouts of derisive laughter from the motley onlookers.

"Please, Granny Betty," whispered Nellie, slipping down from her chair, and laying a confiding little hand on the woman's arm, "untle them now. I don't think they will be naughty any more."

"Lawdy, nussy, honey, you is as soft-hearted as a turkie-dove," Granny Betty vouchsafed; "hut beinst as you's done axed me, I'll turn 'em loose dis time, al dough dey ain't so much as het up right good yit."

"And can they play some funny games for me?" urged the child, smiling her thanks.

"You, Eli," called the old negress, in shrill falsetto, to one of the culprits just released from his bonds, "git out dar an' rap 'Juba' for dis blessed chile. He's a notable rapper, dat boy is," she added, in an aside: "jest as limber as a dish-rag."

An impish grin struggled through the grime and tears that coursed down Eli's cheeks, and thrusting one rusty black foot forward, with which to mark time, he began to chant in a weird monotone:

Sif' de meal an' gimme de hus';
Bake de bread an' gimme de cruns';
Eat de meat an' gimme de bone;
Take yo' wife an' go 'long home.
Juba! Juba!
Juba dis and Juba dat,
Juba kill de yaller cat.
Juba! Juba!

Over and over again he repeated the absurd jingle, rolling his eyes, rhythmically swaying his lithe body and slapping his thighs with sharply accented blows, until from sheer exhaustion he finally sank in a heap upon the ground. Scarcely had his voice died away, however, when a wizen-faced girl, with an abbreviated skirt, and tufts of unruly wool that stood out at right angles from her head, offered her services to "hop Jim Crow," while yet others announced their own proficiency in "cuttin' de short dawg," "dancin' de hazzard 'lope," or "waykin' de coon jine."

One number succeeded another in quick succession, and Mr. Buford stole upon them unobserved, in time to witness the "sheep shuffle," which was regarded by all as the piece de resistance of the entire program.

Nellie, who still kept her seat near Granny Betty, looked on in rapt attention, while half a dozen boys and girls (scantly clad in ragged,

nondescript garments that fluttered in the breeze) ranged themselves in a semicircle about a wiry urchin, black as Erebus, who had parted company with both of his sleeves.

"Now, we's de callers an' clappers, an' Flo, he's gwine ter be de sheep," chorused the semicircle, in a glow of enthusiasm, while Flo dropped upon all fours, and the performance began. The first part consisted of a series of questions in solemn recitative, to which the sheep replied by plaintive bleats, and was in marked contrast to the last, where the "callers" burst into sudden lively song, with vociferous clapping, and the sheep indulged in the most impossible bounds and antics.

FIRST PART

Do de sheep eat corn?
Ba-a-a!
Do de sheep eat hay?
Ba-a-a!
Is de sheep got a horn?
Ba-a-a!
Done come heah to stay?
Ba-a-a!

SECOND PART

Oh, make a purty motion,
'Cordin' to my notion;
Make it in a hurry,
Don't want no worry.
Rooster crow for daylight
Drecky arter midnigh;
Ole wolf come a-prowlin',
Set dem dawgs to howlin';
Better hump yo'se'f, my honey,
An' git back home ag'in.

The duration of the "sheep shuffle" sometimes depends upon the inventive genius of the "callers," as well as the power of endurance of the "sheep," but generally the girations are so extraordinary and exhausting that one verse suffices for both. Granny Betty was very loath to have her little white visitor depart, and urged upon Buford, when he made his appearance, the necessity of young company for his daughter.

"Dat leetle blossom gits lonesome all by herse'f," she told him, "an' 'tain't no wonder she done stole off over heah. White chillun jes' natchely takes to playin' wid leetle quarter niggers, anyways."

"Don't scold me, mother," cried Nellie, upon her return home, greeting Mrs. Buford with outstretched arms, and face beaming with smiles. "I didn't intend to go so far, hut I did have such a lot of fun!"

"And I was balf frantic with anxiety until I knew you were safe," replied the mother, clasping the child to her heart. "You are too young to realize the risk you ran in crossing the creek alone."

"But I never, never will run away again any more." And the repentant little girl sealed her promise with a kiss.

"Nellie needs companions near her own age," said Buford later on, when the child was out of hearing. "More than this, it is really time for her to begin school."

"Yes, she is in her seventh year," assented the mother, with a sigh, "hut I have put off the evil day as long as possible because I so dreaded to have her away from me."

"Well, as to that," said the father, smiling indulgently, "she won't be gone hut a few hours at a time, and I will see that she gets there and back in safety every day. The greatest trouble is going to be to secure a capable, first-class teacher. The last one was altogether unsatisfactory."

Buford was a man who could do nothing by halves, and now that Nellie was to be enrolled as a pupil, he left no stone unturned to have the school a success.

School was to begin the fifteenth of September, and it was on the first of the month that he announced, with an air of triumph:

"I have at last found the man for the place. I have never seen him," he went on, tilting back his chair in a characteristic attitude, with his feet upon the gallery-rail, "but he sent us a letter of recommendation from old Brent Drake, of Tensas, and that settled it with me. My vote was the deciding one, and I cast it for him then and there."

"Is the teacher a Louisiana man?" asked Mrs. Buford.

"Believe he is," came the answer. "He has lived there for some years, at any rate, and has had pretty tough luck, poor fellow. He has a wife and three children, and nothing else worth speakug of, as far as I can learn."

"What is his name, father?" queried Nellie, who was much interested in the coming of her teacher.

"Let me see, little one," said Buford, searching in his coat-pocket for the letter. "Here it is—he signs himself 'John Lofton.'"

[TO BE CONTINUED]

QUEEN WILHELMINA'S SAYINGS

Some of the anecdotes told of Queen Wilhelmina, the young queen of the Netherlands, are interesting. One day the little queen was busily occupied in bringing up her dolls in the way they should go. One of them, however, was particularly obstinate, and the queen was seen to shake it violently, and say, "Look here, if you don't behave yourself I'll make you a queen, and then you'll have no one to play with." When on a visit to England, and asked by the Prince of Wales what she thought of the English people, she replied, "They are very nice and amiable, but I should never have thought it from the specimens I have seen in Holland."

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The lifting the heft of a load,
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'Tis the average man and no other
Who does his plain duty each day,
The small thing his wage is for doing,
On the commonplace bit of the way.
'Tis the average man, may God bless him,
Who pilots us, still in the van,
Over land, over sea, as we travel,
Just the plain, hardy, average man.

So on through the days of existence,
All mingling in shadow and shine,
We may count on the every-day hero,
Who haply the gods may divine,
But who wears the swarth grain of his calling,
And labors and earns as he can,
And stands at the last with the noblest,
The commonplace average man.

—Margaret E. Sangster, in Harper's Weekly.

THE DANGER IN HEADACHE-POWDERS

Doctor Henry Leffman, the well-known analytical chemist, has expressed himself as heartily approving of the action of the Pittsburgh authorities in taking steps to oblige druggists to warn the purchasers of "headache-powders" of the danger of using such preparations indiscriminately. This action was suggested by the recent death of a woman found by the verdict of the coroner's jury to be due to "a headache-powder" swallowed twenty minutes before her death.

"The absurdity and danger of the 'nostrum' cure," said Doctor Leffman, "can be no better illustrated than in the case of 'headache-powders.' These are put up in packages for five or ten cents, and profess to cure all kinds of headaches in a few minutes. Now, any one who has any knowledge at all of human ailments knows that there are at least a dozen different causes of headache. It may arise from indigestion or eye strain, both very frequent causes; or it may be a symptom of brain disease, liver complaint, kidney complaint or the result of simple exhaustion. The folly and absurdity of prescribing a remedy which is supposed to cure all or any of these various kinds of headaches is evident. It is just as if a physician would undertake to cure every ill to which flesh is heir by prescribing one medicine for all. This is where the folly of taking 'headache-powders' is shown.

"There is a more serious phase of the question, however. The basis of nearly all the 'headache' cures is one or other of a certain class of drugs which are most dangerous from their uncertainty of action. They act on different persons in different ways, a fact that is entirely ignored in this system of self-treatment, but which every careful physician never fails to take into account. Coal-tar and all its products, aniline and similar drugs, which appear in these 'headache-powders' in different forms, are dangerous drugs, and especially dangerous in the hands of people who know little or nothing about them. Most of the 'headache' cures are put up by druggists who have an imperfect knowledge of their qualities and effects. The harm done by the indiscriminate use of such preparations is simply incalculable."

THE NEW-YEAR IN JAPAN

The Japanese New-year comes at the same time as ours, but instead of celebrating but one day, the Japanese observe the first three days of January. Indeed, in certain localities even six days are observed. During the holidays public offices are closed, and very little business is transacted, all classes of people devoting themselves to enjoyment and spending much time in making and receiving New-year's calls.

Arrayed in gay holiday attire, the people go from house to house wishing one another "Shim new wo omedetto gozaimasu," which means, "May you have a happy New-year." The callers are often attended by one or more servants, who carry bamboo baskets laden with gifts, for it is the custom to leave presents with one's friendly greetings. The presents are usually inexpensive articles for every-day use. It is customary to bestow more costly gifts upon one's relatives and intimate friends during the closing days of the old year.

During the holidays the streets present a most festive appearance, for houses are elaborately decorated, and everybody looks gay and happy. The decorations remain for fifteen days, and consist in many cases of evergreen arches over the doors. Red berries and yellow chrysanthemums are interwoven into these arches, and purple cabbages are also used. The Japanese think the cabbage highly ornamental, and use it very generally as a house-plant and at funerals. The cabbages are said to look like large, purple rosettes in the decorations.

Straw ropes are twisted into fanciful shapes and interspersed with ferns; and lanterns and Japanese flags are also much used in decorating. The flag of the Sunrise kingdom is a large, red sun on a background of white.—Elizabeth E. Backup, in Forward.

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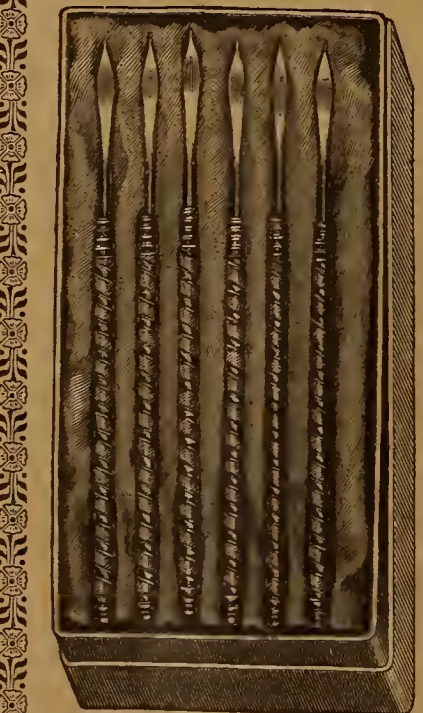
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TO THE NEW-YEAR

One song for thee, New-year! One universal prayer! Teach us—all other teaching far above—To hide dark hate beneath the wings of love; To slay all hatred, strife, And live the larger life! To bind the wounds that bleed, To lift the fallen, lead the blind As only love can lead— To live for all mankind.

Teach us, New-year, to be Free men among the free, Our only master Duty; with no God Save one—our Maker—monarchs of the sod! Teach us, with all its light, Its day, its night, Its grief, its gloom, Its heart-beats tremulous, Its beauty and its bloom— God made the world for us! —Frauk L. Stanton, in Songs of the Sod.

FOR THE BEGINNING OF THE NEW CENTURY

THIS new century, or that part of it which we will be permitted to see, will be to each one of us just what we make of it. Because it is a wonderful century does not make us any the better or broader or more intelligent than we would have been had we lived in the Dark Ages, unless we make use of the marvelous opportunities which this 1900 affords. We are responsible for living in this advanced period of civilization; God will bring us to account for our opportunities and privileges. He expects us to amount to something, to do something. Not that we can all make a name in the world; many a man and woman with a name in the world has no name in heaven, perhaps. But we can dignify our daily toil, keep sweet and cheerful, and be ever on the lookout to do a kindly deed or to give a cheering smile. A kind act is never lost in the truest sense; angel voices whisper its story into the ears of our Father. And so it matters not if here below many a kind action does pass unnoticed, and many a brave deed go unrewarded. Many a hero has won his Victoria cross, yet never received it. Many a worker deserved the statue in the market-place, which was never erected to his memory. Many a runner should be wearing the laurel wreath, but it has never been placed upon his head. Myriads of flowers which should be strewn along the daily pathway are being saved for the coffins.

For ourselves we can say it does not matter; that statues crumble, laurels decay, and flowers fade, and it will all be righted some day; but for others we should see to it that their lives are made as bright as it is in our power to make them.

"Soul is kindled only by soul!" Then let us come in personal touch with the sorrowing ones about us. When Christ desired to save the world he did not empower a committee to do the work, nor send an angel down, but he came himself. There are doubtless some persons you know who need sympathy and aid. Make them feel that you are interested in them and that you are their friend, then, and only then, can you help them. "Never morning wore to evening but some heart did break." Are we so engrossed in our own pleasures or duties that we are not looking for these saddened, broken hearts?

If we are not able to do great deeds, we can do good ones; and if each day is what it should be, life cannot be barren and void, no matter how circumscribed. 'Tis the little things that make the big. Little words, not learned discourses; little acts, not monuments of bravery, make up the true life. The little, constant unbeam, not the lightning's flash, causes the earth to bring forth and bud.

We are here to-day; in one of the to-morrows we will have passed from hence. The century will move on without us, only stopping to mark our record, success or failure, not as man sees, but as God seeth.

ELLA BARTLETT SIMMONS.

CORRECT PRINCIPLES IN LITTLE THINGS

The little things we do, see, say and hear, the common things that make up the warp and woof of our lives, are the things that engross our attention. The men and women whom we know and with whom we mingle

are the people in whom we are interested. The ideas we derive from those of our own station are the most applicable to our condition. The principal part of our education is what we gather from those with whom we come in contact. The little communities make the mighty nations, and the little, ever-present influences mold our characters and seal our destinies.

We know that good actions are the offspring of good principles, and that evil actions come from the lack of good principles, so we judge a person's character by what he does. And everybody knows that those who will not apply correct principles in the little, every-day transactions of life will not do so in anything. So they never get a chance to take part in the things that are called great, for no one will trust them. They could not if they had a chance, for they would not have the ability to meet the responsibility and demands of a higher position.

He who will not do his duty earnestly and faithfully and strive to excel as a common soldier would not do so if he were commander-in-chief of the army. Hence, he is never promoted. The fellow who is not honest, industrious and faithful as janitor of a bank would not be if he were cashier, and he never gets a chance. The young man or boy who wastes his money and won't take care of one dollar when he is poor because it don't amount to much, would not take care of one million if he were rich, and he is never troubled with the care of a million. The person who spends all his time waiting for a better position won't work at all.

If you see a man deliberately doing wrong in all the common transactions of life, or neglecting common opportunities of life, no amount of protestation on his part would make you believe that he would do right in great things or be efficient and energetic if given what is called a better chance.—D. S. Irwin, in The Religious Telescope.

BOYS WHO SUCCEED

Thirty years ago Mr. H., a nurseryman in New York state, left home for a day or two. It was rainy weather, and not a season for sales; but a customer arrived from a distance, hitched his horse, and went into the kitchen of a farm-house, where two lads were cracking nuts.

"Is Mr. H. at home?" "No, sir," said the eldest, Joe, hammering at a nut.

"When will he be back?" "Dunno, sir; mebbe not for a week."

The other boy, Jim, jumped up and followed the man out.

"The men are not here, but I can show you the stock," said he, with such a bright, courteous manner that the stranger, who was a little irritated, stopped and followed him through the nursery, examining the trees, and left his order.

"You have sold the largest bill that I have had this season, Jim," his father said to him, greatly pleased, on his return home.

"I'm sure," said Joe, "I'm as willing to help as Jim, if I'd thought in time."

A few years afterward these two boys were left, by the father's failure and death, with two or three hundred dollars each. Joe bought an acre or two near home. He has worked hard, but is still a poor, discontented man.

Jim bought an emigrant's ticket to Colorado, hired as a cattle-driver for a couple of years, and with his wages he bought land at forty cents an acre, built himself a house, and married. His herds of cattle were numbered by the thousand. The land he bought he cut up for town lots, and he is ranked as one of the wealthiest men of the state.

"I might have done like Jim," said his brother, lately, "if I'd thought in time. There's as good stuff in me as in him."

"There's as good stuff in this loaf of bread as in any I ever made," said his wife, "but nobody can eat it; there's not enough yeast in it."

The retort, though disagreeable, was applicable. The quick, wide-awake energy which acts as leaven in a character is partly natural. But it can be inculcated by parents, and acquired by a boy if he chooses to keep his eyes open and act promptly and boldly in every emergency.—Success.

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THE GREATEST BOY OF ALL

The boy who leads his class at school,
A glorious boy is he;
We wonder at the boy who plays
The violin at three!
The little one in kilts who knows
His Homer through and through,
Or quotes from Willie Shakespeare, gains
Our admiration, too.

But greater far than is the boy
Who leads his class, or he
That all the world has heard of as
An infant prodigy,
Is one whose lot is lowly, but
Whose destiny is high—
The office-boy who works on while
The band is marching by.

THE ITALIAN'S VERSION

Who discovera de America? Christopher Colum—he discovera America. He go to King Ferdinand aud he say, "King Ferdinand, you givea me de plenty de mun, de plenty de men, de plenty de ships, and Ia sail far away and finda you a new country;" and de King Ferdinand hea say, "I noa want new country—olda country good enough fora me." And den Chris, hea vera much discouraged; hea goa to de Queen Isabella, and hea say, "Queen Isabella, you give mea de plenty de mun, de plenty de men, de plenty de ships, and Ia sail far away and Ia finda you a new country;" and Queen Isabella she say, "Chris, I likea you vera much, but I havea noa mun." So Chris he he vera much discouraged. Ata last Queen Isabella shea hock her jewelry and shea give Chris de mun, aud he geta de ships and de men and he saila far away and discovera America, and den de Italians da come over and da build up de hig country—big. Da make New York a biga city, and when da geta New York a hig cit—de Irish ship over a boat-load of policemen and takea de grand new city away.—The Advisor.

HARD TO FIND

The janitor in a neighboring school threw up his job the other day. When asked what was the trouble, he said, "I'm honest, and I won't stand being slurred. If I find a pencil or handkerchief about the school when I'm sweeping, I hang or put it up. Every little while the teacher, or some one that is too cowardly to face me, will give me a slur. Why, a little while ago I seen wrote on the board, 'Find the least common multiple.' Well, I looked from cellar to garret for that multiple; and I wouldn't know the thing if I would meet it on the street. Last night, in big writin' on the blackboard, it said, 'Find the greatest common divisor.' 'Well,' I said to myself, 'both of them things are lost now, and I'll be accused of swipin' 'em, so I'll quit!'"—Huntington (Iudiana) Herald.

A HATFUL OF PEARLS

The wit of Jenny Lind was as charming in its way as her voice. On the occasion of her second rehearsal at the Paris opera-house, Lablanche, the famous singer, was entranced with her voice. Hurrying up to her he said, enthusiastically: "Give me your hand, mademoiselle! Every note in your voice is a pearl!" "Give me your hat," replied Jenny Lind, with a playful smile. Lablanche handed the hat to her. Putting it to her mouth, she gave one of her matchless trills and bird-like snatches of song. "Here," she said, smiling at the delighted Lablanche, as she returned his property, "is a hatful of pearls for you, monsieur."



AFTER CHRISTMAS

The rooster—"I hear they held a post-mortem examination on your brother."
The turkey—"Yes; the verdict was 'very tender.'"—The Criterion.

THE END OF FOOT-BALL

The proprietor of a certain "Sports Emporium" toward the close of last season had a good many foot-halls left on his hands. These he decided to clear "at greatly reduced prices." He filled his window with foot-balls of every shape, size and quality. Before he had finished he was called away, and turning to a young lady assistant, he instructed her to affix the price of each foot-hall in plain figures.

The young lady did so, and when her employer returned some little time later a wonderful sight awaited him. Most of the foot-balls looked as if they had been taking part in a very rough match, while the once beautiful pyramid of halls in the center of the window was now a shapeless mass.

"Here, Miss B—," roared the tradesman, "what on earth's the matter with these balls?"

"Don't know, sir," was the reply, "unless it's the pius, sir!" She had pinned the price-tickets onto them.—Collier's Weekly.

THE RETORT

A Scotch parson once upbraided the blacksmith of the village for not paying his church rate.

"But I never go to the kirk," said the blacksmith.

"That is your fault," said the minister; "the kirk is always open."

A few days later the blacksmith sent a bill to the minister for shoeing his horse. The minister indignantly protested that his horse had not been shod.

"That's your fault," said the smith; "the forge is always open."

HIS IDEA OF DUTY

Sunday-school superintendent (pointing a moral)—"Yes, scholars, the great thing is to know one's duty, and then do it. Admiral Dewey knew his duty when he entered Manila bay and saw the Spanish ships, and the world has seen how nobly he performed it. Now, children, what is out duty in this bright holiday season? How may we emulate the great admiral? What should we do when we see about us the poor, the sick and the suffering?"

Small-boy class (in concert)—"Lick 'em."—Harper's Bazar.

WHAT IMPRESSED HIM MOST

Uncle Reuben had just returned from his holiday in New York, and his mind was a confusion of cinematographs, self-playing pianos, automobiles, phonographs, etc. When he was asked which had impressed him most, he solemnly replied:

"By gosh, the horseless piano beats 'em all."

THE USUAL KIND

"What do you charge to wash a shirt?" Inquired the man at the counter in the laundry.

"What kind of a shirt?" asked the clerk, with his mind on outing-shirts, dress-shirts, negligees and the various other possibilities in that line.

"A dirty shirt," replied the man.

ONE ON THE CALF

He—"They say that a person gradually becomes more or less a part of what he eats the most of."

She—"Well, I shouldn't be surprised if that were so. I've noticed that you are particularly fond of veal."—Chicago News.

The Fear of Humbug

Prevents Many People From Trying a Good Medicine

Stomach troubles are so common and in most cases so obstinate to cure that people are apt to look with suspicion on any remedy claiming to be a radical, permanent cure for dyspepsia and indigestion. Many such pride themselves on their acuteness in never being humbugged, especially in medicines.

This fear of being humbugged can be carried too far, so far, in fact, that many people suffer for years with weak digestion rather than risk a little time and money in faithfully testing the claims made of a preparation so reliable and universally used as Stuart's Dyspepsia Tablets.

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HOUSEHOLD

[CONTINUED FROM PAGE 13]

THE NAMELESS HERO

There are countless heroes who live and die, Of whom we have never heard; For the great big brawling world goes by, With hardly a look or word, And one of the bravest and best of all Of whom the list can boast Is the man who falls on duty's call, The man who dies at his post.

While his cheek is mantled with manhood's bloom, And the pathway of life looks bright, He is brought in a moment to face the gloom Surrounding the final night, He buoyantly sails o'er a sunlit sea And is dashed on an unseen coast— Till the ship goes down at the helm stands he— The man who dies at his post.

Who follow the glorious tide of war And falls in the midst of fight, He knows that honor will hover o'er And cover his name with light, But he who passes unsung, unknown, Who hears no applauding host, Goes down in the dark to his fate, alone— The man who dies at his post.

Who bears with disease while death draws near, Who faces his fate each day, Yet strives to comfort and help and cheer His comrades along the way; Who follows his work while he yet may do, And smiles while he suffers most, It seems to me is a hero true— The man who dies at his post.

There are plenty to laud and crown with bays The hero who falls in strife, But few who offer a word of praise To the crownless hero of life. He does his duty and makes no claim, And to-night I propose a toast To the silent martyr unknown to fame, The man who dies at his post. —Denver News.

RECEIPTS FOR SOAP

IN RESPONSE to our call for soap receipts we select the following for the benefit of our housekeepers as being the most practical. It would be impossible to print all of them.—ED.

In a former issue I noticed a question asked of "How to make good hard soap from concentrated lye." I send you a receipt which I have tried a number of times and never had a failure.

For one ten-cent canful of concentrated lye you will need five pounds of pure grease of any kind, and one quart of rain-water. Empty the contents of the can into an earthen or stone jar, pour one quart of rain-water over this, and stir with a stick until it becomes warm; then let it get cold. Have the grease melted, but not hot; pour the grease into the dissolved lye, then stir with a stick until thoroughly mixed and no streaks remain. Have a small wooden box lined with cotton cloth, and pour the soap into this. Set it away in some warm, dry place for about three days, then you may loosen the cloth and lift out the soap. Cut in bars the desired shape and size.

I generally take all the trimmings of the bars of soap and little pieces and make them into soft soap by putting them all into a kettle, pouring more rain-water on them, and heating on the stove until dissolved. This makes nice soft soap for scrubbing and washing dishes. MRS J. J. CARPENTER. Calhoun, Wis.

Seeing in the FARM AND FIRESIDE under "Queries" a request for a receipt for soap-making, I send the following simple formula:

Have two wooden buckets, and into one empty one canful of good concentrated lye; into it pour five pints of cold water, and let it dissolve. Then into the other bucket, which has been wet so as not to coat it with grease, put six pints of warm melted grease (strained), and then pour the lye into the grease, slowing stirring until it thickens. Let it set until the next day, turn out, and cut into blocks. WM H. T. FOWLES. Washington, D. C.

In response to T. Greiner's call for receipts for good hard soap I send the following, which I have used for some time with success: One pound of potash, one pound of sal-soda, one fourth of a pound of rosin, three gallons of water and five pounds of grease. Boil until it thickens. If the grease is salty, soak to freshen it. Put the water on to boil, then put in the grease, then the potash, then the rosin and soda, and boil until it hardens in a dish. Bartlett, Ohio.

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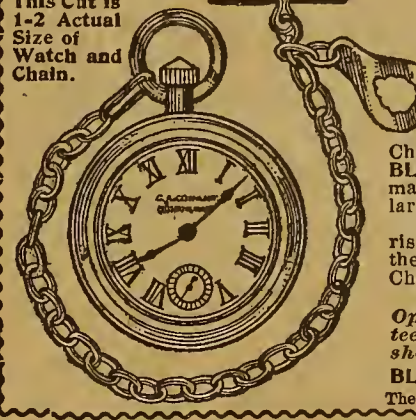
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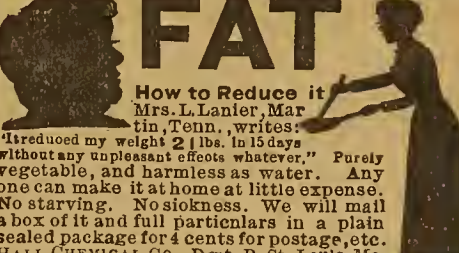
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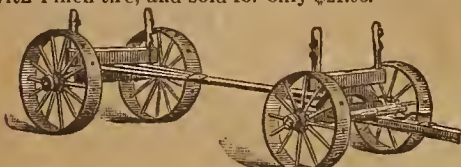
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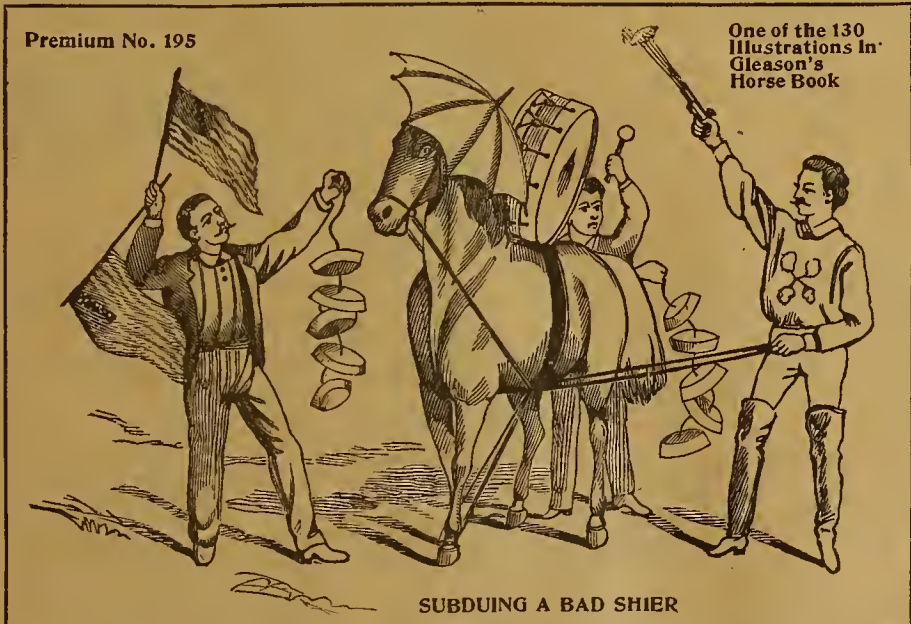
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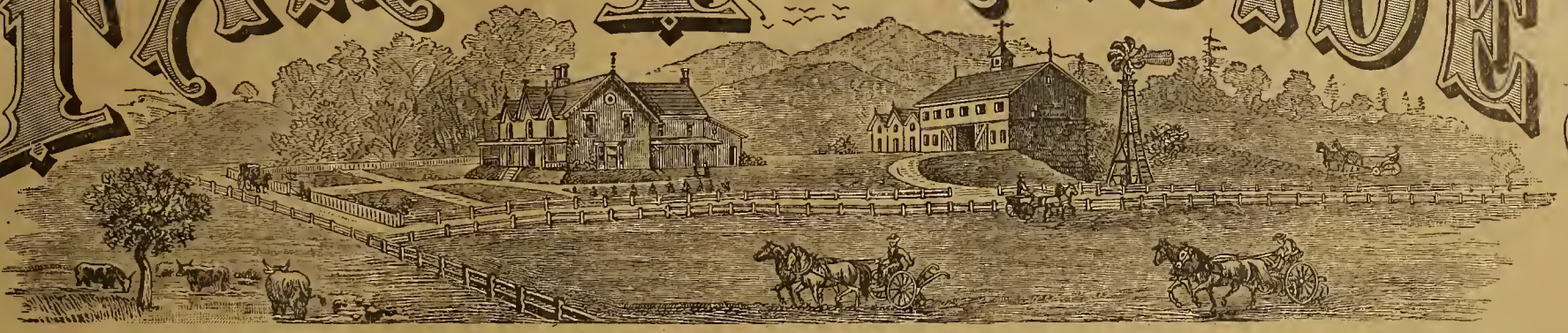
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SUCCESSFUL TEA-GROWING AT THE SOUTH

BY JANE A. STEWART

THE splendid effect of persistency in the face of difficulties was never more appropriately shown than in the success achieved by Dr. Charles Shepard in the growing of tea on his extensive plantation of "Pinehurst," situated in the south-central part of South Carolina. The successful outcome of this noteworthy experiment is attracting attention throughout the country.

Dr. Shepard is a Southern gentleman of means and culture who has achieved some distinction as a scientist and horticulturist. He is a far-seeing man as well as a scholar and philanthropist. Though tea cultivation has been undertaken in a small way in the South at various times, Dr. Shepard is the first person who can be said to be successful in the business. His success has followed the failure of other attempts. The Federal government's experiments in the eighties were given up. But Dr. Shepard felt that these experiments had not been pushed as they ought to have been. He was confident that patience and research would bring suc-

cess. And though he has been steadily at work for so long it was not until the crop of 1898 was nearly harvested that he felt justified in saying he had been successful.

It is just ten years since Dr. Shepard became impressed with the idea that the government experiments with tea had not been prosecuted with sufficient zeal and scientific study. Having ample leisure and fortune and a desire to benefit in a practical way the people of the Southland, he undertook on his own account to make further attempts to find a solution of the problem. That tea could be grown after a fashion was plain enough, for the plant has been growing in South Carolina for nearly a century. To make the plant grow in a productive way was the object to be attained.

Dr. Shepard's conviction that the failure by the government was not by any means conclusive was based on the fact that the experiments had been conducted according to practices prevalent in communities where climatic conditions and other important factors to success were greatly different from those existing here. His initial efforts, consequently, were exerted in studying the principles of the tea-plant's growth and environment, the adaptation of cultural methods, and appliances for the amelioration and enrichment of soils. He possesses a faculty for close observation of minute

details. A long series of tedious and costly experiments has accompanied every branch of the work. But throughout all, Dr. Shepard has been buoyed by the optimistic faith that tea culture could be made a practical success in the South, a faith that the results attained seems to have amply justified.

The great climatic disadvantages of this country for tea-growing are the insufficiency of rainfall and the variable temperature. It rains a good deal in the cotton-growing region, but it does not rain enough for tea. This native of a tropical forest requires a great amount of moisture and an intense heat. These seemingly insuperable difficulties have been largely offset by the work of Dr. Shepard. By liberal and scientific fertilization of the soil, by underdrainage, subsoil-plowing and deep fertilization the deficiency of moisture was practically neutralized. Seeds were procured from high elevations developing hardy qualities and great productiveness. The results of the grower's patient care and intelligent study and application of proper agricultural methods are to be seen in the beautiful tea-gardens at Pinehurst, which have reached a degree of cultivation and productiveness not exceeded in the famous tea countries of the Orient.

Dr. Shepard did not meet with success at first, however. The story of his first garden

—the Rose garden, as it is called—is the story of repeated discouragement and failure. About one thousand plants of acclimated Assam hybrid tea were set out in this particular garden, which site was a drained piny-woods pond. The slowness of the growth was a discouraging feature, which was found to be greatly due to the excessive acidity of the soil. But the crucial time came when, through what proved to be an erroneous method of pruning after the oriental fashion, two hundred of the precious plants were lost. Though well nigh ready to give up the attempt, Dr. Shepard with steady courage set out new seedlings in the place of the dead plants. He tried various schemes of pruning until he hit on the plan of cutting out the original main stem of the plant and inducing a luxuriant sucker growth, a method which has been adopted in all the later gardens of Pinehurst, and which has more than any other factor insured the success of the whole work.

The question of how to get his tea picked was a problem second only to that of cultivation. No machine has been devised to take the place of hand-labor in picking tea. It is a work which requires discrimination in selection. As it is all-important to pick leaves when they are delicate and tender during successive periods of short duration, [CONCLUDED ON PAGE 6 OF THIS ISSUE]



SOUTH FRASER TEA-GARDEN, FOUR YEARS OLD, PLANTED WITH DRAGON'S POOL (CHINESE) TEA-SEED

FARM AND FIRESIDE

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"I would to God that the truth of this whole Philippine situation could be known by every one in America as I know it. If the real history, inspiration and conditions of this insurrection, and the influences, local and external, that now encourage the enemy, as well as the actual possibilities of these islands and people and their relations to this great East, could be understood at home, we would hear no more talk of unjust 'shooting of government' into the Filipinos, or of hauling down our flag in the Philippines. If the so-called anti-imperialists would honestly ascertain the truth on the ground and not in distant America, they, whom I believe to be honest men misinformed, would be convinced of the error of their statements and conclusions and of the unfortunate effect of their publications here. If I am shot by a Filipino bullet it might as well come from one of my own men, because I know from observations confirmed by captured prisoners that the continuance of fighting is chiefly due to reports sent out from America."

Thus wrote brave General Lawton, shortly before his death, in a letter to Hon. John Barrett. His just condemnation will rest forever where it belongs—on the heads of the counterfeit Americans, the anti-expansion sympathizers of the Tagal insurrection, whose inspiration directed the bullet that ended the career of one of the noblest Americans.

IN A letter to the "Echo de Paris," General Joubert, one of the bravest and ablest of the Transvaal oligarchy, frankly says that the Boers have for years been secretly preparing for war. "To arm ourselves unremittingly, he says, and to hide these armaments from the English—such was our object. We have fully succeeded therein. We often allowed secret English agents to penetrate into our arsenals, where there was merely old artillery material, but we carefully concealed our modern material, of which they thus knew nothing until the very eve of war."

After commenting on this clever way of tricking the British, the New York "Tribune" adds:

"In what predicament, however, does this honest statement of an honest man place the pretenses of the overzealous friends of the Boer states who would have us believe that the latter were unprepared for war and undesirous of it, and that all the aggression was on Great Britain's part? General Joubert's plain tale and the corroborative events of the last two months show beyond all question that it was the Transvaal that began arming, and that when Mr. Kruger resorted to the diplomatic ruse of protesting against the sending of a few more British regiments to Natal the Transvaal already had, in trim for instant action, a force many times as large as that with which it was 'menaced.' Instead, therefore, of there having been British aggression upon a couple of peaceful pastoral communities, there was nothing but a tardy British rising and arming to meet a great menace of military aggression against British colonies.

"For, while 'Slim Piet' has told the truth, he has not told all the truth. He has not told us the object of the Boers in thus secretly and formidably arming. But Mr. Reitz has done so, in a plain talk with Olive Schreiner's brother, and Mr. Kruger has done so, in his ultimatum to Great Britain, and, indeed, the Boer governments have done so still more recently in their 'annexations' of British territory. The object was not defense, but offense. It was not to keep the British out of the Boer states, but to drive the British out of Cape Colony and Natal and all South Africa. It was, in the words of the founders of the Afrikander Bond, to make South Africa a Dutch confederation. In that there was, of course, no turpitude. The rights of rebellion and conquest are 'unalienable rights,' provided you have the strength to enforce them. The Transvaal had the same right to take Natal and the Cape from England—if it could—that England had to take them from the Dutch a century before. The Cape Dutch had the same right to rebel against Great Britain that the Thirteen Colonies had in 1776, or the Southern states against this Union in 1861. Only, it is to be regretted that 'a decent respect to the opinion of mankind' did not move them to 'declare the causes which impel them to the separation.'

"By all means let us on all points have General Joubert's straightforward truth-telling emulated; and whether we sympathize with Briton or with Boer, or remain unsympathetic in our impartiality, let our attitude be based on facts, not fancies. Both parties to this sad war are too brave and manly to need the shelter of the baby act."

IT is an obvious fact that a large part of the expressions of sympathy for the Boers, in their struggle with the British, is due to misinformation or anglophobia. To those not afflicted with either the following from the Boston "Herald" will commend itself as an impartial statement on the situation in South Africa:

"It has seemed to us that the causes for the war are decidedly mixed ones; that both sides are to blame, because those on either side who were carrying on the negotiations were desirous that war should break out. Unquestionably, that section of the English people who are represented by Mr. Chamberlain believed that they could gain more by a war than they could by peaceful negotiations; and on the other side, the Boers having made, as events show, enormous preparations for the contest, wanted a war, because they believed that if it broke out they could drive the English out of South Africa. The jingoist element in England was undoubtedly desirous of incorporating the Transvaal into the English empire; the jingoist Boers were desirous of annexing Natal, Cape Colony and the other English possessions in South Africa to their present holdings. There was no high-flown sentiment in this; in both instances it was an illustration of national greed, and hence, between negotiators desirous of war, but at the same time hesitating to assume the responsibility for striking the first blow, a peaceful outcome was clearly impossible.

"No one who has carefully followed for the last few years the methods which the Boers have adopted for the government of the Transvaal is likely to be deceived by the belief that the word 'republic,' as applied to their form of government, has the same meaning that we in this country are accus-

tomed to associate with it. If the descendants of those who secured the independence of the United States had half a century ago concluded to treat the immigrants who came to this country in the way that the Boers have treated those who have gone to settle in the Transvaal, these immigrants and their descendants, including those who came from Ireland, would now be looking on the ruling American class that excluded them from political rights, that restricted them in their trade and in the practices of their religion, as tyrants whom they were justified in overthrowing and dispossessing if they could. The claim that the native Americans might make, that they came here first and won their independence by driving out the Indians and overthrowing English control, and if those coming from foreign lands to settle here did not like to be thus excluded and oppressed they could stay at home, and the fact that they formed a majority of the people of the United States made not the least difference, would not be accepted as a satisfactory argument.

"We do not mean to say that in the dissensions that have occurred in the Transvaal the Boers have been entirely in the wrong and the Outlanders entirely in the right. There has been a good deal to find fault with on both sides; but we have not the least question that, if simply a continuance of the local independence that the Boers possessed had been the object they were striving for, very little difficulty would have been found in securing this through peaceful means, while at the same time they could have built up, by the judicious extension of their naturalization laws, a strong though mixed population, which would have been of itself a guarantee of their continued possession of political self-control. The policy followed by the Boers was one which was bound to produce discontent, and in time interference. It would have produced the same results here if we had tried it, or in any other civilized country, and certainly to this extent they are responsible for the war now going on, and are in no sense entitled to the special sympathy of neutral people. It is, we believe, an indisputable fact that such Americans as have gone to the Transvaal during the last few years—and a good many have gone there for the purpose of entering into business—have, almost without exception, been in favor of English intervention."

MR. O. F. COOK, special agent in charge of the section of seed and plant introduction, has made an interesting preliminary report to Secretary Wilson on the agricultural possibilities of Puerto Rico. The Department of Agriculture will assist the more enterprising farmers, both American and Puerto Rican, in experiments to find out what new crops suitable for our markets can be grown there. The department is to be commended for its wise plan of encouraging the development of tropical products which do not, like sugar and tobacco, compete with home products.

The report reads, in part, as follows:

"As already pointed out in Secretary Wilson's annual report, we are paying over \$200,000,000 for tropical plant products, a large part of which could be furnished by Puerto Rico and the Philippines. Instead, however, of entering upon too many suggestions at once, it is desirable to settle upon a few of the more promising crops and encourage the production of these articles on a scale sufficient to give them a recognized place in commerce. For bananas, for instance, we paid in 1898 over \$5,500,000, mostly to Jamaica and Central America. In Puerto Rico the banana has scarcely been considered as a source of income or an article of export. It has been planted principally for shade in the coffee-plantations, and as one variety was as good as another for this purpose, most of the bananas are unsalable. The variety almost exclusively imported into the United States is not generally cultivated. As the conditions for commercial banana-growing are very favorable, it may be expected that attempts in this direction will soon be made.

"The soil and climatic conditions are exceedingly diverse, so that it is probable that a wide range of products can be secured, at least for local consumption. Oranges, limes and other citrus fruits, European grapes, and other semi-tropical fruits and vegetables can be produced in the drier parts of the island, while from the moister parts vanilla, cacao, mangoes, and other more strictly tropical plants can be exported.

"Coffee has been the chief product of the island, and is, perhaps, that in which the greatest expansion is possible. Over \$13,000,000 worth of coffee has been exported in a single season from Puerto Rico in spite of the fact that methods of cultivation are of the most primitive character. Instead of seedlings grown in nurseries, those which spring up by chance in the heavily shaded plantations are used. These are already weak and spindling; in order to keep them alive heavy shade is necessary, and this is continued throughout the life of the plant. This, together with the overcrowding and lack of proper care, brings the average crop down to one third or less than what might be obtained through better methods of cultivation. There is also a large amount of land suitable for coffee culture, but not now planted, so that it is not unreasonable to believe that if this industry were properly developed Puerto Rico might supply at least half of the enormous quantity consumed by the United States, our imports in 1898 being valued at over \$65,000,000.

"There are, however, few Americans interested in coffee-growing, and the capitalists who have canvassed Puerto Rico for profitable investments have been giving little attention to the possibilities of coffee, doubtless owing to the depressed condition of the market, the result of overproduction of inferior grades in Brazil and elsewhere. The superior quality of the Puerto Rican article has, however, long been recognized in the European market, and there is every probability that an increasingly large amount will be required in the United States. The stock now on hand is being held at high prices, owing to the fact that the visible supply is very small, a result of the August hurricane. Higher prices in the general market are to be expected, and while it is improbable that coffee-growing under the old methods will ever be as profitable as formerly, the natural conditions are favorable for the perpetuation and extension of the industry on modern lines.

"Puerto Rico is unique among the West Indies, or, indeed, among tropical countries generally, in the possession of a large white population capable at once of furnishing labor for carrying out local improvements and of taking part in the progress of advancing civilization. The explanation is to be found in the delightful and salubrious climate, where the European can live, work and thrive. A more advantageous point of contact with the tropics could scarcely have been selected."

IN HIS annual report Secretary Wilson commends the South Carolina tea-growing experiments described in the special article in this number. Among other things on this subject he says:

"If a new industry of this kind can be introduced into the Gulf states, which will save the people of the United States the many millions of dollars now sent abroad for the purchase of this commodity, and at the same time provide light work for the young people who are now entirely idle, there is a double incentive to make research to the utmost regarding the production of a commodity in such universal use.

"The Department of Agriculture has a sufficient number of plants growing in pots to start experimental tea-gardens in all the Gulf states from Florida to Texas, and including California. Efforts are being made to induce the experiment stations in those states to co-operate with the department in conducting these experiments.

"Experiments in South Carolina have shown that the production of two hundred pounds of dry tea an acre is readily obtainable under favorable conditions, with a probability of double or perhaps treble that amount when the plants have arrived at full bearing. It is desirable to ascertain the limit of productiveness under all the varying conditions of surface, soil and seed varieties. It is gratifying to note that the yield an acre has steadily advanced in spite of all hindrances from fifty to one hundred and fifty pounds per annum an acre for the whole of the older tea-gardens at Summerville within the past few years. The best varieties from all the countries of the Orient are being experimented with, and efforts will be made to add promising new varieties, both by importation and by hybridization. Experimentation of this nature is beyond the capacity of men of moderate means, and I am of opinion that it is entirely justifiable that Congress, through the Department of Agriculture, should assist in demonstrating the probability of raising tea in the United States for home consumption at least."



ABOUT RURAL AFFAIRS

A Plea for the Quail The idea of asking state legislatures for the enactment of a law which forbids the senseless murder of quails should have the earnest support of every good man and woman. In the first place, the quail is harmless. It lives mostly on noxious weeds and injurious insects. We have no feathered friends of much greater value to the farmer and gardener. And what a pretty creature it is, too! A resident of Ohio who advocates a strong move upon the state legislature in favor of the bird says: "What kind of a man (?) can he be who finds sport in murdering this harmless, sweet, little chicken-like creature? Who are the class that are destroying them? How many decent men do you find engaged in their slaughter? Their slayers are principally town men of idle habits and doubtful character. Are the farmers' fences to be torn down and his crops run over, and one of his best friends that he has fostered and protected destroyed by this heartless, vicious element of society?" And while we are about it we might as well go a step further and also try to find protection for partridges, grouse and other similarly harmless and useful birds. Their numbers are growing less every year. Let us stop this murder of the innocents.

A Plea for the Family Cow No question but that the family cow is a family pet. But we do not keep her for fun. We want milk—good milk, rich milk—and plenty of it. To secure such result, however, we must have a good cow for a starting-point. A poor cow, or an indifferent one, either, does not deserve to be a family pet. The animal should pay a good profit, and a good cow will do it if properly managed. One trouble with family cows, even good cows, is that the family expects them to be able to mix dry straw or a bundle of moldy corn-stalks and water and make milk out of the mixture. To make a big pailful of rich milk twice a day requires a good deal of substance, but not near as much in cost as the pailful of milk is worth, especially when it could be sold to neighbors at five cents, more or less, a quart. A good cow, in short, given all the wholesome food in properly balanced ration which she should have will pay handsomely for her keep, while the same cow fed as so many are fed will cost more for feed and care than her milk is worth. My friend, the editor of the "Rural," replies to a query concerning the balanced ration as follows:

"We keep one cow. Her business is to eat up the coarse fodder, chiefly sweet-corn stalks, and turn them into milk and cream. The best ration we have found for a family cow is one half wheat-bran and one fourth each of corn-meal and ground oats. Twice a week a good handful of linseed-meal in addition is desirable." For some years I have been keeping two family cows—good ones, too—and during the winter chiefly on the ration mentioned by my friend. I cut the stalks, moisten them with water, and then add four or five quarts of the grain mixture for each cow, also one or two handfuls of linseed-meal twice a day. The linseed-meal is hardly ever omitted. Besides this, I give to each cow a big pailful of thin slop, made of a quart or two of the grain mixture and hot water, mornings and nights, and about one half bushel of cut beets, carrots or turnips once a day. After managing my cows in this fashion for years I can say that it is a pleasure to keep them thus—always provided that they are good animals. They are sleek and healthy, never seem to have the least trouble, and such pailfuls of milk as they turn out all winter long! Of course, cleanliness and pure air, warm, well-ventilated stables and plenty of good bedding, with occasional currying, are also important factors. A good cow is worth taking care of. Try the plan once and see for yourself.

Crude Petroleum as an Insect-killer A great deal has been said during the past few years about the pernicious or San Jose scale, and the fearful fate that awaits our orchards if we ever let it get a foothold in them. I feel certain that this scale may be found in thousands of localities and orchards where the owner has never yet suspected its

presence. I identified the enemy in a portion of my young Bartlett pear orchard last fall, but am sure that it has been present there for a number of years. Its spread from tree to tree seems to be, very slow, but when it has once found lodgment on a tree it soon saps the vitality of its host. The disfigured fruit, of course, should not be sold, as it might serve to spread the infection. Fortunately we have now a sure and reasonably cheap remedy for this pest in kerosene-oil, or still better, in crude petroleum. The New Jersey State Experiment Station has recently published a bulletin (No. 138, for September 5, 1899) on the use of crude petroleum for scale-insects. Professor John S. Smith, who wrote it, says:

"It seems a fair conclusion that in the crude petroleum furnished by a well-known oil company we have an important insecticide for winter application on orchard trees. It is fully as effective against scale-insects as kerosene, and is harmless to the most tender varieties and on the youngest trees; therefore it is peculiarly adapted for employment against the San Jose or pernicious scale. As the oil remains on the surface for a long time it makes no difference whether it is put on undiluted or mixed with water. If mixed with water the latter evaporates and leaves the oil, so that the material in contact with the tree is as much undiluted as if the water had not been applied with it. If it is put on undiluted a fine Vermorel nozzle should be used, not only because better distribution can be secured in that way, but because of the saving of material. It will be just as well, however, to use an emulsion sprayer and mix with from sixty to seventy-five per cent of water. It will be possible to use a nozzle of larger capacity, or, better, a group of Vermorels, and the material can be applied until everything is dripping. A gallon of emulsion containing twenty-five per cent of oil will give a better coating than one quart of oil undiluted. On trunks and branches a summer application is as safe as if made in winter, and small trees, or larger ones not generally infested, can be summer treated if application to the foliage is avoided.

Of course, my own infested trees will be quite thoroughly looked after this winter. I am not unduly frightened over the presence of the pernicious scale, but I do not wish to have it for a permanent boarder. I have the spraying-machines and plenty of Vermorel nozzles. The crude petroleum I can probably get in Buffalo. A few hours' work with the pump on a one-horse wagon will give me the desired relief, and I hope to see my Bartletts free from the characteristic marks and spots another year. The winter treatment with petroleum is said to increase the health and vigor of the trees. But I would rather have them die and burn them up than leave the scale in free possession.

Petroleum for Ants I am frequently asked how one can get rid of ant-hills in orchards or cultivated ground. Usually I have recommended the use of bisulphid of carbon, which is not always readily accessible, and at best a disagreeable thing to handle. Now I am told that kerosene or petroleum will do even better work than our old remedy, and I have no reason to doubt it. Pour a quantity in a ring around the ant-hill, and then a still more liberal dose right into the center of the hill. This will do the business without fail.

Spraying Dormant Wood With Fungicides For a number of years I have practised the spraying of trees and grape-vines in early spring, before the buds open, with strong solutions of copper or iron sulphates, in the conviction that a good share of the spores were attached to the limbs, branches, buds, etc. In the case of grape-vines I have also paid attention to the posts, wires and not less to the ground, especially where leaves had accumulated, giving all a soaking rather than a spraying. I have always believed, and still believe, that this treatment gave very decided beneficial results. At least I have seen the grape diseases grow less and less with every season even where this treatment was not followed up with

later ones upon the foliage. It is now claimed that there is nothing to be expected from spraying the dormant wood, as the spores are all attached to the fallen leaves, will ripen sufficiently in spring to float in the air, and find lodgment on the young leaf as soon as that begins to expand. It may be so, and yet I am not ready to change my tactics so far as the grape is concerned.

T. GREINER.

SALIENT FARM NOTES

Pure-bred Fowls I see no reason why every farmer should not raise first-class, pure-bred fowls. Only a short time ago one of those poultry-buyers that drive about the country buying fowls from farmers stopped at my house and actually begged me to sell him some—a dozen or two—of my Plymouth Rocks. He offered me two cents a pound more than he was paying for common chickens. He said he wanted them to "tune up his load." In his wagon, which was made of tiers of coops fastened one above the other, he had three hundred and fifty-five fowls, and they were of almost every imaginable color, shape and size. There was not a dozen really good market-fowls—birds that would dress well and show well on the block—in the entire lot.

He said that they came from over twenty different farm-yards, some of them from farmers who pride themselves on the fine quality of their hogs and cattle. I asked him whether he ever suggested to them the advisability of improving the quality of their poultry, and he said he hadn't any time, and a very few had acted upon his suggestions, and by purchasing first-class males were producing a better quality of poultry. "But," he continued, "I find it very difficult to induce those who raise such fowls as I have in this wagon to invest two or three dollars in pure-bred males. They seem to think it throwing money away. When I do get a man or woman started in the right track they never go back to scrubs and mongrels. The person who once gets a lot of first-class chickens in the yard soon begins to take a great deal of pride in them because their superiority over scrubs and mongrels is so manifest, and invariably they give them better care, and as a consequence make money. When one of my patrons improves the quality of his stock I as a dealer am benefited, therefore I encourage them all I can."

Several poultry-dealers tell me that one of the greatest mistakes farmers make with their poultry is in mixing breeds. One year they will procure Plymouth Rock males, the next Brahmas, the next Leghorns, and instead of making any progress in improvement they find in their yards a miscellaneous assortment of mongrels and scrubs that are neither "fish, flesh nor fowl." The more they mix and cross the worse they are off. They are like the brilliant amateur farmer who became owner of a number of Holstein cows. He decided they were somewhat too large, so he crossed them with Jerseys. Then he concluded that there was not enough beef on the output, so he crossed them with Shorthorns. Then somebody told him that Galloway hides brought much higher prices than any other, so he procured a Galloway bull. In the end he found that he had neither milk, beef nor hide, and his only recourse was to sell out and begin again.

I have raised pure-bred fowls seventeen years, and have found them profitable stock. Size, laying qualities, vigor, anything desired to make the stock suit me to a dot, can be bred into them by proper mating and selection. Some years ago I thought my fowls were not large enough. In two years I had them up to the mark desired. They did not lay as well as I thought they should. In three years I had hens that laid over two hundred eggs in a year. And all this was done without mixing with any other variety or breed. Simply proper selection and mating.

"Discouraged" People Many a strong man who has met with accident or misfortune has given up the struggle and allowed the burden of making a living to fall upon his wife. Said a big, lusty fellow, "If I hadn't taken down sick and about lost my crop of corn last year I would now be in lots better circumstances than I am. When they saw my crop was a failure they closed in on me and took all I had. No, I ain't doing anything now. I'd like to get a good job somewhere, but it seems like they don't come my way." His wife was then taking in washing to provide food for the family, while he felt too much "discouraged" to even make a garden.

We can find these "discouraged" people in every town and village. Some slight misfortune or accident has so "discouraged" them that they have turned the matter of making a living over to their wives while they loaf about town and prattle politics and peddle gossip.

Contrast the aimless, worthless lives of these "discouraged," able-bodied loafers with that of the man who wrote me the following letter: "I am a one-armed man, sixty-seven years old, and the past eight years I have cultivated about one acre of garden. As soon as the land is cleared of truck in the fall I commence wheeling on manure with a wheelbarrow. I put on five hundred to eight hundred wheelbarrow loads and then spade it in. If the grass-seed in the manure springs up I spade the ground over again, and again in the spring. My main tools for cultivating the crops are a hand-cultivator and an iron rake, and I never allow a single weed to go to seed. When I began cultivating this land it was all ridges and furrows and filled with weed-seeds. It took me two years to level it and clean out the weeds. Now it is as level as a floor and not a weed on it."

The writer of the above is an old man and has only one arm, and the left one at that, yet he has bravely risen above his misfortune and is still to be found among the foremost of the world's workers. Instead of weakly giving up the struggle, like the "discouraged" loafers I have spoken of, and frittering away the golden hours of life in idle prattle and mischief-making, he manfully sets himself to making a living, and in so doing winning the priceless boon of health and the sound, restful slumber of the honest toiler. Such an example of spirited energy and perseverance is enough to shame the big, lubberly, able-bodied loafers who have weakly and cowardly like given up the struggle because "luck" seemed to be against them clean out of the sight of men.

Planning the Campaign Not more than one farmer in ten makes any well-defined plans for the next season's campaign. Most men have a vague idea of how many acres of this or that they will plant next season, but rarely do they consider the details—the methods they will pursue. It is a good time right now to study all these out and jot them down in a book that can be referred to in the busy season. When the work is on hand and pushing one to his utmost he is apt to forget many important details, many matters that are small but really vital. One who has not tried it has no idea what a relief it is to have his work all carefully planned in advance. It is almost like working under the direction of another person. I am aware that some people imagine that farm-work cannot be planned in advance because it is so largely governed by meteorological conditions, but if they will once give it a trial they will learn otherwise. When one has everything in readiness and knows to a certainty what he wants to do he can accomplish a third more than when his ideas are all mixed and mingled with the odds and ends that bob up every day. When he knows what comes next, and how he has determined to accomplish it, and that everything is in readiness, there is no confusion, no mistakes. Careful planning and prompt execution of those plans makes the successful farmer; haphazard confusion the "unlucky" one. Don't be "unlucky" this year.

The Catalogues of seedsmen are now coming in, and in a few days my order will be forwarded. The early order is invariably filled promptly and with the varieties called for. Those sent in about planting-time are filled with whatever is left. I have known seedsmen to run out of some of the most popular varieties of vegetable-seeds before the season was half over, and many a gardener has been disappointed through sending his order too late to get the best stock. The best plan to follow is to make out the order as soon as the catalogue arrives. One then has the list complete, order sheet and everything in good order. In a short time the catalogue may be lost or destroyed. Like almost all others, I have my favorite seedsman, and he receives my order for the principal part of my garden-seeds, and I make it a point to stick to a dealer so long as he does right—sends out good, live seeds. I glance over all catalogues that come, and if I find anything in them that appears to be extra good I try it.

FRED GRUNDY.

OUR FARM

FARM THEORY AND PRACTICE

PLANTING ORCHARDS.—Good authorities say that nine trees out of every ten planted never bear fruit to an extent worthy of consideration. Something usually happens. The trees are neglected, wrong varieties are planted, fruit from the trees does not come upon the market to affect prices. There would be reason to fear the overproduction, of which we hear much, if all the trees that are sold by nurserymen should be fruitful; but just so long as farmers listen to the tales of agents and plant varieties unsuited to soil, climate and market, and just so long as most farmers fail to fertilize, prune and spray their trees, the man who understands his business may safely hope for profit from his orchards. If he is engaged in producing the few varieties that are in demand, and has a location adapted to fruit, the competition he must meet is not a very serious matter.

MONEY IN APPLES.—Some fair-sized fortunes are being made from apple-orcharding to-day. These orchardists did not listen to the tales of tree agents who are here to-day, gone to-morrow, and the future knoweth them not. They did not want any marvelous new variety, untested for their locality. The orchards, be they ten acres or five hundred acres in extent, are composed of the one or two varieties that do exceptionally well in the soil and climate of the region and that are in demand. It does not matter whether the variety suits the palate of the grower or not, provided it sells well. In fact, the best sellers usually are not those of highest quality, but they are good keepers, good shippers and of good color. The market takes the York Imperial, Ben Davis, Rome Beauty, etc., freely, and the successful orchardist chooses the variety that succeeds under his conditions, being guided by market demand, and not by personal preferences in the matter of quality.

I write of the demands of city markets and of heavy buyers who store or ship. It is true that there are local markets to be considered, and the small orchardist often finds it profitable to cater to the wants of consumers near at hand. Here high quality is a prime consideration. The apple need not be a good shipper or a long keeper, but must please the eye and palate. Summer, fall and winter varieties are wanted. They go direct to the consumer, and the fruit-grower seeks to satisfy him. But the extensive orchardist must have a staple article—an apple right in color, a shipper and a keeper. The man who produces this always has a market. A straight lot of such fruit attracts the shipper, while a mixed lot of good, bad and indifferent fruit, viewed from the standpoint of big dealers, may go begging for buyers.

APPLYING LIME TO THE SOIL.—There are sections of the country in which three hundred bushels of lime is not considered an excessive application to an acre of land. In some other sections fifteen bushels an acre is the usual amount. The advocates of heavy liming defend the practice vigorously, while others are sure that a few bushels are enough. The farmer that wants the truth becomes badly puzzled, but the wide difference in opinion is capable of some explanation. Lime may be applied to the soil for various reasons. Quite often soils contain too much acid, and lime is needed to correct this condition. For this purpose a very light application is supposed to be sufficient. It takes up the acid, and an increase in growth of crops, especially clover, follows.

In other cases, where the litmus-paper test may not show any harmful degree of acidity, a little lime may act directly as plant-food or it may break up tough plant-food in the soil. Such a soil is not of limestone origin, and the required lime usually must be brought from a distance at heavy cost. There is an effort to find out just what the minimum amount for a successful application is. The smaller the amount needed to take up acid or supply plant-food, the less the cost of an application. But on heavy limestone soils we have a very different problem. Lime is abundant and cheap, being burned on the farm by the owner of the land. The cost for a bushel in cash is small. The object in liming is not to correct sourness or feed plants, but to change the physical condition of a stiff and naturally strong soil.

The soils in sections where heavy liming is practised are usually tough and hard to work. They do not give up their fertility easily. They need primarily what is called the mechanical effect of lime on the soil, rendering them more porous, admitting air more freely and holding more water without puddling. For this effect more lime an acre is needed than in the correction of acidity. The lime is at hand, and a heavy application is a natural result. I believe some stiff soils would not respond to a light application, especially if made upon a sod and left exposed to the air. With lime at hand it is easy to depend too much upon it, and to use it wastefully. This is often done. But the liming of a stiff limestone clay to secure disintegration is a very different thing from correcting sourness in other soils, and really demands larger amounts of lime an acre.

RATIONAL LIMING.—I have sought to point out some reasons for the differences in opinion among farmers on this lime question. Some land needs no lime. Much land needs lime in small amounts to take up harmful quantities of acid or to supply plant-food. Some land needs larger amounts to change the texture of the soil and break up its tough plant-food. So long as such land is dressed with lime by means of a shovel, and the lime is allowed to remain exposed to the air for months, unnecessarily large amounts will continue to be used. The minimum amount for a tough limestone clay is not definitely known. But rational liming is the use of the amount absolutely needed, when the lime is evenly distributed and mixed with soil while in a caustic state. As the amount used in an application depends upon the object sought, it will continue to vary as



FIG. 1

soils vary in their condition. The tendency to-day, however, is toward small and frequent dressings.

LIME AND HUMUS.—In every instance let us remember that most soils are deficient in organic material, and that lime is destructive of such matter. It frees the plant-food in decaying vegetation in the soil, adding temporarily to productiveness, but it benefits permanently only when we use the liming as a means of growing more sods that will add to the percentage of humus. When lime helps to clover or other sods it benefits land, but lime without sods or manure leads to unfertility of the land.

DAVID.

WHY DO NOT FARMERS ADVERTISE?

Enthusiastic believers in the efficacy of advertising in the commercial world claim that before half the twentieth century is gone merchants generally will set aside a goodly sum yearly to be devoted to advertising, just as is now done by those who depend almost wholly on mail orders for their trade, and that the man who has anything to sell and who does not advertise will be a fit subject for the platform in a dime museum. This view may be chimerical to a certain extent, but yet who would have dreamed fifty years ago that it was possible to do the simply enormous trade that is now being done wholly through the mails?

Unfortunately, as in some other matters affecting his own welfare, the farmer is slow to see the advantage that would accrue to him from advertising; not of necessity newspaper advertising, though even this may be done to his profit under certain conditions, but by every legitimate means making known his wares. Truth is, the farmer is not a good trader. He can produce good crops in abundance, but does not know how to sell his products. This is true, it is safe to assert, with eight farmers out of ten, and is particularly true of the farmer who is located some distance from large towns and cities. This state of affairs is to be regretted, and methods should be devised to find a way around the difficulty. I will admit that it is no pleasant task to peddle one's wares from house to house; but even

in this work one has the advantage in that his goods are necessities, and always in demand, so that if the quality and price are what they should be sales are comparatively easy to make.

A number of ways of advertising are here presented for the consideration of the reader who is interested, all of them eminently practicable and inexpensive. The illustration of the wagon (Fig. 1), the sides of which are covered with signs, speaks for itself. If one is in the habit of making weekly trips to town, or if you go more often, so much the better, carry your advertisement with you as shown in the illustration. Get some narrow strips of half-inch lumber, and make frames the width of your wagon-box, and eighteen inches or two feet long. Then get some muslin, and on it print your advertisement, and tack it onto the frame, and the frame onto the wagon-box. If you have a lot of fine potatoes for sale say so on one of these signs, and you will not make many trips to town before you will find customers. Do the same thing with anything you have to sell that dwellers in town want, and you will readily find a market for your wares.

In connection with this plan of signs on the wagon fit up a sample-box as shown in Fig. 2. This can be easily done in your spare time, making the box so that it will fit in under the seat or across the front end of the wagon. Divide this box into compartments, and fill each compartment with any samples of fruits or vegetables you have to offer the public. In selecting samples see that they are samples, and not selected specimens. Have the goods you deliver even a little better than the samples you show, and you will make customers you can keep if you treat them right. If you have grain to sell, get a few wide-mouthed bottles at the drug-store, and

put up in the samples of the grain. Slip these bottles in your pocket when you go to town, and take occasion to show your samples to any one whom you think is likely to want grain. Do this especially with oats, for town people with horses would be glad of the chance to buy good oats direct from the farm at the same price they pay the middleman in town.

Make it your business when you go among people who are likely to use anything you have for sale to tell them of what you have, and show them samples if possible. Be your own drummer on every possible occasion. Of course, this means "talking shop" on many occasions when you would rather not, but that is the way to sell your products, and the only way in which to sell them so as to get the highest price for them. I have in mind a farmer, a bright man of considerable education, tact and good sense, who makes it a practice to go to the city some twenty miles away once in two or three



FIG. 2

weeks, and take with him samples of his products, which are mainly eggs, fowls and fruits. He dons his best clothes, packs his samples in a small compass, and goes right for the best retail-market trade in the city, and frequently approaches the stewards of some of the best hotels. His dress is neat, and as he looks and acts and is every inch a gentleman, he has no difficulty in obtaining an audience from any business man whom he approaches. In his usual farm-dress this, of course, would not be possible. Our friend has learned how to get customers, and is sufficiently intelligent to keep them after getting them by always delivering goods that are a little better than his samples. He has worked up a trade in fresh-laid eggs that of itself gives him a comfortable income the year through. It was my pleasure to start him on this track sev-

eral years ago when he had an especially fine lot of potatoes feady for the late fall market. I tried to persuade him to let the residents of a near-by town in some way know what he had, but he was loath to try any plan I suggested. On my own responsibility I had one hundred postal-cards printed, on which I offered the potatoes at the highest market price a barrel delivered at the door, and requested those who were interested to write for samples, which would be shown them at their address on either Tuesday or Thursday of the following week. To this card I attached my friend's name, and addressed the cards to the lady heads of one hundred families whom I thought would be interested. After the cards were mailed I wrote my friend, and told him what I had done. He told me afterward that he was much provoked at my action, and made up his mind to tell me so when he went to town. Two days later he began to receive requests for samples of the potatoes offered, and—well, to make a long story short, by the time he got around to score me for my interference in his business all the potatoes he had to spare were sold, so the lecture he gave me was not very severe. It needed only this hint to put my friend on the right track, and he soon outstripped me in evolving plans for disposing of his farm products.

We farmers might just as well get down to the facts in the case first as last, and learn that we must compete with the middleman by working along the same lines as he, and the first step is to learn to advertise. Use the signs and samples as suggested for a starter, and you will soon see other ways that I cannot point out where you can extend your advertising to your own profit. If there is a live town paper near you, advertise in it occasionally. You may not be able to lay aside a certain sum of money for this purpose as the merchant does, but you can devote two or three barrels of apples or potatoes, a half hundred cabbages or some honey to advertising, being sure that the newspaper man will give you the full market price for your goods in space in his paper. Try it for awhile, and see how it works. Others have been successful on the same lines, and so may you, and when you have reached the point where your customers call on you, by mail, perhaps, you will then begin to more fully realize the importance and independence of your business.

GEORGE R. KNAPP.

COFFEE

Dealers in a number of cities who have offered "Puerto Rican" coffee for sale have found a receptive market for it as a high-grade article. Coffee is the ideal crop for Puerto Rico, as the mountain lands, comprising a large portion of the island, are fertile to their summits. It is claimed that coffee of unexcelled aroma can also be grown in the Philippines and Hawaii, and the importations of the article from these islands will undoubtedly be largely increased as soon as American capital can be put into operation.

Reference to the treasury figures show that we imported during the year ending June 30, 1898, 870,514,455 pounds of coffee, amounting to \$65,067,631, at an average cost of 7.4 cents a pound, an estimated consumption per capita of 11.45 pounds. These figures show that we consume nearly as much coffee as does Germany, France, Austria, Belgium, Holland, Russia, England and all other countries combined.

Previous to 1860 every retail merchant in the United States bought his coffee green, and householders generally did the roasting at home; but the inventive genius and skill of the American mechanic improved upon the antiquated methods of roasting to the manifest advantage of customers, and the appreciation of these benefits resulted in building up several large roasting establishments. The industry has grown to such an extent that at the present time ninety per cent of all the coffee imported into this country is sold by the merchants to the consumer after being roasted.

Much of the coffee imported is impregnated with small stones, or, as they are termed, Brazilian diamonds. The average is nearly one pound of stones to the bag. Hundreds of tons of these stones taken from coffee have been used in paving the walks and drives about American homes. Undoubtedly many growers believe that they receive more for their coffee in the aggregate by working in as many stones as possible, but in this they are in error, for the green coffee is all graded by experts, who grade stony coffee lower than they do coffee free from stones.

GUY E. MITCHELL.

NOTES FROM GARDEN AND FIELD

THE CABBAGE-MAGGOT.—It will be only a month or two more when we must begin to start our earliest cabbage-plants in the greenhouse. It is by no means too early to think of the enemies that will beset us later on and just as soon as we get the plants out in open ground. The great foe that often ruins a large portion of our crops is the maggot. We have tried to fight it with all sorts of applications, and more recently have resorted to the device of keeping the maggot away from the root where it wants to feed by the mechanical barrier of a collar of tarred felt. It seems a reasonably safe device; at least I managed to save a fine crop of early cabbages, two years ago, by this device when otherwise a good many plants would have been destroyed. To those who wish to use this device, but have not yet learned the particulars (repeatedly mentioned in these columns), I can only give the advice to write to the New York State Experiment Station at Geneva for a copy of an earlier bulletin on this subject. It gives the whole story. Of course, it is some trouble to cut the collars and adjust them, but the expense is trifling compared with a possible loss of a third or one half the crop. These Early Wakefield and Eureka cabbages, as I usually grow them, seldom bring me much less than five cents a head. I can afford to take a little extra pains with this crop. A reader in Prichard, Ala., writes me about this problem as follows: "Instead of using tarred paper for keeping off cabbage-maggots, would it not be as well to use the tar by either reducing or warming it so that some of it could be poured around the stem of the plant? When one sets out from 25,000 to 100,000 plants it would be impossible to put a paper collar around each plant. If this is feasible, what is the best kind of tar to use, and how should it be applied?"

I would not risk a direct application of tar on tender plants. Although I have not tried it as yet, I am afraid that it would play havoc with the plants. But there is another compound which has been used in just the way our friend suggests. This I also mentioned in these columns last season. For the benefit of new-comers, however, I will give the formula again; namely, four pounds of fresh tallow, one pound of lard, one half pint of sweet-oil, one half ounce of carbolic acid (crude). Mix all, and have it warm enough so that it is in liquid form. Make a little cup-like depression around the stem of each plant, and then pour a teaspoonful or more into each depression so that the mixture will surround the stem like a collar. It soon hardens, and keeps the fly or maggot away. I have not the least doubt about the effectiveness of this device, and propose to use it myself more largely next season. At the same time I shall test against it not only the paper collars, but also my old favorite remedy, tobacco-dust, also a mixture of lime and ashes. Last spring and summer I hardly lost a plant, whether protected or not, by maggot attacks; but I have no assurance that I shall be as fortunate the coming season.

KOHLRABI APPRECIATED.—Whoever tries the vegetable to which I called attention in November 15th issue of the FARM AND FIRESIDE (kohlrabi) surely likes it. H. V., one of our friends in Chicago, writes me as follows: "I had a good deal of experience with kohlrabi for many years, although on a small scale, for family use, for cow and chickens. I found, after trying different kinds, that 'Goliath' served my purposes best. It grows rapidly, is always tender, although not so much as 'Vieuna Glass' kohlrabi, but when young there is hardly any difference. 'Goliath' grows to enormous size. I had several times heads as heavy as twenty-four pounds, seventeen pounds and ten pounds. Of course, the kohlrabi needs good manuring. It never gets woody, and keeps well in winter. If planted one and one half feet apart, and thinned at the proper time, the plant should on an average be of about four pounds weight. I had the seed of this variety from Erfurt, Germany."

PRUNING AND GRAFTING.—I often utilize the mild spells during winter for trimming my fruit-trees. Most trees need looking after, especially after these years of neglect and the careless management resulting from low prices and a feeling of hopelessness. With brighter prospects, of

course, comes greater care in orchard culture. All fruit-trees under my control will look more respectable and better cared for next season than they have for years. I believe that will be the case with most orchards over the country. In some cases severe pruning will be necessary. The question is whether a painting or coating over of the cut surfaces will be required or not. I have seldom cared to take any extra pains in this respect. The superfluous limbs and twigs were simply removed and the injury left to heal over as best it might. But I believe that some covering of the exposed surfaces would be of advantage. What to use is the question. Possibly common cheap oil-paint would do as well as anything, and it might be applied with a brush after the cut surface has dried a little. For choice trees or small ones perhaps grafting-wax might be used. Later on I will have to do some grafting; in fact, there is occasion for it almost every spring. I may want to put in a few scions of the Rome Beauty or of the Walter Pease or of the Gravenstein apples. In that case a supply of grafting-wax will be needed, and I might as well prepare it now as any other time. Mr. Burbank, of California, the great originator of new fruits and flowers, and perhaps also of vegetables, recommends the following receipt for "best grafting-wax;" namely, one pound of tallow, two pounds of beeswax, four pounds of rosin. Slowly melt all together, stir well, and when partially cooled pour into pans which have been moistened or oiled to keep the wax from clinging too tightly to them. When thoroughly cold break into convenient pieces. For use it should be melted and applied carefully all over the exposed cuts and open cracks around the grafts. A small paint-brush is most convenient for this purpose. It can be applied safely much warmer than can be borne by the hand, but care should be used not to have it very closely approaching the boiling-point of water. T. GREINER.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN THE CRANBERRY

It may be laid down as a general rule that the cranberry cannot be successfully cultivated except on the granitic soils of the Northern states, and that it will be a failure on the limestone drift soils, such as are common to the prairies of Minnesota, Iowa and the Dakotas.

PLANTS AND PLANTING.—In selecting plants great care should be used to get them from fruitful beds, as some wild beds are almost barren. There are many named kinds, and they vary greatly in size, growth, time of ripening and productiveness. The kind most esteemed in the East is called the Early Black. It is very early and productive, though not a vigorous grower.

The cranberry-plant grows very readily from cuttings, and on this account slovenly growers sometimes cut the plants in a hay-cutter, sow the pieces broadcast and harrow them in; but that method of planting is not generally advisable. The most common way is to make cuttings of the younger parts of the vines, about ten inches long, and plant three or four together, setting them four inches deep; but sometimes longer cuttings are used, which are doubled when planted. The cuttings may be carried over a whole season with good success if they are kept covered with running water, but in stagnant water they would be likely to spoil. On this account they may be set at almost any season of the year if the flowage is controlled, but the spring of the year is generally preferred, and if there is no chance to flow at will it is by far the surest time to plant.

Before planting is commenced the bed should be marked off each way at eighteen-inch intervals. In planting, a wooden dibber is used, having an incurved or reverse wedge-shaped point, with which the cuttings are crowded through the sand down into contact with the bog beneath at one operation, without first making a hole, as is customary in the ordinary use of a dibber. After the cuttings are planted the water should be raised in the trenches sufficiently to keep the surface land a little moist to encourage the rooting of the cuttings. The after-cultivation consists in keeping the soil moist and in giving clean cultivation.

PICKING.—If the berries are allowed to fully ripen on the vine they will keep much better than if picked earlier; but where there is danger of frost before they are ripe the berries should be picked as soon as they

commence to color, though when picked thus early they will seldom keep well after the middle of January. If severely frozen the berries are ruined, but they are not injured by a "white frost." Picking is generally done by hand, though some few growers "rake" them off the vines. The berries keep well in a dry, cool place, but they are more easily kept if covered with water.

The high bush cranberry is a very different plant from the kind referred to. It is the original form of the snow-ball, and grows six to eight feet high, producing red or yellow berries in autumn, having one large flat seed in each. It may be increased by layers or divisions, and is best adapted to moist but not wet land. It is sold in some of the markets, and makes a nice sauce or jelly, but is not generally so highly esteemed as the common trailing kind.

BEST LOCATION FOR CRANBERRY-BEDS.—In a wild state this plant is found at its best on moist land where the water-level is within eighteen inches of the surface. It seems to be rather indifferent about the soil, sometimes growing on sand and then on peat, mud or moss.

As a rule the best locations are low meadow-lands sloping down to ponds, or watered by brooks or creeks, somewhat sheltered but not shaded. On uplands it has been successfully cultivated, but in such situations it is generally unprofitable, and frequently an entire failure. It may be laid down as a rule that the soil in which this plant is to thrive must be liberally supplied with water, and yet the land must be so drained that the water can at will be drawn off at least ten inches below the surface. Land that has been covered with stagnant water for a long time, as the bottom of ponds, is not fit for the growth of this plant until it has been cultivated and exposed to the air for a year or more.

SOIL ADAPTED TO IT.—Wherever the cranberry is growing naturally one may be sure that the land near by is adapted to its culture. If no wild plants are growing near the supposed proper location it is a safe and good plan to plant a few rods of the most favorable portion of it as an experiment before spending much time or money on improvements which may prove to be futile. With a bog adapted to the growing of this plant, with control of the drainage and flowage, a good crop of fruit is assured for almost every year if the work of preparation is properly done. Yet there are many wild and cultivated bogs that have yielded very profitable crops for many years where the flowage has not been controlled, and hence if that factor cannot be directed at will is not necessarily a sufficient reason why an attempt should not be made to plant suitable land, providing the work can be done at small cost. The returns from natural cranberry-bogs may often be greatly increased by a little judicious expenditure.

PREPARATION OF THE LAND.—The first steps in preparing for a first-class cranberry-bed should be directed to destroying the vegetation growing on the land. The proper method of doing this will vary according to the location and condition of the land. But in some way the surface of the land must be cleaned of its growth and made level and fine and perfect as a garden. If it is to be flowed it should be made perfectly level, as it will then take much less water for flowage than if uneven. This matter is especially important where the water supply is limited.

SUPPLYING SAND.—It is of great advantage to have the surface of the land covered with about four inches of clean sand, and this should be done even if at considerable expense. The sand used should preferably be rather coarse, but it must be free from clay or loam, as anything that encourages the baking of the surface of the bed is injurious. This sand offers a good place for the plants to root, is easily cultivated, and experience shows that it conduces to fruitfulness. Yet there are many very fruitful peat-beds that have never been sanded.

IMPORTANCE OF WATER.—The flowage may sometimes be controlled from a pond above the bog, or by a brook or creek running through it. Every reasonable effort should be made to secure and control water for flowage for the following reasons: (1) Without a good water supply bogs often get very dry in periods of protracted drought, to the great injury of the plants, and occasionally peat or moss bogs get on fire and burn up, destroying all the work done. A bog once on fire can seldom be saved except by flooding. (2) The water kept over the plants in the spring will serve to retard the blossoming until danger of frost is past, and will protect the fruit from early frosts in autumn. (3) Beds that are kept under water until late in the spring are seldom seriously injured by insects. (4) Beds do best when

protected by a water covering in winter. If not thus protected they may be seriously injured.

ABOUT FLOWING.—All that is required in flowing a bog is sufficient water to cover the vines; they should be covered about the first of November, and as deep as they are to remain covered during the winter. The freezing of the vines in the ice does not hurt them, but raising the level of the water in the bed after they are frozen, and thus raising the ice and tearing the vines out of the ground, is where the great danger lies. To avoid this the sluiceways should be kept sufficiently open to allow any surplus water to pass off.

2.

DIRECTIONS FOR WINTER TREATMENT OF THE SAN JOSE SCALE IN ORCHARDS

The time is now near at hand for winter work against the San Jose scale. The state crop pest law requires that infested orchards should be treated or destroyed.

The general state inspection that has been made this season shows that most of the infested orchards can be saved by the use of proper remedies. In our experiments with insecticides last winter for the control of scale-insects we found that, everything considered, kerosene in mechanical mixture with water, at the rate of twenty per cent, gave the best results. At least two applications are necessary, and if the trees are badly infested a third application would pay. Better results are obtained from several applications of the weaker mixtures than from one application of a stronger per cent of kerosene.

The first application should be made as soon as the trees have ripened up and shed their foliage, while the insects are still in an active condition and therefore more susceptible to treatment than later in the winter, when they are dormant. The application should be made through a very fine spray-nozzle, and the trees thoroughly moistened from the ground to the tips of the twigs. Thoroughness in the application is absolutely necessary to good results.

At any time during the winter after the first treatment the usual annual pruning of the trees may be done, taking care to remove all superfluous limbs and twigs and clear away any leaves or other trash that may be lodged in the crotches. Also cut the trees back as much as possible not to remove too many fruit-buds. This decreases the surface to be sprayed the second time, and removes the parts most likely to harbor the scale in protected places.

The second application of the kerosene mixture should be made in the spring, beginning in time to finish as the first buds are opening. If three applications are necessary, the second can be made at any time during the winter after the first, and the third in the spring. The outfit necessary for applying the mixture is a kerosene-sprayer fitted up with the proper discharge hose and Vermorel nozzle. For orchard work a barrel kerosene-sprayer with two hose attachments mounted on a wagon and driven between the rows should be used. In this manner two rows can be sprayed at a time. The hose should be long enough to reach to the opposite side of the tree, so that the whole tree may be sprayed before leaving it.—From bulletin by W. M. Scott, State Entomologist, Georgia.

2.

INQUIRIES ANSWERED

Scurfy Bark-scale.—A. B., Galena, Ill. The insect that infests the bark of your tree is what is known as "scurfy bark-scale." It is quite common in some sections, and is occasionally injurious, although not much is to be feared from it. Spraying the trees with potash lye when dormant will probably cause them to fall off.

Injured Pear-tree.—L. E. C., Salem, Ohio. The specimen received shows a portion of the branch of a pear-tree much swollen, but there is no plainly seen insect injury, and I am not sure what has caused the injury, but rather think it was caused by some fungus growing in the soft tissues of the new growth. I think it would probably be a good plan to cut off the injured portions, if it is not too much work, although I doubt it will cause much harm even if left on.

Quince Flowers and Fruit Dropping Off.—J. E. H., Massachusetts, says he had much trouble with borers in his quinces, and that they have caused the flowers and fruit to drop off. He also recommends using hot brine around each tree (about two quarts of old salt and hot water) to kill the borers. In this connection it may be well to state that while in his case it may be borers that caused the flowers and fruit to drop off, yet the same result may be produced by anything that weakens the trees, as cold, wet soil, too much shade, fungus disease, insects that defoliate the bushes, or cold, damp weather at flowering-time. Also that while two quarts of salt might not injure large bushes on his land, that on different land and smaller trees the results might be bad.

SUCCESSFUL TEA-GROWING AT THE SOUTH

[CONTINUED FROM FIRST PAGE] the difficulty of getting trained pickers when wanted is a serious one. Dr. Shepard proved equal to this emergency in a plan which, while it is undeniably a bit of practical philanthropy, is also a good business arrangement, and a mutual benefit as well. He built and equipped a comfortable school-house, provided a competent teacher, and invited the colored families to send their children to the school free of charge. They would be taught all the branches of a primary school, and also how to pick tea, and given an opportunity to earn money to help buy food and clothing. Of course, this plan proved an immediate success. Many of the children when they first come to school are too small and delicate to work, but they soon learn, and become quite skilful in the art of picking. The pickers are supplied with a wholesome lunch, and often make from thirty to fifty cents a day.

The importance of Dr. Shepard's labors and the inestimable value of the service which he has rendered the Southern section and the whole country is apprehended when the fact is recognized that the population of the South is increasing more rapidly than the means of employment and sustenance. Many must remain idle unless new industries are provided. The cultivation of tea offers easy out-of-door employment for those incapable of hard labor in a hot, malarial region; it enables women and children to be self-supporting, as is required in all densely populated countries. "According to my experience," said Dr. Shepard, regarding the outlook for profitable employment, "ordinarily skilful and industrious laborers may be safely paid as much in tea-gardens as in cotton, corn or pea fields."

Pinehurst, the scene of this noteworthy experiment, is two miles from Summerville, and Summerville is twenty miles inland from Charleston, on the line of railroad which connects that city with Columbia. It is a beautifully diversified estate of seven hundred acres. The grounds immediately surrounding the pleasant home are mainly devoted to ornamental purposes. The visitor is charmed by the magnificent woodland of towering native pine-trees, which afford grateful shelter and protection to the innumerable varieties of rare shrubs and plants flourishing beneath them. Dr. Shepard reveres these majestic old Southern pines, and would not permit the removal of a single one in the laying out of his roadways and paths. The tall, straight, bare trunks of the monarchs of the forest permit only a softened light to pass between their interlaced boughs, and form a classic

"Pillar'd shade High overarch'd and echoing walks between."

Everything is on a large scale in the beautiful Pinehurst park. Cape jasmines grow in extensive groups of dozens, with flowers as large as magnolias, and fill the air with their fragrance. A specially fine border of hydrangeas has plants nearly as tall as a man, with flower-heads uncommonly large and of an intense cerulean hue. Roses are planted by the acre, and cultivated like a corn-field, or trained on trellises ten feet high. It is no unusual sight at Pinehurst to see a mass of flowering Chinese azaleas an acre in extent. There are fruit-gardens and much else to attract the public, who extensively patronize the park and purchase the flowers, the proceeds of this sale going to a local charitable institution.

The principal avenues of the park are bordered by low-kept hedges of tea-plants, which afford pickings, and thus happily combine the ornamental with the useful. This is an entering wedge to the practice of tea culture which Dr. Shepard would like to see widely adopted. "There is a large class of people," he declared, "who might profitably add the cultivation of tea to flowers and vegetables, filling out the corners of their gardens and home fields with tea-bushes, as they do in China, or substituting useful as well as ornamental evergreen hedges of that plant for the present unsightly and costly fences. Cultivated in this way the outlay of time, labor and money could hardly prove burdensome; and, as one result, the household should be able to supply its own tea, pure, strong and invigorating, instead of the wishy-washy stuff generally sold."

Nothing interests the intelligent visitor at Pinehurst more than the fine tea-gardens, comprising fifty acres or more in all stages of development, and in a perfection of cultivation hardly excelled in oriental countries. Here is the Rose tea-garden of

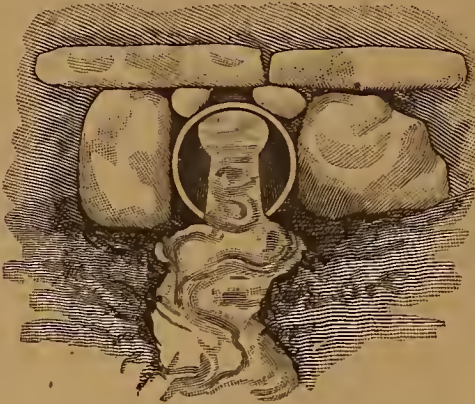
almost an acre, now nine years old, whose gratifying productiveness is the best basis for the belief that commercial tea may be grown in South Carolina in quantity quite comparable with the average yield of the most favorably situated oriental countries. One notes the good condition of the bushes, which are about three feet tall, and look like well-pruned willows, although the leaves are a little darker and more glossy.

A neat two-story wooden cottage serves the purpose of the tea-factory, in which the various processes of manufacture—the wilting, drying, rolling, oxidation and firing—are accomplished by the latest forms of machinery. The factory stands, like all the other buildings of the place, beneath the superb Southern pines. Not far away is the neat frame school-house for the colored children.

With regard to the future extension of tea culture it is pertinent to say that no person can hope to succeed unless the methods laid down by Dr. Shepard are strictly adhered to. Experience is absolutely necessary in the practical application of the principles governing every detail. The prospective grower must serve an apprenticeship, and thus become thoroughly conversant with the science and practice of the whole culture. To this end the national government, which has shown a revival of interest in the appropriation of five thousand dollars by the last Congress to further the work, will undoubtedly contribute by establishing an agricultural school or experimental farm near Pinehurst, where a knowledge can be acquired of everything pertaining to the management of the plants and the manufacture of tea.

PROTECTED OUTLET OF TILE-DRAIN

If the fall be slight the unprotected outlet of a tile-drain will sooner or later give trouble from clogging, due to stock tramping or the action of frost, and the tile will become displaced. A good protection may be made by placing stones of about the size



of the tile in diameter upon each side of it, and laying large flat stones wide enough to cover the whole thing from the mouth back three or four feet. Earth should then be placed on the stones to protect them. Accumulations of silt should be removed frequently. M. G. KAINS.

CORRESPONDENCE

FROM SOUTH DAKOTA.—Sometimes one sees in the FARM AND FIRESIDE something from correspondents that the reader considers has more than paid him for the price of the paper. It has been so with me many times, and it may be some of your readers, especially land-renters, would like to know where they can get a cheap but desirable home of their own. This, to my notion, is about half way between Minneapolis and Duluth. There are three railroads, and the traffic is immense. Land is cheap and good. The markets are excellent, and near-by land can be had from \$2 to \$3 on the Omaha, and a little more on the other two roads. All kinds of berries you ever heard of grow here in abundance. One acre cultivated to strawberries produced over \$400 worth last July. There is not much timber, but enough for fuel and fencing. The land can easily be put in cultivation. The soil is sandy loam with clay subsoil. Clover does remarkably well. S. H. D. Watertown, S. D.

FROM NORTH DAKOTA.—I saw a few lines in the December 1st issue from a hired hand in Virginia, saying that \$10 a month was all a fellow could get there, and \$115 for a year, and hard work every day to earn it. Now I think those hired hands are very foolish to remain there when they could just as well come up to North Dakota and get \$215 to \$250 a year; and \$215 is the lowest wages paid for a year, with not so much work to do in the winter season as in the Eastern states. Hired men get from \$160 to \$200 for eight months here. Good men are always in demand. A. S. Park River, N. D.

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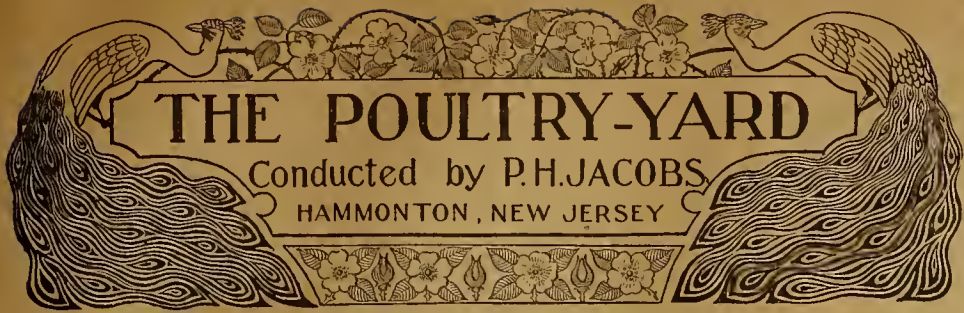
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IMPROVEMENT AND CARE

MUCH skill is required on the part of the breeder to produce perfectly marked birds, and it may be justly claimed that breeding is a fine art, though there is still a class who think the whole affair of raising a brood of chicks only a pastime. Years ago, when the barn-yard fowls could be bought for twelve or fifteen cents apiece, it would not pay to devote too much time to their breeding and rearing. But things have changed since then. Improvement and progress in the cultivation of all kinds of domestic live stock necessitates more careful selection, greater care and better management to produce and keep up the quality of the stock, for on the quality most generally depends its value. Care for chicks does not imply that they should be coddled and pampered to death by overzeal or mistaken kindness. Care is that part of the routine of poultry culture which bestows a kind hand to the tender younglings, to supply their little wants with the view of promoting thrift, good health and prepossessing looks, and prepare them for a useful and valuable life by giving them such food and adjunct necessities as will best accomplish this; but the breeder does not consider it necessary to bestow much care unless he feels that the chicks will grow up to be perfect specimens of their breed.

PROTECTING AGAINST COLD

Although extremely cold weather may exist any time in winter, yet it is not out of place to state that to make a poultry-house frost-proof means that there must be a double wall or the house must be well lined with paper, and the consequence is that some expense must be incurred. There is no better non-conductor of heat than air, and a space of one inch of "dead air" will prevent drafts and dampness; but the object is to secure a warm poultry-house at the smallest cost. The best mode of so doing is to nail the boards on in such a manner as to effectually prevent rain from beating under, and then lining the outside close upon the boards with tarred paper. Ordinarily thick paper, such as is used in buildings, may be procured at a cost of about one third of a cent a square foot, which will answer as well as tarred paper except for roofing. A coat of linseed-oil may then be applied, or even coal-tar, as the paper will soon become hard and firm. It must be remembered that no poultry-house can be made entirely frost-proof unless artificial heat be used; but with the animal heat of the bodies of the fowls, and the house well protected, the temperature may be greatly increased, even in severe weather.

MARKET QUALITIES

In breeding for market it is important to have a breed that grows rapidly and fleshes up young; the skin should be yellow, and if the feathers are all white both the chicks and old fowls will look much better when dressed than those with colored feathers. The color of the skin is sometimes important, yet half of the fowls that are sent to market have anything but a yellow skin. Small bone, short legs and a well-rounded form are all desirable, and a size (when full-grown) of not less than five pounds and not over six before dressed gives the best early fowl for market. None of the qualities are an injury to a laying hen, and if to them are added good layers, hardy and quiet, we may often have combined the points necessary for both meat and eggs.

MAKING MISTAKES

It is natural for the hens to lay, and when they do not produce eggs in the summer or fall the cause should be investigated. When eggs cease to come in the farmer sells the molting hens, which is just where he makes his greatest mistake. The ones to dispose of are those that are fat and in high condition. If the poultry on the farm have the attention given them that is received by the cows the farmer would soon learn to know more about his flocks and understand how to correct his mistakes.

FEEDING FIXED RATIONS

The matter of feeding depends upon so many conditions that a suggestion for one flock may not apply to another, and one hen may eat twice as much as another. Advice given for a flock may apply to that flock only. If there are a dozen hens in a yard, and the owner gets only six eggs a day, it is plain that six of them are not laying. Now, a hen that produces an egg certainly requires more than a non-layer, and yet the latter, if with the laying hens, may get more than any other in the flock. All hens or pullets with red combs should, therefore, be to themselves, and should be fed more than the non-layers. It is estimated that one quart of grain or its equivalent is a ration for twelve hens one day. Yet although that quantity is the estimate, no one would like to feed just a quart "day in and day out," as the saying is. It is too much like feeding by rote. No man living is capable of advising another how to feed. There are too many contingencies in the way. He can only feed his own flock properly, as no two flocks will eat the same amount of food, nor will any one flock eat the same amount every day.

LANGSHANS AND COCHINS

A black Cochin, like any other Cochin, requires plenty of time for maturity, often not laying until fully grown, while the Langshan hen may begin to lay when but little over six months old. The Cochin is the most persistent sitter, while the Langshan does not show a strong propensity for so doing, but does her work well when she begins, the same as the Cochin. A Langshan can fly high for a large fowl, while the Cochin is no flyer at all. The Langshan always has dark legs with pink between the toes, while the legs of the Cochin may be either dark or yellow. The skin of the Langshan is white, and the flesh fine in grain, but the Cochin has yellow skin and rather coarser-grained flesh. The carriage of the Langshan is majestic, and its beauty of plumage is increased by its long sickle-feathers, except such as are short and abruptly turned over.

POULTRY WITHIN REACH OF ALL

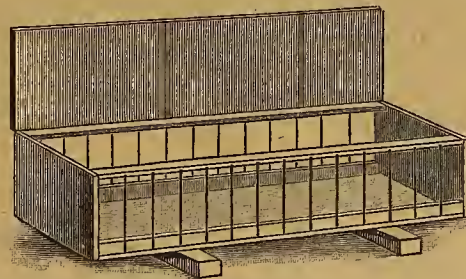
What a boon to the man of limited means is the opportunity of keeping poultry. He not only can have fresh eggs, but is also enabled to enjoy a roast fowl at times, as well as obtaining the same at only a very small cost. There is always more or less food that cannot be utilized in all families, and a small flock of hens can thus be partially supported without entailing any very great expense. It is simply changing the form of the cheap food into poultry and eggs, which are often higher. Then there is the pleasure of keeping a few hens. The working-man cannot afford a horse, a cow, and often he has no accommodations for a pig, but he can always find a place somewhere for a few hens, which will interest him and add to his enjoyment as well as profit. Even the children join in the undertaking, and are all benefited thereby.

CORRESPONDENCE

TURKEY INCUBATORS.—There are others who have been communicative on the subject of turkey incubators, and the sister who wrote of her "gentle turkey" some time ago was not altogether satisfied with the result of her experiment. To begin with, it is my belief that much depends on her turkeyship's natural amount of susceptibility, while the turkey-hen is not of parliamentary habits, as she will frequently lay and sit with other hens; but when it comes to yielding to coercive measures she is by far more tractable than any other fowl, yet it is apparent that the method of handling or "breaking" her is of prime importance. The idea of forcing a turkey to sit was a new one to me a little more than a year ago, and it seemed rather paradoxical, but I decided to test its practicability. So along in January I went to a neighbor's and purchased a fine young Bronze hen for seventy-five cents. I brought her home, and the way in which she hopped on to my pretty fluffy Cochins was a caution. From that day she was mistress of the barn-yard. One evening of the first week in February I took her to the shed, where I procured a salt-barrel, laying it down and blocking it on either side to prevent its rolling. I put in a generous amount of straw and chaff for a nest, and one egg by way

of temptation. I gently pushed her in, and closed the end of the barrel with a wide board, leaving a space at the top to admit some light. I left her to the solitude of her own thoughts and to affiliate her new surroundings. The next morning when I peeped into the barrel she was standing on one leg, her head to one side, and eyeing me quizzically. I again retreated, but several times during the day I discovered her sitting down or standing up by turns, which I conceived as a favorable sign, and the following morning when I took down the board she was sitting complacently on her one egg, and from the slight hissing noise she made as she swerved her head from right to left I inferred that she was on the defense, and meant to resist any intruders on her maternal rights. I gave her twenty-two carefully selected eggs, took down the board, and placed feed and water on the floor of the shed at her disposal. As the weather for the following two weeks was the coldest of the season it was twenty-four days before there were any signs of the eggs hatching, and then but two of the twenty-two came out of the shells, which was perhaps due to the balance being chilled. This, however, was no fault of my turkey or her behavior during the period, as her behavior during that time had been satisfactory. I decided to set her again. I adopted the waifs, and tendered them the comforts of a home-made brooder, and slipped another sitting of eggs under the hen. She sat three weeks, and did even better, for she hatched thirteen downy chicks this time. After six weeks of faithful sitting I turned her out. She looked a little worse for wear, was quite gaunt, and her tail was badly bent. I not only settled the question of making a turkey sit, but was twenty-three chicks ahead on my experiment. She soon fattened up with good feeding, and in May she began strolling away to the fields in the direction of the neighbor's of whom I had bought her. Finally I missed her from the roost, and after a little searching I found her sitting on a cozy nest under a mammoth hurdock in a remote fence-corner in the meadow, in which were thirteen speckled eggs, and in a few days she came off with a brood of thirteen little pink-toed turkeys, which I allowed her to care for as a reward of usefulness, and she did it very creditably, raising eleven—six gobblers and five hens—to full growth, which I put on the market the week before Thanksgiving at an average of \$1.20 a head. H. P. H. Lewistown, Ohio.

IMPROVED FEED-TROUGH.—The instinct of cleanliness seems to be sadly lacking in the mental make-up of chickens. If permitted to have their own way they will dirty their feed and water without any compunctions of conscience to all appearances, and without doing any offense to their sense of propriety. "Cleanliness is next to godliness," we are told, in human conduct. It may not be a virtue of such importance in chicken-life, yet we believe that even there dirt should have a limitation. We draw the line distinctly when an old hen proposes to jump into her food or water with filthy feet. We do so by the use of a feed rack or trough like that shown in the illustration. The bottom and ends are made

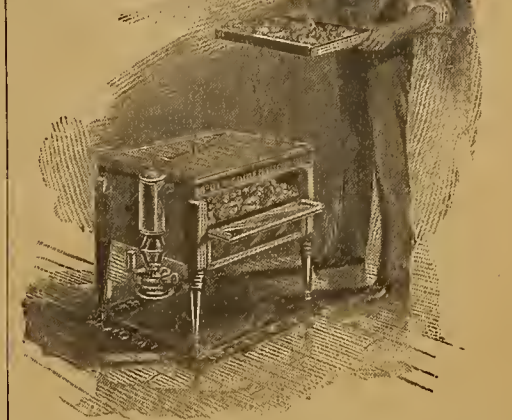


of ten-inch boards. The top consists of a strip one and one half inches wide at each side and a hinged lid covering the space between them. The sides are made of a strip two and one half inches wide at the bottom, and above that heavy wire slats about two and one half inches apart. These are fastened with staples at the lower end, and turned at right angles, driven through the one and one half inch strip, and clinched at the upper end. Strips of board would do for slats. The rack should be ten or twelve inches high, and may be of any length desired. Water in vessels can be placed in this rack, as well as feed of all kinds, including cabbage-heads, turnips, beets, etc., and all will be kept clean. A. R. Steubenville, Ohio.

INQUIRIES ANSWERED

Breeds of Turkeys.—Mrs. H. C., Kelley, Kan., writes: "Will you please inform me which is the best breed of turkeys to raise for size?"
REPLY.—The Bronze is regarded as the leading variety, being large, but probably other breeds are fully as hardy.
Incubator Chicks.—T. C., Arden, N. C., writes: "I hatched eighty fine chicks in an incubator. When three weeks old they began to die, being mostly weak in the legs first. They were brooded indoors at a temperature of seventy to eighty degrees."
REPLY.—Your mode of feeding should have been given, also kind of brooder used. Weak legs may result from too much bottom heat in brooder. The temperature in brooder should be about ninety degrees.
Black Minorcas.—W. C. M., Battery Park, Va., writes: "I have some Black Minorcas, and they do not lay. It has been four months since some of them have laid. They get plenty of fresh water and grit, and feed twice a day, and a high range and plenty of grass. Please let me know the cause."
REPLY.—Mode of management should have been given. You probably are feeding them heavily on grain to the exclusion of other foods. It would also be advisable to examine them carefully for the large body-lice.

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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE 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 inclose 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.

Lawn.—T. L. E., Lebanon Junction, Ky. The best time to make a new lawn is early in the spring. Prepare a fine seed-bed, and sow bluegrass and white clover at the rate of four bushels of the former and four pounds of the latter to the acre.

Preserving Maple-syrup.—J. R. S., Milwaukee, Wis. If properly made maple-syrup can be preserved by sealing it in tins or glass jars. Should any granulation take place remove the cap or top, and heat the tin or jar in a vessel of water before using.

To Harden Plaster of Paris.—J. M. D., Brooklyn, Ky. Add to a thin milk of lime ten drops of liquid silicate of soda for every pint of the liquid used. Thicken this with plaster of Paris to a thin paste, and pour into the mold. It will set in a very few minutes, so quick work is necessary.

Smut in Barley.—A. L. T., Mulberry, Mich., writes: "My barley was smutty last year. If I use it for seed will the crop be smutty?"

REPLY:—Very likely. Spread the seed on the barn floor and thoroughly sprinkle it with a solution of one pound of formalin in thirty gallons of water. Shovel it into a pile. After a couple of hours spread it out and dry it.

Broom-corn Culture.—L. W., Kilmer, Kan., and others. You can get a book on broom-corn culture from the Orange Judd Company, New York, for fifty cents. The present high prices for broom-corn are tempting many farmers to rush into growing it. There are now enough experienced growers to produce all the broom-corn there is demand for. They will probably increase the acreage this year, and by the time the next crop is ready for the market prices will be down to or below their normal level. It will be well for the inexperienced to proceed cautiously.

Forage Crop.—E. R., Conquest, N. Y., writes: "I have a lot that has been cropped for five or six years. The past two years it has raised oats. The soil of this lot is gravelly. I wish to seed it in the spring, and at the same time raise the best crop on it for general fodder for cow and horses that I can. I have stable manure enough to cover it with a medium coat. What crop do you think will be best suited to my wants and to the soil?"

REPLY:—Under your conditions the best forage crop we can name is corn. Plant the best variety grown in your locality, cultivate thoroughly, and cut early to make the best fodder. In the fall sow rye, and seed down to clover and grasses the following spring. Another plan is to sow oats and seed down this spring, and then cut the oats early for a hay crop.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose 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. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE:—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Spavin.—E. J. M., Southwest Oswego, N. Y. Please consult the FARM AND FIRESIDE of November 15, 1899, and of November 15, 1898.

Possibly a Case of Spavin.—F. McC., South Milwaukee, Wis. Please consult the FARM AND FIRESIDE of November 15, 1899.

About a Female Dog.—A. F., Trenton, Ill. What you complain of may be due to various causes, and therefore no advice can be given as long as the cause is not known.

Sore Teats.—O. T. S., Longmont, Colo. If your cow is kept clean and never milked with wet hands, and still the teats continue to be sore or to become cracked, apply to the sores after each milking a mixture composed of equal parts of olive-oil and lime-water, and wipe them off with a clean and dry rag before each milking. Continue this treatment until a permanent healing has been effected.

Diabetes.—A. H., Swiss Alp, Texas. What you describe appears to be a case of diabetes. Avoid the feeding of any food that is in the least musty, dusty, moldy or spoiled, but particularly avoid musty or moldy oats, and feed nothing but that which is perfectly sound, bright and free from dust and from any contamination with fungus spores. If this is done the disease, unless already too far advanced, will soon disappear.

Probably a Case of Periodical Ophthalmia.—W. E. G., Curran, Ill. If there are no other symptoms than those you mention it must be concluded that it is periodical ophthalmia (so-called moon-blindness) you describe.

Lachrymal Ducts and Corn-cobs.—J. A. J., Huntington, Teun. I do not know that worm-dust on corn will stop up the lachrymal ducts, but if it does it will not thereby cause what is generally known as "blind-staggers." Ground corn-cobs being indigestible to horses may, if fed in considerable quantities, possibly cause digestive disorders, but will not influence in any way whatever the lachrymal ducts.

A Place(?) Inside of the Horse's Knee.—E. A. K., Fitzgerald, Ill. You say, "There is a place about two inches long and one half inch in diameter on the inside of the horse's knee of the left hind leg," and give no further information whatever. The only thing I can tell you having any bearing upon your question is that spavin does not occur on the hind knee, but on the hock, and then usually on the median surface of that joint. I have no means of knowing what you mean by saying "place."

A Consequence of Dehorning.—B. F. M., Detroit, Minn. Your description indicates a purulent inflammation of the frontal sinus, and to gain access to the seat of the inflammatory process inside of the frontal sinus it will probably be necessary to trepan that cavity. Consequently you will be obliged to call on a veterinarian able to perform that operation and to devise the treatment to be applied. The latter will depend upon, or be dictated by, the extent and the quality of morbid changes found in the frontal sinus. All horned cows have hollow horns.

Possibly a Case of Actinomycosis.—W. M. G., Rockwell City, Ia. Your description is too superficial to make it possible to decide whether the swelling on the left side of the head of your calf is an actinomycosis (so-called lump-jaw) or merely an inflammatory swelling attendant upon the formation of an abscess. All the description you give is simply that you say it is hard, did once soften and break, then decreased, and is now again hard and increasing. The best you can do is to have it examined by a veterinarian before any treatment is attempted.

Infectious Abortion.—A. N., New Richmond, Minn. What you describe appears to be infectious abortion. The best way will be to remove all the cows yet with calf to another non-infected place away from the herd until they have calved, to clean and to disinfect meanwhile the infected premises in a thorough manner, and to disinfect the tails and external genitals of the cows which recently have aborted with a four or five per cent solution of creolin in water. For further information please consult the answers recently given to similar inquiries in the columns of this paper.

Bovine Lymphangitis.—G. C., Dustin, Neb. Your description indicates bovine lymphangitis, a disease which is comparatively rare, and which does not easily yield to treatment. Medicines given internally are of no effect whatever. If any treatment is attempted with any expectation of success it must be a local one, and must consist in a thorough destruction of every ulcer as soon as it makes its appearance. Whether this is done by an application of caustics or by searing (cauterizing) them with a red-hot iron is probably immaterial. The best results, however, it seems, have been obtained by searing every ulcer to the bottom as soon as it breaks with a red-hot iron of suitable shape.

Incontinence of Urine.—A. McC., Morganville, Ohio. What you describe is known as incontinence of urine. Unless some improvement has been observable since the colt was born, for in that case some more improvement may be expected when the colt gets older and stronger, there is hardly any hope that a cure will ever be effected. If the cause consists in a mere weakness of the sphincter of the bladder a gradual improvement is possible, and may be expected to take place when the animal gets older and stronger; but if a defective formation of the urethra constitutes the cause there is not much hope for any improvement. The nature of the cause may possibly be ascertained by a careful examination.

A Fistulous Sore.—L. H. N., Preston, Kan. The abscess-opening or sore on the right side of the abdomen of your horse appears to be of a fistulous character, or, in other words, the source of the discharges, or the bottom of the abscess appears to be lower than the opening, and the abscess itself is probably deep, so that its bottom is not only lower than the opening, but also remote from the latter. Therefore it must be considered advisable to call on a veterinarian to probe the abscess and to perform the necessary surgical operation, and thus to provide a free discharge of the pus and the exudates from every part of the abscess. As long as this is not done any treatment for the purpose of effecting a permanent healing will be in vain.

Vitiated Appetite.—J. W., East Eden, N. Y. What you describe is a case of vitiated appetite usually produced if the food fed to the cattle lacks essential constituents needed and craved for by the animal organism. As a rule it is lime salts, phosphates and nitrogenous compounds. Consequently a cure is out of the question unless the diet of the animals is changed and food containing these constituents in sufficient quantities is given, and food rich in acids—sour slop, for instance—is strictly avoided. But as such a change of food does not at once remedy the vitiated appetite it is usually advisable to give each animal a hypodermic injection of apomorphinum hydrochloricum. The dose is three grains. Get a veterinarian to administer it.

Water Very Thick and Dark in Color.—J. I., Germania, Pa. All the information you give me concerning your horse is contained in the words contained in the heading. Consequently if your horse is sick, you have mentioned only one symptom occurring in several diseases, and a diagnosis, therefore, is out of the question. If, on the other hand, your horse does not show any other symptom of disease, it must be supposed that the abnormal quality of the urine is due to an unsuitable diet, and maybe poor care. If such is the case the remedy consists in removing the cause.

Cow Has a Very Hard Cough.—C. A. G., Danbury, Neb. It is very well possible that the feeding of the very musty alfalfa hay a year ago constitutes the cause of the morbid changes which produce the "very hard cough" your cow is troubled with, and that the disease of the latter is identical with what is usually called "heaves" in horses; namely, an incurable, chronic and feverish difficulty of breathing in horses. You can alleviate the difficulty of breathing and the irritation which causes the coughing if you see to it that the cow does not get too much voluminous food—in other words, is fed with less hay and more grain—that she is not allowed to become costive, that she is not kept too warm, and that she has always fresh and pure air to breathe. A cure is out of the question.

Worms in Sheep.—J. W. A., Waxpool, Va. The disease of your sheep is caused by a small round worm which inhabits in its embryonic stage the nodules on the intestines, and, undoubtedly, by its presence causes the production of the same, while some mature parasites have been found in the side of the large intestines. As the embryonic or larval worms do by far the most damage, and as the same are inside of their tumors or nodules, and thus in a safe place where no medicines can reach them, there is no known remedy. If many worms are present the disease very likely has always a fatal termination, while sheep which harbor but comparatively few of these worms may "pull through." Several years ago this disease was quite frequent in this neighborhood, while during the last few years not much was heard of it.

Hidebound.—A. V. W., Watkinsville, Ga. What is usually called "hidebound" is not a disease, but a condition produced either by some chronic disease leading to extreme poverty, or is the direct consequence of a long-continued insufficiency of nutritious food; in other words, starvation. Such a condition, if not produced by some still existing chronic disease, cannot be removed by medicines and "magic stock food," but only by good care and by feeding good, wholesome and nutritious food, which, at the same time, is easy of digestion and given in sufficient quantities. It seems that your mare has good sense in so far as she refuses the medicated food. Good grooming, not with an iron currycomb, but with a good brush, and pure and fresh water to drink, protection against the inclemencies of the weather, good and dry bedding to lie down on, and pure air to breathe, are also just as essential as good food.

Appears to be a Case of Heaves.—A. G. S., Viola, Mich. What you describe appears to be a case of so-called heaves. It cannot be cured, but you can considerably ease the animal if you feed very little rough or voluminous food, and make up the deficiency by feeding more grain. Tame hay should not be fed at all, unless it is of the very best quality, and even then only a very limited quantity should be fed. Of good wild hay, if it can be procured, a little more may be fed. Green and juicy food, if it can be had, may be substituted, otherwise a moderate quantity of good, bright and clean oat-straw may be given, and then, of course, the deficiency in nutrient elements must be made up by feeding more grain, particularly more good and clean oats, and some bran. A good bran-mash should be given whenever the horse shows any inclination to become costive. It is also essential to keep the animal in a place that is not too warm and in which the same has pure and fresh air to breathe. This, however, does not mean that the animal should be exposed to drafts of air.

Worms in Sheep.—D. S. W., Glasgow Junction, Ky. Tapeworms and other intestinal worms in sheep will be expelled by the following treatment: 1. Shut the sheep up over night in a place in which they cannot find anything to eat. 2. Make a solution of tartar emetic in distilled water in a proportion of ten grains of tartar emetic to one ounce of water. 3. Take a couple of vials holding each two ounces of fluid. Pour one ounce of water into one of them, and one and one half ounces into the other; then make on each a mark either with a file, with pen and ink, or with sealing-wax, to show how high the fluid stands. 4. Have three men to help you to drench the sheep; one to fill the vials with, the one with one ounce and the other with one and one half ounces of your solution, another one to catch and hold the sheep to be drenched, and a third one to take hold of every sheep as soon as it has been drenched and to lift it over a fence so that it cannot mingle with the others and be drenched a second time; you to do the drenching. 5. If a lamb born last spring is handed to you, drench the same with one ounce of the solution, and if an old sheep comes, ask for the one and one half ounce vial, and drench the animal with one and one half ounces of your solution. If the sheep handed to you should be a small or stunted one, one and one quarter ounces will be sufficient. The drenching, of course, must be done carefully and slowly, so that the fluid will neither be spilled nor go the wrong way—into the windpipe. 6. After having been drenched, the sheep should be kept for about six hours in a place in which they do not find anything to eat. After the six hours have passed they may be fed.

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THE GRANGE
 Conducted by MRS. MARY E. LEE, New
 Plymouth, Ohio

WHAT IT MEANS TO BE A GRANGER

Did you ever think what it means to be a Granger? Did it ever occur to your mind that the Grange is a unique organization in history? Did you ever think what its peculiar mission is in the world's progress? Never before in written history do we find an account of a like organization. We read of the uprisings of peasants to redress some grievous wrong, but never do we hear of them continuing their work as an organized body. When the fight was over they separated, each going to his own home. They did not know how it fared with their comrades-in-arms. To-day the farmers are organized not only to correct abuses, but to prevent them. They recognize that "knowledge is power." They keep in touch with the great outside world. They study history, that they may read the future by the past. But they are confounded with this new force in progress, the organized intelligence of the farm. No wonder they are amazed at the immense power in their hands. No wonder they can look with such calm gaze on the progress of events. They know that all over our land there are Grange halls. In those halls the boys and girls who are soon to go out into the world are learning lessons of self-reliance. They are learning how to think for themselves, and to carry measures through the intricacies of parliamentary procedure. They know that these young people can go into a deliberative body fresh and vigorous, with strong and trained minds, resolute wills and indomitable courage, and hold their own against any onslaught. They see them with their fingers on the pulse of trade, with firm touch, detecting the conditions and adjusting themselves to them, always keeping in mind the lessons of integrity, honesty, truthfulness that Mother Nature has taught them. And they look with calm superiority and benignity on the orators who grow pessimistic over the trend of events, and say, "Never mind. Don't worry. We are filling your cities with strong, self-reliant men and women. They are not going to be overcome by any wiles. We have been training them in our Grange halls, and they have played under God's great dome, with winds and storms for their play-fellows. They have studied history and science and economics with the world's great teachers. They will take care of themselves, and you, my pessimistic friend, and the times that are masquerading before them. We are constantly filling the ranks with trained heads and hands. And back of them is a great order with thousands upon thousands of noble men and women ready to uphold and strengthen the sons and daughters they have sent into yonder great city. We do not forget them when they leave the home nest, but we tell them they are forces in the great world. And the ranks are filled with new recruits to be drilled and trained for service. More than all that, we are making the country homes so attractive, so lovely, that the children dread leaving the home nest. They want to stay on the farm and develop its wonderful possibilities into realities. Do not worry, my friend. You have been telling the farmer of his wonderful power, but you did not believe it; not a word of it did you believe. And while you are lamenting over the condition of the world, and bemoaning its wickedness, we are sending men and women to solve the problems. For more than a third of a century we have been looking after our own interests, and we have helped you, too. We are stronger than ever before. You have been telling us of our power and intelligence; we believed it; you did not; we know it, and you are learning it."

And its mission? Oh, my brothers and sisters, you know its mission. Read your rituals. Study the opening and closing services until you comprehend their meaning. Study the overseer's proclamation in the opening service; make the master's charge in the closing service a part of your confession of faith. Why, you will be a better citizen, a better Christian, for spending an hour, a day, a week, incorporating those precepts in your mind. And then live them, my friend, live them.

Why not transact our public business in a businesslike way? "If the government would once accustom itself to do business in a businesslike way the savings all along the line would be enormous," says Hon. E. F. Loud. He goes on to show the immense expense incurred in the carriage of second-class matter, the "sample-copy" abuse, and the franking privilege whereby an immense amount of campaign literature is sent out free. He points out that "first-class mail matter pays on an average ninety-three cents a pound. The rate is two cents an ounce, but since the average weight of letters and postal-cards is very much less than the maximum allowed on first-class matter, the amount stated has been found to be the actual return. Second-class mail matter pays one cent a pound." Again he says, "If the sample-copy privilege were limited to its original intent there would be no call for its curtailment; but human ingenuity has made it a very easy weapon for 'playing' the mail service."

In one contract we note that for the 203,580 miles traveled \$203,580 was paid for carriage of mails. The income on postage was only \$3,590.

Orville J. Victor writes: "The government pays about \$5,000 a year for each postal-car and its transport. As a car is worth but \$4,500, in twenty years—the average length of life of such a car—the railway receives \$100,000 for the use of one car. The New York Central railway, we are told, receives an annual payment of \$3,088.09 a mile for transporting mail matter between New York City and Buffalo, a sum exceeding the amount required to pay interest on the cost of a double-track line from New York City to Buffalo. The Pennsylvania railroad receives annually \$3,801.53 a mile for its service between New York and Philadelphia.

Such examples might be multiplied indefinitely, but enough are given to show that we are not asking more than what is right, and also to show that farmers must come in close contact with the great outside world through daily papers to know of the enormous expenditures from which little return comes. Work for free rural mail delivery.

THE TRAVELING LIBRARY

No Grange can afford to neglect the splendid opportunities offered by the traveling library. In several states the only fee is the transportation charges. From twenty-five to forty books are sent out for three months, with privilege of renewal for three months longer. For information address the state librarian of your state. The state libraries are situated at the capitals of the various states. If by correspondence you find that your state has no such system, begin agitating the question at once. The farmers' institutes, the Grange and agricultural press are all good mediums through which to work. As an example of determination and pluck will cite Illinois. The plan was defeated in the Legislature. The president of the Farmers' Institute immediately asked for an appropriation of \$300 from the State Board of Agriculture, at the same time setting forth the advantages of such a system. The board, after careful investigation, was so convinced of the utility of the measure that it appropriated \$1,000. No doubt the Legislature will now come to its aid with a liberal appropriation.

New York has a \$25,000 fund to draw from, and has sent out hundreds of libraries to various sections of the state.

Wisconsin has had marvelously good re-

alized the help socially, financially and educationally that would result from the establishment of such a mail-route they would flood their representatives in Congress with petitions not only for free rural delivery, but with demands that some of the present abuses of the postal system be eliminated.

For instance, the postal subsidy law, which runs until 1905, is putting millions of dollars annually into the pockets of a great corporation. It was not the other fellow's party that enacted the law, but yours and mine. Both of them aided actively and passively in securing its passage. Keep your eyes open. Do not get excited when Old Glory is waved. Old Glory is all right, but watch who is holding the flagstaff. Do not go into ecstasies over the poor laboring-man. He was not much in evidence in harvest-time. Do not bother about manning American-built ships with American officers and seamen. That sounds well and tickles our ears. Promises are not always kept. Some way or other the fellow that waves Old Glory and shouts for the poor working-man has to be paid pretty heavily for his labor.

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New York has a \$25,000 fund to draw from, and has sent out hundreds of libraries to various sections of the state.

Wisconsin has had marvelously good re-

sults in furnishing to the rural communities through the Granges, clubs and schools thousands of the best books by the world's great writers.

Ohio, in 1897, appropriated \$4,000 for the establishment of a circulating library system. Up to May of last year 642 libraries containing 16,827 volumes have been sent out to small towns and rural communities. Who can estimate the value to the child and to the state?

In Michigan, the great Grange state, the results have been most gratifying, both in the number of libraries sent out and the interest manifested.

Nearly every township in Massachusetts now has its circulating library to aid in educating its youth. No wonder the percentage of illiteracy is so small in Massachusetts.

No one can estimate the value to the youth of the country of this plan of bringing to them the choicest thought of all the ages. What a leavening power it will have for good. Confront the young boy and girl with the examples of achievement of the world's heroes, and they will be encouraged to battle for mankind. I know of no greater educational advantage than that offered by the traveling library system. Let every Grange immediately determine to secure the benefits it will confer.

Your state has no traveling library? Well, there is no state in the union that does not have men and women of brain and courage who will seek to place their state in the list of its most progressive sisters. There is no state but that has many men and women of noble purpose and high resolve who feel that their life has been wasted, who in sadness of spirit look back over their lives, and sadly say, "I have done nothing to make the world better." (I will whisper to you that they have, but do not tell them; they might not work so hard.) Here is an opportunity for them to begin at once the agitation for a traveling library system. They may not know just what plan to suggest, but they do know the need, and they can arouse others to the necessity. The way will be found. Many state librarians are eager to try the experiment in their own states. They have been studying the methods of other states. Some of them have had sample libraries sent them. They are ready with a plan. They need you to show the necessity. Get in close touch with your public institutions. They belong to you. Use them. You help support the state library. See that you share in its benefits.

New York sends out lists of study courses, with necessary books. Any of the states, if you will but indicate what is to be the plan of study, will furnish books along that line. If you do not have any definite plan of work, indicate the tastes of your Grange. The librarian will do the best he can with the books at his command. Let every Grange act immediately on this subject.

ILLINOIS STATE GRANGE

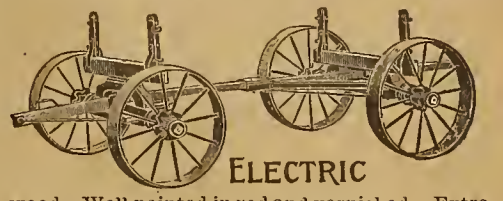
Illinois State Grange convened December 13th at Joliet, Ill. Large attendance and great enthusiasm marked the sessions throughout. A public reception was tendered the Grange, consisting of music and speeches by Mayor Mount and Major Thompson on behalf of the city and Will county. The responses by Patrons were good, of course. In answer to the Mayor's question as to what were the objects of the Grange, State Master Wilson responded in his happy style. "The fundamental principle of the organization is education in its broadest sense—education of the hand, mind and morals, and all that makes better farmers, housekeepers, mothers, better men and women. We believe education is lifting up the motherhood and sisterhood of the nation. We are here as learners; here to investigate and take whatever is of advantage to our homes."

State Lecturer George Bell, who contributed so much to the enthusiasm of the state lecturer's conference during National Grange, cited the following incident illustrating the educational value of the Grange:

"I met a La Salle gentleman who said, 'Do you know that La Salle is a very peculiar county?' 'Well, what of it?' I asked. 'In La Salle county,' answered my friend, 'there are five cities, each having over 10,000 inhabitants. There is not a county like it in the United States.' 'Well, what of that?' said I. The answer came, 'In La Salle county there are forty-nine supervisors, and out of that number seven make all the motions and do all the thinking for that body, which is the largest assembly in the state outside of the Legislature. And,' he added, 'every one of these seven are or have been members of the Grange.'"

BUY THE BEST

If you want the best low down wagon you should buy the Electric Handy Wagon. It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and rear hounds are made from the best angle steel, which is neater, stronger and in every way better than



wood. Well painted in red and varnished. Extra length of reach and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4000 lbs. anywhere. Write the Electric Wheel Co., Box 96, Quincy, Illinois, for their new catalogue which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.

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your own wood and save time and money. Saw your neighbor's wood and make from \$5 to \$15 a day. You can do it with an APPLETON Steel Frame Wood Saw. It is strong, durable, safe, effective and fast. Has the advantages of both tilting and swinging table saw frames; adjustable dust proof oil boxes—in fact all our latest improvements in wood saw construction. We have 4 styles of wood frame wood saws and the best SELF-FEED DRAG SAW made. Our new 160 page catalogue tells all about them and our shellers, huskers, ensilage and fodder cutters, shredders, feed grinders, horse powers, wind mills, steel tanks, etc. All are "APPLETON QUALITY," which is the best. Write for it today. Mailed free on request. Appleton Mfg. Co., 9 Fargo St., Batavia, Ill.

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Sows all Clovers, Alfalfa, Timothy, Red Top, all Grass Seeds, Flax, &c. Special hopper for wheat and oats. Sows 20 to 40 acres per day in wet, dry or windy weather. Puts on just exact amount of seed desired—don't waste any. Weighs only 40 lbs. Last indefinitely. Price list and catalogue free. O. E. THOMPSON & SONS, Ypsilanti, Mich.

Like a Bull Dog

for strength is the CHANDLEE FENCE. You build it yourself, you control all the conditions of height, weight, closeness of stays, cost, etc. It requires no expensive machinery. The secret is in the use of our CHANDLEE LOCK. It makes the stays stay where you put them, on any kind or size of wire. There is no twisting and consequent weakening of the wires. It's strong, handsome, safe and cheap. WE WANT AGENTS and will reserve exclusive territory for the right men. Write to-day for catalog, terms, etc. Tomorrow may be too late, for some other man may ask for the territory you want. CHANDLEE FENCE CO., 13 S. Howard St., Baltimore, Md.

SAW YOUR WOOD

RUNS EASY No Backache. SAVES DOWN TREES. EASILY CARRIED. weighs only 41 lbs.

With a FOLDING SAWING MACHINE. 9 CORDS BY ONE MAN in 10 hours. Send for FREE illus. catalogue showing latest improvements and testimonials from thousands. First order secures agency. Folding Sawing Mach. Co., 55 N. Jefferson St., K-40, Chicago

HOW MANY APPLES

does it take to make a barrel of Cider? No matter; it will take less if you use a HYDRAULIC CIDER PRESS and the cider will be better, purer and will keep longer. Don't buy until you get our catalogue. HYDRAULIC PRESS MFG. CO. 6 Main Street, Mt. Gilead, Ohio

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We offer you the best mill on the market at such a low figure that it will pay you to write us. Our mills have been on the market 50 years. They are the best constructed, least complicated and fastest grinding mills yet produced. Mills sent on approval. Prices cover freight. Send for illustrated catalogue. Address, LEONARD D. HARRISON, 12 Third St., New Haven, Conn.

Horse-High Bull-Strong Pig-Tight FENCE!

Over 100 Styles, plain and ornamental. Build it yourself at the actual wholesale cost of the wire. Don't miss this GOLDEN OPPORTUNITY. Write for our Catalogue and convince yourself how easily and cheaply it can be done with a Duplex Machine. KITSELMAN BROS. Box 278 Ridgeville, Ind.

SAVE THE MONEY

you are spending on repairs and by new wheels. It is cheaper and in every way better. We sell 4 Buggy Wheels, 7-8 in. Steel Tire for \$7.50 4 Carriage Wheels, 1 in. Steel Tire for \$8.00 Other wheels for other purposes at equally low prices. Write for price list No. 81 containing directions for measuring. WILMINGTON WHEEL CO., Wilmington, Del.

4 Buggy Wheels with Tire on, \$6.75 With Axles and Boxes Set, \$9.75 I make all sizes and grades. Carriage and Wagon Hardware of every description. Send for catalogue giving prices on wheels 7 to 4 in. tread, with full and plain instructions how to order. Address W. F. BOOB, Center Hall, Pa.

ICE PLOWS \$16.50. Circulars free.

H. PRAY, No. Clove, N. Y.



TO BE INDEPENDENT

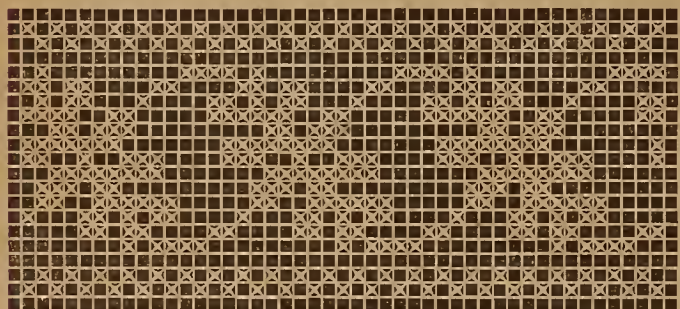


THOUGH present circumstances and surroundings may not indicate a necessity for the need of understanding any particular employment by which a living might be wrought, one is never certain of what the future holds in store. It is better to be prepared, for it is cowardly and weak to shirk care and responsibility. It is unbecoming a true, womanly girl, and she is fast awakening to the truth of it.

To be capable of earning for one's self a competence, whether it be necessary or not, has come to be recognized among the present-day "accomplishments" of young women. The daughters of wealthy parents, if the parents be practical and entirely sensible, are encouraged to master some branch of industry by which they might live and thrive did the time come when effort of the kind might present itself for recognition. And the girls thus equipped are the most thoroughly practical and sensible. Contact with the world, and an understanding of what it means to make one's way, and trained to a knowledge of responsibility, it rests less heavily and burdensome when the time comes for action; and the training cannot come too early to all our youth, both our "little men and women." But the suggestion of a teaching of practical things applies more particularly to girls, for boys and young men are more apt to be taught these things than are their sisters.

Self-reliance and independence should be instilled from infancy. Respect for all honest employment and for all who are honestly employed cannot be dwelt upon with too great force by parents and teachers. This teaching alone will work an unfathomable reform, and snobbery will entirely become unfashionable, while a general and wholesome respect for all that is respectable will grow in favor and popularity. To be capable of doing something well, or of doing many things well, is always commendable, and it is not an infrequent happening that such capability stands for bread and butter in the long run and where it had been least expected.

The daughter of a wealthy, retired physician has said that the happiest day of her life was the one on which a check was handed her through the mail for her first accepted work offered for publication. She was a bright and talented girl, and there was no manner of need of exertion of the kind. But through a love for "scribbling," as she termed her efforts, she was led to report (and to offer for acceptance or rejection) a very dress-affair reception at which she was in attendance as a guest and not as a reporter. She was delighted with the acceptance alone, but accompanied as it was with a check for five dollars, and a request for other society notes of general interest, she began to feel herself a woman of the business world, in a sense. And it was this that gave her keener pleasure than did the money, though she confessed that the earning of money was a real "confection sweet." She was well trained in home-keeping and housekeeping, and is now prepared to take



her place as mistress over a well-ordered home of her own, and to direct those in her domestic employ.

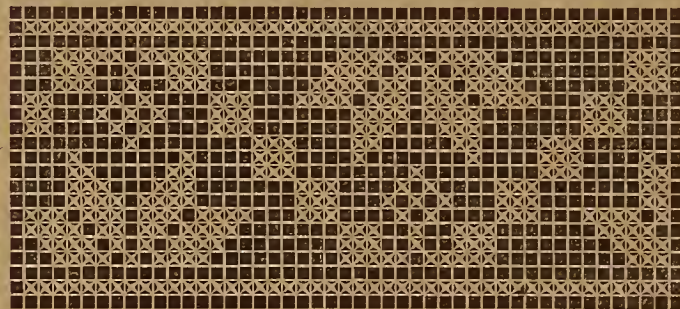
Said a mother of her daughter, who is now eighteen, "When my daughter has finished her schooling and is well along in music, and when she has mastered or has grasped well an understanding of some branch of wage-earning, I shall then put her into the kitchen with my trusty servant there and my good cook, and she shall learn culinary arts in every form, and will be taught to serve a meal in its completeness. She will also be taught good housekeeping in all

other departments of the home, when she will be fitted to move in good society with grace and tact and intelligence, and to be a good housewife and mother, or to provide for herself, if need be, the income that is necessary to every one that lives. To make my daughters practically self-reliant is my greatest ambition for them. The rest will all come in due time."

A young woman, well educated and of parents of ample means, who was left to choose some practical profession, but was told that something she must make herself proficient in, made a choice of millinery. The work grew more fascinating to her as she grew to be first an adept and then an expert in presenting rare and rich conceits for the admiration and purchase of her teacher's delighted customers. And she in turn became a successful teacher.

Not only does this bright woman teach the trade of millinery, but she teaches also the wisdom of being prepared to be financially independent; and she counsels all young women whom she comes in contact with to never look to marriage for support. "Be first ready and capable of self-support," she says, "and then if you do marry, whatever you know in any direction of useful work will never come amiss."

Not so very many years ago girls did look to marriage for support, and waited in parents' homes for the coming of such a time, instead of starting out and branching out for themselves, and fitting themselves for a business career of some kind. At present all this is changed, and it is not an uncommon thing to find our country girls, as well as our country boys, serving as waitresses in large boarding-houses at meal-times, and accepting as pay their own board. This enables many among them to attend schools and colleges in the city, where but for some such method of wage-earning or board-paying it would not be possible for them to attend. The serving-hours are not



long, nor the labor more than any strong girl can endure. It is, in fact, an agreeable change from the hours of study, and the landlady thus secures good and efficient service at a small figure, while her table-maids are paving their way to future possibilities for themselves.

In such employ we have found in the city both boys and girls, and have always felt a pride and an interest in them wherever we have known them. And especially in our girls everywhere do we feel a particular interest as we see them reaching out from home, determined to perfect themselves in some manner of employment that may be relied upon to return them a salary or a steady income when they are so far proficient as to make a success of their financial schemes and undertakings. It is not that we are more interested in our girls themselves than in our boys, or that we love girls better and care more to see them

succeed; but that so comparatively few of our girls as counted in numbers with their brothers ever do take the initiative step toward financial independence, while with our boys and young men it is expected of them as a general thing.

It has been urged that the young people be pushed out from the home nest, if need be, and forced to depend upon their own resources and capabilities, that of the boy may be made a self-reliant man, and of the girl a self-reliant woman. Homes full of weaklings instead of strong men and women are found in a great many communities of

wealth or in homes of affluence because of the too tender care of parents. Children forced to rely upon their own strength and judgment may be early taught the beauties and advantages of independence and the weakness of clinging and of acceptance of support. Every home should be a training-school for its young people from the age of their earliest understanding or capabilities of grasping truths and situations. Better a bequeathment to a child of right training in business principles and understanding, with no money to rely upon, than a fortune where capability of management and care of it is lacking. One will make of the recipient a man or a woman, while the other more often proves the ruin of either. And we would quote, "The child has a right to be turned out a finished product; not a mere useless mush-ball."

ELLA HOUGHTON.

HOME EDUCATION

From your children's earliest infancy impress them with the necessity of instant

obedience. Unite firmness and gentleness. Let your children understand that you mean what you say. Do not promise them anything unless you are quite sure that you can give them what you have promised.

If you tell a little child to do something, show him how to do it, and see that it is done. Always correct your children for wilfully disobeying you, but never correct them in anger. Never show your children that they can vex you or make you lose your self-command. If they give way to petulance and temper, wait until they are calm and then gently reason with them on the impropriety of their conduct. Remember that a little present punishment, when the occasion arises, is more effectual than the threatening of a greater punishment should the fault be repeated.

Never give your children anything because they cry for it. On no account allow them to do at one time what you have forbidden at another, and do not omit to praise and commend them when they really deserve it.

We would urge all parents to bring up their children in such a way that they can maintain themselves by remunerative labor. Give them trades or professions. The time has arrived when it is just as neces-

sary for girls to have some regular employment as it is for boys. Marriage has ceased to be "the chief end and aim of existence" in the minds of sensible girls. Matrimony is not a "haven of rest," but it is a condition where every faculty of mind and energy of character are needed to build up a happy and successful household. To marry "to be supported," as the phrase goes, is a very unworthy motive.

Every woman should learn some business by which she can support herself independent of a husband, should circumstances require it. The avenues to woman's work are constantly widening, and those parents are to be blamed who do not allow their girls to have a well-defined occupation. They will be more contented and happy with "business interests" to look after than simply waiting for some man to "fall in love" with them.

Where a number of boys cluster around the farmer's fireside it becomes a question of some importance what calling is best for them to pursue. It is seldom that more than one out of three boys is content to stay on the farm. It should first be ascertained what each one is best fitted for. A boy that develops a tact for hauling and using tools should be taught some trade. The mechanic arts are never crowded. And if a boy decides to be a farmer, time spent in learning the use of tools will come back to him with profit.

It is better to spend money in preparing your children to earn their own living than in keeping them hampered and ignorant in youth, so that you may lay up money to leave to them. One hundred dollars judiciously expended will often do a child more good than five hundred bequeathed to him.

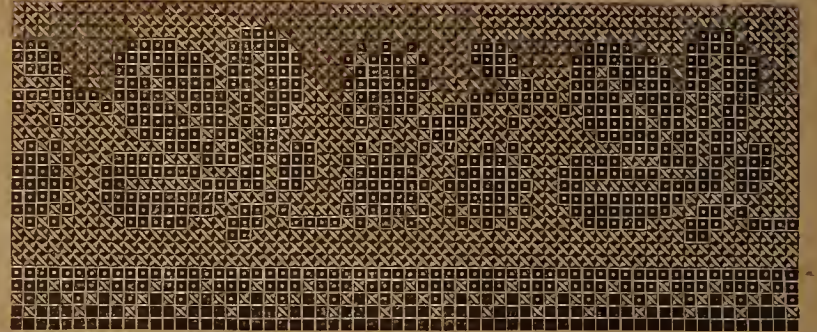
AUGUSTA MILLER.

CARE OF HOTBEDS

There are many plans and directions given for the construction of hotbeds, and the work is undertaken with a great deal of zeal, from the stacking of the manure to the planting of seeds.

The ground is kept moist, and there is eager watching for the first tiny sprouts that will appear. There will be a week or two of zealous care, and then the monotony begins, for there is nothing new to come, and the plants look just the same, except a new leaf or two. And now comes house-cleaning and spring sewing, and the hotbeds will be forgotten if you don't watch out, just when care is most needed if you wish strong, stocky plants.

On cool, frosty nights do not forget to shut down the sash, or partly close them if it is cool and not frosty. In the morning open the sash before the sun has a chance to stand directly over the glass and scald the leaves, as it will on very warm spring days. It is better to water the plants toward evening, as the earth will stay moist much longer than if the sun is pouring down heat



to bake it and leave big cracks traveling across in every direction. Also when watering do it thoroughly; let the roots get a good soaking and they will stand the morrow's heat without wilting.

If possible, when plants have three or four leaves transplant to small crocks and leave in the shade a day or two and then place in the sun again, either in the hotbed or a cold-frame (which is the same without the manure at the bottom), and when ready to put the plants in the garden they will slip out of the crock so easily that the roots will not know they have been touched, and the growth of the plant will not be retarded; sometimes it will not even wilt during the transplanting process.

GYPSEY.

TWO DAINTY DESSERTS

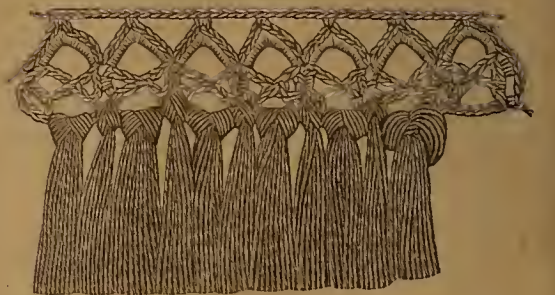
LEMON CREAM.—Five eggs, two lemons, one half pound of powdered sugar. Beat the yolks with the sugar, juice and grated rind of the lemons. Put on the fire and let come to a boil, then add at once the stiffly beaten whites. Remove from the fire, pile high in a dish, and let cool. Give a few vigorous beats before sending to the table.

APPLES AND CUSTARD.—One pound of sugar, one half pint of water. Let boil up, then add two pounds of peeled and chopped apples. Cook until thick, put in a mold to cool, turn out, and serve with cold boiled custard.

MARY M. WILLARD.

CROSS-STITCH

For decorative work cross-stitch is being revived, and is used in numerous ways—upon pillows, table-covers, ends of towels and even upon articles of dress. A very pretty idea in a child's dress can be worked up during the winter for summer wear by



using the cross-barred muslin that comes in an even check, and working the pattern in the turkey-red or blue cotton. By using the wash-silks any color could be chosen. Very pretty toilet articles can also be made of the same material. The canvas that comes in large weaves can be worked beautifully for table-covers by using several different silks, as gold in the border and two shades of green and two of old rose in the middle pattern. The introduction of some black makes it very effective also. A crocheted and knotted fringe, as illustrated, can be used as a finish.

B. K.

Ivory Soap is 99 $\frac{44}{100}$ percent Pure



From the painting by
Jessie Willcox Smith

A Good Foundation

A careful builder insures the permanency and strength of his building by laying foundations of the best materials. The good housewife lays a foundation of Ivory Soap and rests upon it the cleanliness and comfort of the family. It pays to use the best materials and the Ivory is the best Soap.



It Floats

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Any person wishing a copy of this picture may mail to us 10 Ivory Soap Wrappers, on receipt of which we will send a copy (without printing) on enamel plate paper, 14 x 17 inches, a suitable size for framing. THE PROCTER & GAMBLE CO., CINCINNATI



A LULLABY

BY ELLA BARTLETT SIMMONS

Rock-a-by, hush-a-by, baby, my sweet,
With cunning wee hands and tiny pink feet;
Tired are your eyelids, so shut out the light—
Rock-a-by, hush-a-by, baby, to-night.

Rock-a-by, hush-a-by, baby, my dear,
Angels are guarding, and mama is near;
List, while I sing you a loving sweet song—
Sleep, darling baby, all through the night long.

Rock-a-by, hush-a-by, baby, my own,
Now I have company—am never alone;
Since you came from heaven my comfort to be,
Baby and mama great chums, yes, are we.

Rock-a-by, hush-a-by, baby, my all;
But God watches even the sparrows that fall,
And will bring us home to papa some day,
Where sorrow and sleeping have passed away.

SIMPLIFY THE HOME WORK

THE holidays are now gone, and in too many cases they have left the whole family tired and glad of a season of rest. No matter how we may plan each year to begin early with our holiday preparations, the week or two before Christmas is almost sure to be crowded with many things which must be done. There is sure to be a call for extra exertion by every one, but upon the house-mother comes the greatest burden. Besides the planning, selecting, making and buying of Christmas gifts, she wants her larder to be well stored with the delicacies of the season, and the house prepared for Christmas guests. But no matter how tired we get; no matter if there are some disappointments, and perhaps some sad memories brought by these days, yet the season is precious to all, both old and young.

During the next two or three months, before spring work begins, we will have time to rest, to read and to visit. It is a good plan, too, during this time to look over the supply of linen, table, bed and clothing, and replenish the stock while it may be done leisurely and no other work crowding. Then, almost always linens and muslins may both be bought in January to an advantage.

For every-day wear the half bleached table-linen is the most economical. It looks well even at first, and very soon bleaches perfectly white. I also prefer to buy unbleached sheeting for every-day wear at this time of year. It is warmer to sleep in, will be bleached white by spring, and wears longer than the bleached. There is also an advantage in buying pillow-casing that is woven double, needing no sewing except to hem and sew up the end. When these pillow-cases are partly worn rip open the end, fold the other way, and sew up again. They will wear a third longer than if you could not turn them.

Now is a good time to begin to simplify the home work. Sometimes those of us who have been accustomed to a certain routine for a long time forget that there may be a better way, and are inclined to criticize our neighbors who do not follow our plans. I grant that the house and its belongings should be kept clean and tidy to be healthful and comfortable, but must the tables, floors, etc., be always scrubbed to snowy whiteness? It will save work to have the kitchen floor oiled or painted; then it may be easily

mother can afford to grow away from her children or let them pass on and leave her behind. It is not a wise plan to use up all one's strength when young and then have to drag through the later years of life with no energy to do or enjoy. It is economy that wastes instead of saving.

Think of this, young housekeeper and mother, and be assured that the wisest economy is that of your own health and strength. If it is not possible to have help in your work, then study in every way to simplify it. The family are just as happy and more healthful with plain food for their daily fare, and will appreciate an occasional

thought away from the mind of Mrs. Brace, and she was happy to be allowed to be in even the reception.

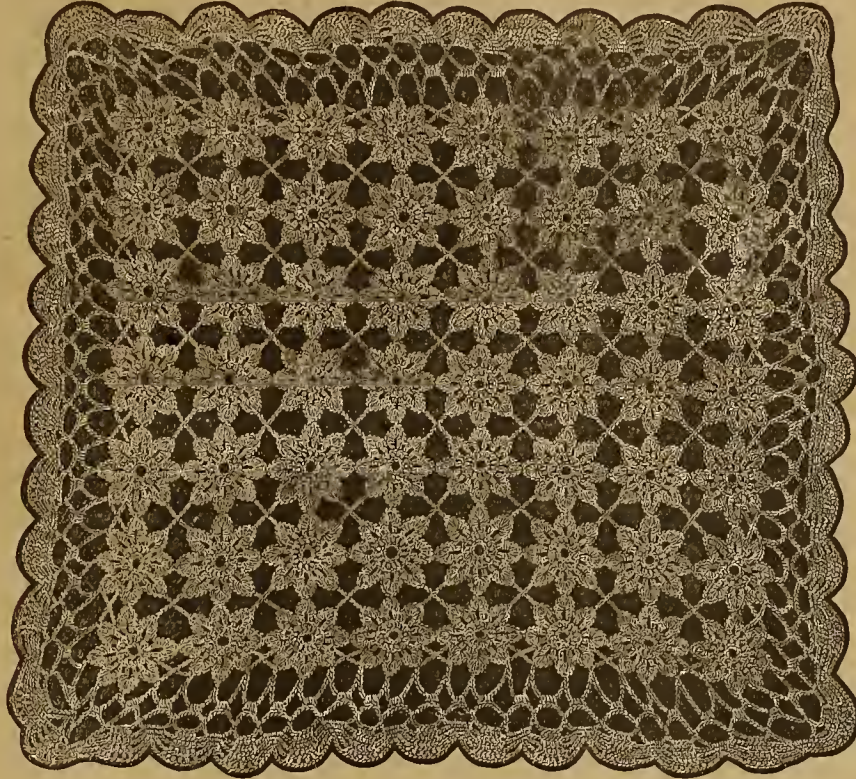
As she went to shake hands with the bride and groom the little bride said:

"Oh, Mrs. Brace, I am sorry you came so late! Couldn't you have come earlier?"

But without answering Mrs. Brace moved on to give others a chance to greet the bride. Soon the father and mother of Blanche, turning to one side, said to Mrs. Brace:

"I am so sorry you were late. Why did you not come to the ceremony?"

"I came very soon after nine," replied Mrs. Brace.



we were invited to the dining-room to dinner, the crowning plate of which was a finely roasted turkey.

We joked the family considerable that we should have had the foresight to come upon the day they were having turkey for themselves. After dinner Mrs. Logan was showing us about her convenient farm-house, explaining a great many nice contrivances, when she opened the door of her cold-storage room and showed us at least twelve turkeys (frozen, of course), dressed, stuffed, and every bit ready to be slipped into the oven at a moment's warning. She told us that when we drove up the turkey we had for dinner was hanging there with the rest. She told us that each year she attended to the raising of a large number of turkeys, and besides what they sold she each year had from fifteen to twenty killed, and prepared them for her own use at home. By killing them after the cold weather really set in they saved feeding so many; then they were ready for any emergency.

We suggested the possibility some years of a thaw and time of warmth, but she said, "I could sell them any day in the village market. I would not let them waste, for I could give them to friends." She added that she always allowed at least two for the minister's family during the winter.

For people who were not wealthy her farm life was ideal. She did a great deal of work with her hands, but she also did much with her head, and her husband was in full sympathy with her suggestions, also originating many plans himself.

She loved her life on the farm, and said they tried to have some of the comforts to which she believed a farmer and his wife were entitled.

MARY JOSLYN SMITH.

WEAVER-BIRD LACE

ABBREVIATIONS.—O, over; n, narrow; k, knit; p, purl.

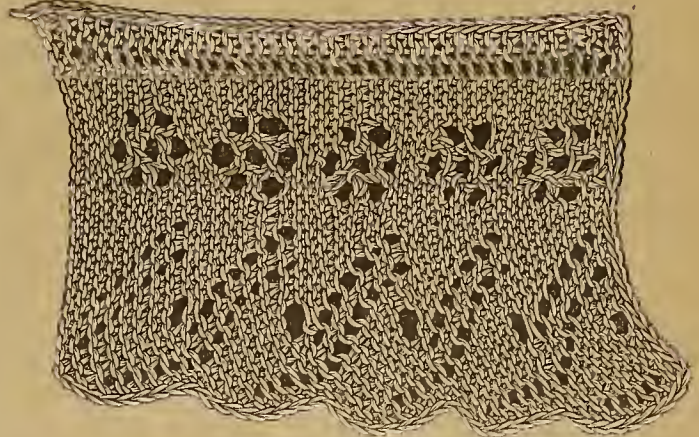
Cast on 26 stitches, using No. 10 white thread. Knit once across plain.

First row—Slip 1, k 2, o, n, k 3, n, o twice, n, k 3, o, n, o, n, k 1, o four times, n, k 1, o, n, k 1; turn.

Second row—Slip 1, k 5, p 1, k 1, p 1, k 10, p 1, k 9 stitches; turn.

Third row—Slip 1, k 2, o, n, k 1, n, o twice, n, n, o twice, n, k 2, o, n, o, n, k 6, o, n, k 1; turn.

Fourth row—Slip 1, k 16, p 1, k 3, p 1, k 7 stitches, turn.



Fifth row—Slip 1, k 2, o, n, k 3, n, o twice, n, k 5, o, n, o, n, k 5, o, n, k 1; turn.

Sixth row—Slip 1, k 18, p 1, k 9 stitches; turn.

Seventh row—Slip 1, k 2, o, n, k 1, n, o twice, n, n, o twice, n, k 4, o, n, o, n, k 4, o, n, k 1; turn.

Eighth row—Repeat same as fourth row.

Ninth row—Slip 1, k 2, o, n, k 3, n, o twice, n, k 7, o, n, o, n, k 3, o, n, k 1; turn.

Tenth row—Repeat same as sixth row.

Eleventh row—Slip 1, k 2, o, n, k 15, o, n, o, n, k 2, o, n, k 1; turn.

Twelfth row—Slip 1, knit remainder plain (28 stitches).

Thirteenth row—Slip 1, k 2, o, n, k 16, o, n, o, n, k 1, o, n, k 1; turn.

Fourteenth row—Slip 1, and bind off three stitches, leaving the slip stitch on the needle. Knit the remaining twenty-four stitches plain. Repeat from first row for length required.

ELLA MCCOWEN.

TRAY-CLOTH

For this you will need No. 20 white sewing-thread. The wheels are made separately and then joined. Make a chain of six, and join. Into this put twelve single crochet.

Third row—Two double crochet in every other stitch, with a chain of one between them, or eight shells. Into these put eight double shells, finishing the edge with deep scallops of fifteen stitches in each. Finish with any kind of a pretty border when joined together.

E. B. R.

[HOUSEHOLD CONCLUDED ON PAGE 17]

dainty the more. A cheerful, happy woman is a better appetizer than rich and dainty food with the mother tired and—yes, I will say cross, for tired nerves will rebel.

If all women would reserve their physical strength and increase their mental strength in their early womanhood we would not have so many cases of nervous and physical wretchedness in middle age, nor so many motherless children.

MAIDA MCL.

THE ETIQUETTE OF CARDS

Mrs. Brace was one of the women in reduced circumstances, a widow, of which the world is pretty full, but her friends had never slighted her; they had seemed to value her for herself, and not for her husband's former position or means. Year after year she had received invitations from her friends in the set in which they moved, although she gave no companies and made no effort to return the compliments received.

There was to be a wedding at the house of one of her very wealthy friends. Two hundred were bidden to the ceremony at seven, while a thousand received invitations to the reception at nine the same evening. Mrs. Brace opened her invitation—and read in handsomely engraved letters:

Mr. and Mrs. Blank
request the honor of your presence
at the wedding reception of their daughter,
Blanche Blank,
to
Harold White,
on Wednesday, October —, eighteen hundred
and ninety-seven,
at nine o'clock.
— Street City

Inside this invitation was a card with:

CEREMONY
SEVEN P. M.

"Yes," replied the hostess, "but you were invited to the ceremony."

"No," replied Mrs. Brace, "my invitation said to the reception at nine."

The hostess continued, "Was there not a card inside which said, 'Ceremony, seven P. M.?'"

"Yes," drawled out Mrs. Brace, "but I thought—"

When Mrs. Brace went home she kept saying to herself, "Maybe 'where ignorance is bliss 'tis folly to be wise.' But ignorance

is not always bliss. I quite pride myself in keeping up with the etiquette of cards, but I have missed it this time, and see what I have suffered in feeling just because I did not know enough to know I was invited to the ceremony as well as the reception! I know a person must try to keep up with the fashion of cards or risk some terrible blunders in society matters. I cannot take this card, being inside, as a fixed law, for the rule might change in a very short time."

Later Mrs. Brace took a sort of melancholy satisfaction in knowing that several distinguished people stayed at home from that same wedding ceremony because they did not understand the present etiquette of cards.

MARY JOSLYN SMITH.

READY FOR EMERGENCIES

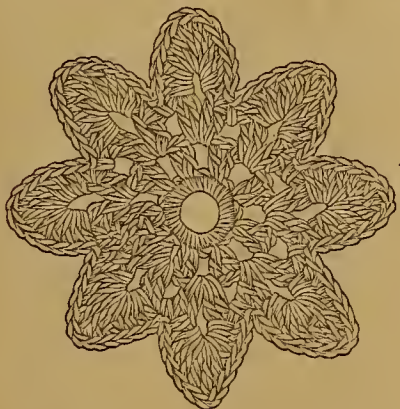
No short article, I am sure, has appeared in the FARM AND FIRESIDE for a long time which has created as much interest among women in the farming country as has "Canned Hens," and no one need be surprised to see it copied many times in the rural papers.

Canned hens were ready for use at any time of the year, but my story of turkeys is only applicable to the winter season.

It was a morning in midwinter when the sleighing was perfect that it occurred to my mother that she and I would go and spend the day with a friend who lived on a farm seven or eight miles away from our village home.

Mother said, "I would not think of going unexpectedly to some homes, but if Adaline is at home it will be all right. She seems always ready; at any rate we will have a fine sleigh-ride."

We went swiftly enough, and found host and hostess at home, who gave us the heartiest of welcomes. Shortly after our arrival we were served to a nice lunch, mother having a delicious cup of tea. We enjoyed our visit very much, and soon after one o'clock



kept clean with a mop, and needs no scrubbing. I sometimes spread a large newspaper by the side of the stove when cooking, and if your kitchen-table is not covered with oil-cloth, or, better still, with zinc, keep clean newspapers on it and it will be clean and look tidy without scrubbing.

If each housekeeper would give more thought to simplifying her work she could find many ways of lightening her burdens, live longer and be happier. It is gratifying to one's pride to be called the best housekeeper in the neighborhood, but isn't it better for a woman to save her physical strength and have some energy left for reading and conversation which will keep her abreast of the times and make her companionable in her own household? No

THE STORY OF AN OVERFLOW

By Pauline Shackelford Colyar

CHAPTER V.

WELL, mother, how do you like the Loftons?" inquired Buford the day Mrs. Buford and Nellie made their first call upon the new-comers.

"Mr. Lofton was not at home," came the reply, "but his wife is one of the most pathetic-looking little women I ever saw."

"We had to advance Lofton a month's salary to pay for their move over here," said Buford, filling his pipe from a Satsuma jar on the mantelpiece. "From all I can learn, their lines have not hitherto fallen in pleasant places," he added, applying a lighted match to the bowl. "Poverty is doubly hard to bear when a man has a helpless family dependent upon him."

"The house is very meagerly furnished, but as neat as a pin," said Mrs. Buford.

"And oh, father, they have the cutest blue-eyed baby," ventured Nellie, her face beaming with smiles. "She wasn't a bit afraid of me, and I held her in my lap a long time, and her name is Debbie." "She made me think of you, dear, when we four—when you were about her age," rejoined the mother.

"But I have lots of hair, and she is just as bald as a—" and the child looked about helplessly, searching for a simile.

"Once upon a time you were quite as bald as she is, little lady," said Buford, laughing and catching his daughter up in his arms. "But no matter what the others are or not," he murmured, tenderly, "we wouldn't give our baby for all the others in the world; would we, mother?"

It was about two months after the opening of school that Buford came in one day hearing a pleased expression on his countenance and holding an official-looking blue envelope in his hand. There was a hint of frost in the air, and a bright wood-fire crackled in the fireplace. Mrs. Buford sat at the sewing-machine working on a winter frock for Nellie, and it was only after her husband had seated himself in a chair at her elbow that she looked up from her stitching.

"It is next to impossible to keep this braid straight, but it will make a pretty little school suit. Don't you think so?" and she held up the small garment for inspection.

"You are a first-class doll's dressmaker, my dear," Buford assured her, smiling his approval, "but I want your attention a moment now about a more important matter."

"I am entirely at your service," Mrs. Buford replied, laying her sewing in her lap and crossing her hands over it.

"I have a letter here from Kemble & Kemble, attorneys at law," said Buford, without further preamble, "stating that Uncle Peter Gilbert has recently died, and I, as his next of kin, come into possession of a sawmill and a large tract of heavily timbered land adjacent to it—both in Arkansas."

"But what about Henry, his son?" demanded the wife.

"I learn from this—indicating the blue envelope—that he died some months before his father did. You know he has been a sort of rolling stone ever since he lost his wife, and he was killed in a drunken brawl somewhere out in the West. Our family have always been poor hands at letter-writing, and we have not kept up with each other as we might have done."

"Well, it seems too good to be true," exclaimed Mrs. Buford, joyfully; but suddenly recalling the fact that it was death that had brought her her happiness, she altered her tone. "I never supposed the old man owned any valuable property," she said, sedately.

"This Arkansas land has been a hobby of his for years," Buford explained, "but it is only since a railroad was built in that section that it has amounted to anything; and although I rejoice in our good fortune, I wish from the bottom of my heart that the poor old man could have longer enjoyed his success."

"But now that it is yours, what are you going to do with it? Surely it will not necessitate a move to Arkansas?"

"Not if I can avoid it. But before I can decide upon anything definite I will have to go and look over the property for myself. The moment I read the letter, however, I formed a hazy sort of plan which may possibly mature into something tangible." He hitched his chair a fraction nearer, and lowered his voice, though there was no one else in the room. "Lofton is a bright, energetic fellow," he went on, "but school-teaching is too confining for him. He wanted to get out of the swamp and this was his only chance for doing so. He was telling me the other day that he feared his health would compel him to seek outdoor work, and I believe a year or so in the piny woods of Arkansas would be the making of him. Besides, if things turn out as I hope they may, I could afford to pay a capable man a good round sum as manager, and Lofton, poor fellow, needs money as much as health."

"I would be so glad to be able to do them a good turn," said his wife, smiling her satisfaction.

"Well, don't give them or anybody else a hint of all this," admonished the husband, rising from his chair. "There will be plenty of time after my

return, and it would be dreadful to raise false hopes. I expect to start some day this week."

A protracted absence from home was such an extraordinary occurrence in the life of Taylor Buford that he grew genuinely uneasy over the prospect of leaving. Indeed, an air of gloom overhung the entire household, and the forebodings of her parents were voiced by little Nellie when she announced, tearfully:

"I feel like something awful is going to happen to us while father is gone."

But the days went by much as usual—dreamy, peaceful autumn days—and toward the end of the week Mrs. Buford sent a note by Nellie when she started to school, asking Mrs. Lofton to come the next morning and take dinner with her. The two women had grown to be good friends during the short period of their acquaintance, and the very dissimilarity of their temperaments seemed only to draw them more closely together.

"Tell her I shall be all by myself," admonished the mother, as the child kissed her good-by, "and that she must come early and stay late."



"GOD GAVE HER TO ME, AND SHE IS MINE"

The air was bracing and cool, and the woods a riot of crimson and gold. The little path along which Mrs. Lofton came wound in and out under the tall pines—now in sunshine, now in shadow—while overhead the long pendant gray moss swayed gracefully.

Mrs. Buford noted a tinge of color in her pale cheeks when she reached the house, and welcomed it as a harbinger of coming health.

"You see I brought my fancy (?) work along with me," said the visitor, with a wan little smile, as she unrolled some small garments, and began to make buttonholes. "As a girl I was considered right skilful in embroidery, but with three little ones to sew for I never find time for anything but the necessities."

"I hardly see how you manage with three," was Mrs. Buford's rejoinder. "I find my own hands full with one."

"Well, I have at least this advantage over some mothers," said Mrs. Lofton, "my children are all girls, and such stair-steps that their clothes descend from one to another."

"How glad you must be that none of them are boys," suggested Mrs. Buford. "But maybe you don't feel about it as I do. In thinking of myself with a son I am always reminded of the chicken-hen that hatched out a duck."

"No, Mrs. Buford, I have never had a son," said Mrs. Lofton, gravely, "but my first-born was a beautiful little girl who died when she was but six months old. I have not mentioned it to you

before," she went on, without waiting for a reply, "but it is a grief that is always with me—one that even time does not soften—for it was because of my carelessness, because of my leaving her, that she was taken from me."

"Oh, my dear, you are too hard on yourself. I am sure you never knowingly neglected your child," said Mrs. Buford, with ready sympathy.

"No, not knowingly, thank God!" came the answer. "That is the one ray of comfort. I was young—too young to have been a mother, perhaps—and I meant to have been gone only a few moments, and—" she covered her face with her hands and burst into a passion of sobs.

"Don't, dear; don't talk about it, my poor child," murmured the older woman, her own eyes misty with tears. "Try not even to think of it."

"But I must! I want to!" cried the other. "Nothing could be worse than this repressed misery that has gnawed at my heart all these years. You care for me, you sympathize with me, and since Cousin Debbie died there has been no one else to whom I could pour out my sorrow, for my husband, poor fellow, his burden was already heavy enough. Then, too, he does not look upon it as I do. He does not blame me."

"If it brings you relief, dear, tell it to me," urged Mrs. Buford, taking the other's hand in her own warm clasp.

"We were so young and light-hearted then, and life seemed full of hope and promise," the visitor began, after a pause. "When John secured the management of the big Dupont plantation I felt that his success was assured. We lived—"

shoulder to shoulder on the sodden levee, John's careworn face, and then—then, with the suddenness of a lightning's stroke, the yawning crevasse, the swirling, roaring torrent, and over in the distance my baby in the little white cottage awaiting her doom!"

So intent was the speaker upon her recital of her own misery that she did not note the sudden change in her listener's countenance. From the first Mrs. Buford had given her undivided attention to the mournful story, but now she sat as rigid as though galvanized, with drawn, set face and distended eyes.

"It scarcely took as long as the telling has done," Mrs. Lofton went on, "before, as far as the eye could reach, there was nothing in sight save a wild waste of water; but in that short time my husband, too, had left me. Frenzied with grief over our baby's peril, he plunged into the seething flood in the vain hope of saving her, and it was hardly short of a miracle that he was ever—"

"But the baby—the baby!" the other broke in, almost fiercely. "What became of her?"

"For months afterward," came the reply, "I hoped and prayed that at least her little lifeless body might be given back to us, but even that was denied me."

"Then how do you know that she was drowned? How do you know that she was not rescued?" demanded Mrs. Buford.

"Oh, the time has past for such arguments as these," replied the mother, with a gesture of dreary dissent. "Long ago poor Cousin Debbie, in the goodness of her heart, tried to buoy me up with such false hopes, but they brought no comfort. I knew God had taken our darling."

"But you did not know—you could not know!" retorted Mrs. Buford, in the same savage tone. "You say the hall door was open, that the baby was in her cradle. Why might not it have drifted away unharmed?"

"What chance had a baby in that seething torrent!" interjected Mrs. Lofton.

"But if the cradle had floated there would certainly have been a chance," came the rejoinder. "What sort of a cradle was it?"

"A little rattan one that was light and easily moved about from place to place."

"And don't you see that the mattress might have kept it afloat for at least a little while, long enough, perhaps, for some one to have found it—some one who did not know whose child it was—some one who thanked God for the little treasure—some one who now loves and cherishes her as though she were her own?" Every word she uttered fell like a drop of molten lead upon her own heart, but some irresistible force seemed impelling her to speak. "You have no proof that she was drowned."

"Oh, if I could only believe what you tell me was true!" cried the mother, her voice all quiver with emotion. "Even though I should never again be permitted to see my child, I would be the happiest woman in all the world. But I shall never know—never know!"

"Was there nothing by which you could have identified her?" was Mrs. Buford's next question, and her voice sounded strained and unnatural.

"To have identified my baby?" reiterated Mrs. Lofton, incredulously. "What did I need more than my own heart? I would have known her among a million of others, just as I would know her to-day were she alive. I have but to close my eyes, and I see her again just as I left her that last day, the beautiful little face, with her lashes sweeping her cheeks, one chubby fist holding the coral beads around her neck—"

"Coral beads!" echoed Mrs. Buford, hysterically. "Why, of course, I might have known—all babies wear coral beads."

The strain was telling upon her overstrung nerves.

"How selfish I have been!" exclaimed Mrs. Lofton, contritely, as she observed the change. "What right have I to burden you with my sorrow?"

The timely arrival of another visitor diverted the conversation into more peaceful channels, but the day dragged tediously, and when, after dinner was over, Mrs. Lofton announced that she had promised the children to be back early, Mrs. Buford did not urge her to remain. Nellie found her mother waiting for her at the grove gate that afternoon upon her return from school, and the child was startled by her impassioned greeting.

"Oh, my darling!" she cried, crushing the little one to her breast with fierce, impassioned strength, "it would kill me if they took you from me. You have been the light, the joy of my life."

"What makes you talk like this, mother? Nobody could take me away from you, could they?" demanded Nellie, while visions of swarthy faces in gipsy tents flitted through her infantile mind.

"No, dear, no; nobody could take you from me—nobody!" And the pretty upturned face was covered with kisses.

When night came, and Nellie was tucked away in her little bed, the poor woman began once more the battle with her conscience which she had so relentlessly waged all day. The wind was rioting through the trees outside, and ever and anon a bough from the oak beside the house rapped sharply upon the window-pane, as though clamoring for admission. Hour after hour she walked the floor, torn by contending emotions, desolate and alone. There was no one with whom she could share her vigil, no one to whom she dared confide her dread secret. It seemed a veritable mockery of fate that to-night, of all times, she should be deprived of her husband's counsel, of his aid, in this, the greatest trial of her life.

"They shall never know! The child is mine! God gave her to me!" she cried out once, with almost a menace in her eyes as she paused beside the little white bed where Nellie lay. For a moment she stood there in a rebellious, unchristian mood, but out of the darkness suddenly arose the

"The Dupont plantation?" reiterated Mrs. Buford. "Why, that was only a short distance from our home in Louisiana."

"We lived in a little white cottage in sight of the river," the narrator went on, unheeding the interruption, "and I took such pride in my flower-garden. Everything flourished in that rich soil, and as for Mary, our six-months-old baby, why, she was as strong and vigorous as my plants. But all this happiness was as deceptive as the calm which precedes the storm. Everybody had been predicting an overflow, and it was but a little while before Cairo, Greenville, New Orleans and a number of smaller towns were reported under water."

"That must have been in '82," said Mrs. Buford, her thoughts reverting to that fateful year.

"Yes, in '82," came the answer, "and from the moment that danger threatened John's one thought by day and dream by night was to save the levee. I was sure it would hold—we all were—but I saw that John was overtaxing his strength, and that last day he did not come to his dinner, although he had been at work since daylight. I was anxious about him, so I took it to him—his dinner and some hot coffee—and as my baby was asleep, I kissed her good-by and left her there in her cradle beside the open door of the hall."

There were long-drawn pauses between her words now, and the compressed misery of years was in her eyes.

"Oh, God! how it all comes back to me—the steady downpour of rain, the negroes working

wan, pale face of that other mother who had mourned her baby as dead all these years, and her better nature quickly asserted itself. It was characteristic of the woman that, after coming to a final decision, she no longer wavered, and the sense of absolute resolve brought with it conscious strength.

The sitting-room door stood ajar when she reached the home of the Loftons the next morning, and so self-absorbed was she that she thrust the door open without even the conventional knock. The young mother sat there rocking her baby to sleep, and singing to it softly as it lay in her arms, when she was startled by the sudden apparition.

"I hardly knew you, Mrs. Buford. What is the matter?" she cried, springing to her feet in alarm at the changed appearance of her friend.

"Hush!" said the other woman, with a silencing gesture. "Let me expiate my sin, if sin it be; let me lift your burden while yet I have the strength. Your baby was not drowned. God did not take it to himself, but sent it to me—to me whom he had denied the joy of ever having a child of my own. We found it, Taylor and I, that awful day floating in its cradle upon that waste of water. It was cold and wet, but I wrapped it in a shawl and held it close in my arms, and—never a child gladdened two sad hearts as this one did. Not until yesterday did I suspect that she was yours, or even that her mother was alive; but as soon as you began your story I knew, God help me, though I tried not to believe it. Look, these are the clothes she wore, and these are the coral beads."

Until now Mrs. Lofton had listened incredulously to her friend's recital, feeling assured she was laboring under some mental aberration; but at the sight of the coral necklace, of the tiny garments, she seized them with a cry of indescribable pathos and yearning, and, covered them with kisses, while tears of joy rained down her cheeks.

"But my baby, my darling, where is she?" she demanded, eagerly.

"Your baby—yours!" cried Mrs. Buford, falling upon her knees at the other woman's feet. "God gave her to me, and she is mine—mine! I might have kept silent, and then you would never have known, but I could not purchase my own happiness at the price of yours. You have your three children—the baby—the other two—and she is my all. You gave her up long ago. She has been dead to you all these years. Do you think you could ever love her as we do? Would you—could you take her from us?"

Her eyes were streaming with tears, her voice shaken with sobs. For a moment Mrs. Lofton did not trust herself to reply, but her arm stole around the other's neck, and she was still holding her thus, with the sleeping baby cradled between them, when she suddenly murmured, with ineffable tenderness:

"No, dear friend, the child shall never know. Your generosity shall not exceed mine. As you say, I feel that the hand of the Lord was in it—that he sent you to save her, and I have no right to take her from you. But to know that she is alive, that she is safe and well, that she has been so sheltered and loved, I could shout aloud for joy!"

The baby stirred in its sleep, and the two mothers, smiling through their tears, hushed it softly.

CHAPTER VI.

"I am not afraid to have the child know the truth," Mrs. Buford had said to Mrs. Lofton the morning she made known to her the little one's identity. "I am secure in her love for us, and I always meant to tell her even before I knew she was yours. I was only waiting until she was old enough to understand."

And that same evening, after supper, when the servants were gone and the two quite alone, Mrs. Buford kept her word. Her heart was in the story, and with more eloquence than she knew she pleaded her own cause, dwelling alike upon the loneliness of the childless couple (she had as yet called no names) to whom Fate sent the tiny waif and the great happiness that came with it. Nellie sat in her lap listening, silent and absorbed, until she reached the part where the two mothers met—when to the one the parentage of the child was no longer a matter of uncertainty.

"And did she ever tell the other mother?" demanded Nellie, her big blue eyes swimming in tears.

"Yes, dear; she knew she could never again be happy with the weight of such a secret upon her heart, and God gave her the strength to do what was right."

"But she didn't take the baby away from her, did she, mother?" queried Nellie, with earnest protest in her voice. "You know she had three more children, and the other poor lady didn't have but just this one. I don't think she was good a bit if she made her give it back to her."

The pronouns were very much mixed in the latter part of this sentence, but Mrs. Buford understood, and the sweet words of sympathy (even though the child did not as yet know whose cause she was championing) fell like a soothing balm upon her heart.

"No, my darling," cried the mother, clasping the little girl close in her arms, "she did not—she could not take you from me. You were the baby left in the cottage that day," she went on, her voice tremulous with emotion, "and we—your father and I—found you wet and cold in your cradle out in that awful flood. Not until Mrs. Lofton told me yesterday—"

"Mrs. Lofton?" gasped the child. "Is she my mother instead of you?"

"You were horn to her," came the answer, in such low, tense tones as to be hardly audible, "but now you are mine—you are ours—ours."

"And I don't want anybody else. I won't have anybody else," wailed Nellie, in an abandon of tears. "Just you and my father."

The mother crooned over her and fondled her much as she had done that first day long ago, and though for awhile the child seemed inconsolable over the revelation made to her, before bedtime (with the adaptability characteristic of childhood) she had accepted the situation and no longer struggled against the inevitable. She begged, however, to be allowed to sleep with her mother in the big bed that night instead of her own little one, and upon opening her eyes next morning her first words showed the trend of her thoughts.

"Mother," she whispered, while both little arms stole around Mrs. Buford's neck, "are you always—always going to love me just like I was your ownest own?"

"You are my own—my very own—my choice of all the world. The accident of birth has nothing to do with our love for one another," was the mother's reply.

The following week the Loftons left for their new home in Arkansas with hopes of a bright future before them, for the sawmill and timber lands far exceeded in value Mr. Buford's most sanguine expectations.

"It seems almost providential that I could give Lofton a fine salary and congenial employment," said Buford, when talking it over with his wife. "Nothing I could offer would be much of a return for their magnanimity to us; but after what has happened—after—since they know about little Nellie, it was better for them to go away. Our relations with them would unavoidably have been strained."

"You don't blame me for telling them, do you, Taylor?" demanded the wife, with anxious concern.

"Blame you?" reiterated the husband, after a moment's hesitancy. "No, Ellen, assuredly I do not, and deep down in my heart there is a sense of genuine relief that it is done and over with. But to tell the plain truth, my dear, I should never have had the courage to do it. I am afraid I am something of a coward, after all."

December was now at hand, and Nellie was already counting the days until Christmas. The delusion concerning Santa Claus (certainly one of the happiest of childhood), which is so short-lived among sophisticated city children, is far more enduring in the country. No doubt had ever yet dimmed Nellie's mind as to the existence of this dear, ubiquitous, little old man, and on Christmas morning she was up at the first peep of dawn reveling in the marvelous contents of her stocking.

Now that their circumstances permitted it, Christmas was celebrated as in ante bellum plantation days. The house was decorated with holly, cedar and mistletoe, and in every fireplace crackled cheery hickory-wood fires, while in the dining-room generous howls of egg-nog, flanked by mammoth cakes, stood invitingly ready for any one who might chance to call.

All morning a stream of dusky figures had been coming and going between the family residence—"gre-t'ouse" (great house), in plantation parlance—and the negro cabins, and one after another the woolly heads protruded themselves through the hack door of the hall to "ketch Marse Taylor, Miss Ellen, an' leetle Missy Chris'mus gif." Nellie gladdened each and every one of these simple-hearted creatures, these grown-up children, with some appropriate gift and good things to eat, and she confided to her father when the day was drawing to a close that she knew now just exactly how Santa Claus felt when he was filling up the stockings.

She had hardly spoken the words when a helated "Chris'mus gif, Miss Ellen! Chris'mus gif, Marse Taylor!" rang out through the big hall, and a smiling yellow face appeared at the sitting-room door.

"I 'clar' to grashus, I don't b'lieve you all knows me!" cried the owner of this same face, as she dropped her best curtsey upon the threshold.

"I am really afraid I do not," replied Mrs. Buford, smiling.

Mr. Buford glanced up from the paper he was reading, but did not speak.

"It's be'n sech a monst'ous long time since you seed me, Miss Ellen," the woman went on, "dat I speck I done slipped plumb outen yo' mem'ance. But I ain't forgot you, honey, an' I'd 'a' knowed you 'mongst a thousan', even if youis done growed so portly, an' got a double chin into de bargain. Come 'long in heah, Tuck," she added, addressing some one in her rear who until now had been hidden out of sight, "an' let de white folks git a peep at you. I'll het a dollar dey'll reckonize dem how-legs o' yo'n."

Hat in hand, and covered with confusion, Tuck dutifully made his appearance; but it was his wizen black face, coupled with the name by which the woman had called him, even more than his howed legs, that established his identity.

"It isn't—it surely can't be Aunt Rindy and Uncle Tuck?" cried Mrs. Buford, extending both hands to the new-comers.

"Done guessed it the fust pop!" interjected Aunt Rindy, her smile expanding into a sounding guffaw.

"Where are you living now?" asked Mr. Buford, laying aside his paper.

"Well, sah," came the answer, "me an' Tuck is be'n mostly livin' 'roun' from place to place for gwine on sehen or eight year. 'Pear like we couldn't settle down to nothin' regular up yander in Vicksbu'g arter de oberflow, an' den we tried Jackson, an' Canton, an' Natchez, but we all ain't use ter no town doin's, an' dat's de fact."

"Yas, sah, we all's jest jinnywine country niggers, dat's de Lawd's trufe," broke in Uncle Tuck, with sudden inspiration; but the next second he was shuffling his feet and twirling his hat as though frightened at his own temerity.

"But we's gittin' ole, now, an' sot in our ways," Aunt Rindy went on, in a slow, argumentative tone; "so when we stumble upon Lem an' Tildy yistiddy down on de Main street of Natchez,

an' dey nominate as how you all wuz livin' out heah, an' dat dey wuz wuckin' for you, right den an' dar I sez to Tuck, an' he kin sw'ar to it, too, sez I, Ise gwine to 'em. Dey's my white folks what I use ter h'long to—leastways, Miss Ellen is—an' Ise gwine to her jest ez quick ez I kin git dar, so heah I is. Lawdy mussy, honey, I wuz dat lonesome an' down in de mouf on 'count o' it bein' Chris'mus-time, an' none o' my white folks to gimme nothin', nor to take no intrust in me, dat a leetle mo' an' I'd 'a' busted out cryin' right on de street."

There was a suspicious moisture in her eyes now, but she brushed it away with the back of her hand, and added, with much cheerfulness:

"When de train pulled outen de cyar-shed to-day, me an' Tuck wuz on it, an' heah we is, Miss Ellen, done come to stay wid you de halance o' our days."

"And I am indeed glad that you have done so," Mrs. Buford assured her, heartily.

"Well, Aunt Rindy," said Buford, amused at the situation, "you and Tuck go to the kitchen and get your supper, and to-morrow we will talk things over. I don't doubt but that my wife can find something for you to do, and as for Tuck, I have been looking for a trustworthy man to take charge of the cattle, hogs and—"

"An' he jest natchelly gwine ter fit inter dat place," declared Aunt Rindy, with conviction. "He ain't much to look at, ole Tuck ain't," and she bestowed upon her diminutive black spouse a glance that was almost a caress, "but he's a powerful good wucker, an' jest ez stiddy ez a clock."

"Sarvant, sah, sarvant," announced Uncle Tuck, making an awkward attempt at a bow, as though wishing to corroborate his wife's statement.

Just here, Nellie, who had been in another part of the house searching through her depleted store of presents for something appropriate to the old couple, came back into the room, and for the first time Aunt Rindy noted her presence.

"You don't mean to tell me, Miss Ellen," she cried, incredulously, "dat dis heah's yo' chile. I ain't never heerd tell o' you havin' one twell dis very minute."

For an answer Mrs. Buford slipped an arm around the little girl and drew her tenderly to her side, while with the volubility characteristic of her race, Aunt Rindy continued to air her astonishment.

"An' to think o' her a-growin' up dis big widout me knowin' nothin' bouten it," she said, prefacing the remark by dropping upon a convenient chair and seating Nellie on her lap. "She's de very pictur' of what you wuz at her age, Miss Ellen, an' a sho nuff beauty, too."

"I'm afraid you've developed into a sad flatterer, Aunt Rindy," said Mrs. Buford, holding up an admonishing forefinger, but laughing indulgently the while.

"I wish you would look at what dis blessed chile done fotch me!" exclaimed the old negress, triumphantly displaying Nellie's present. "An' she says dis one is for you, Tuck, an' you got to make her a whole passel o' hird-traps an' doll-waggins to pay for it. Thanky, honey, thanky, for my part o' de Chris'mus gif."

Mrs. Buford found Aunt Rindy very helpful about the dairy and poultry-yard, and declared that her presence on the place brought back vividly the days of her own childhood. Nellie and Aunt Rindy established a footing of good comradeship between them from the first, and one of the dearest privileges accorded the little girl was permission to go out to the old servant's cabin, in the back yard, during the interval between supper and bedtime, and listen to her inexhaustible fund of stories in which "Brer Rabbit, Brer Fox," and other animals figured as heroes.

"Mother," asked Nellie after one of these nocturnal visitations, "do you reckon somebody read those stories to her? You know they are every one in 'Uncle Remus,' only they sound much nicer when she tells them."

"Why, no, dear," replied Mrs. Buford, "certainly not—in fact, I doubt very much if she has ever even heard of the book—but these stories, 'The Tar Baby,' 'Miss Meadows An' The Gals,' and all the rest of them have been handed down by word of mouth from generation to generation among the negroes. My hlack mammy told them to me, and my mother and grandmother each heard them from theirs. It was a happy thought in Mr. Harris to compile them in book form as he has done, for the old-time plantation daries are fast passing away, and when they go all their quaint traditions and superstitions will doubtless go with them."

Uncle Tuck soon proved himself invaluable in his new capacity of stock-minder, and Aunt Rindy was not long in getting her duties well in hand; but her proneness to dwell upon the splendors of the past, the "use ter wuz" (to adopt her own phraseology), had rather a paralyzing effect upon the efforts of the other domestics of the Buford household.

One day when the matter was under discussion the cook voiced the sentiments of her co-workers when she avowed that "ef I wuz to sarve up gold an' silver wid di'mon's sprinkled on de top she'd 'low it wuzn't a patch on to what her ole mist'ess use ter have."

The old woman was not popular among her own race, especially those of the new régime, and was styled by them a "white folks' nigger"—a term which carries much opprobrium with it—but she bore it all with great equanimity, secure in the affection of the Bufords.

After Mr. Lofton's departure some time elapsed before another teacher could be found to take his place in the village school. Meanwhile a governess was secured for Nellie—a brisk, capable, little woman, who won her pupil's esteem, while guiding her young mind through the intricacies of an education. Thus the weeks rolled into months, and the months into years—quiet, uneventful years, but happy withal, with scarce a ripple from the outside world to disturb the placid monot-

ony of their lives. Nellie had already left her childhood far behind her, but it came as a shock to the doting parents when one day the governess informed them that her task was done.

"I feel that we ought now to send her off somewhere to a good boarding-school," said Mrs. Buford, when discussing the matter later on; but her husband would none of it.

"The child is but sixteen years old, and separations and heart-aches will come soon enough, God knows," he argued, "so why need we plan to send her away from us?"

"But she has seen nothing, absolutely nothing of the world," insisted the mother, "and she is bright enough and beautiful enough to shine in any society."

"And this very artlessness, this absence of worldly wisdom, constitutes in my opinion one of her chief charms. I, too, want her to have every advantage that money can procure, and now that she is done with her studies we can travel with her, take her to New Orleans, New York, California, Europe, where you will, but we must keep our darling with us while we may."

Mrs. Buford was not ill-pleased at this ultimatum from her husband, for in the first place it shifted the responsibility of the decision from her own to his shoulders, and in the second, it did away with the necessity of a separation from Nellie.

"You don't know what it cost me to suggest her going away from us," she answered; "but a mother is not worthy of the name who is not willing to sacrifice herself for her children. We will do as you suggest, therefore, Taylor, and who knows but that it may be for the best, after all. Girlhood is such a little interim in a woman's life that I want to make her's a bright spot in her memory upon which she may look back in after-years."

"And first of all we must try to make her contented at home," said the father, after a meditative pause. "I don't think there need be much uncauseness about other places when a woman finds true happiness at her own fireside. It is certainly a safe foundation upon which to build."

[TO BE CONTINUED]

OLD TIMES, OLD FRIENDS, OLD LOVE

There are no days like the good old days—

The days when we were youthful!
When humankind were pure of mind,
And speech and deeds were truthful;
Before a love for sordid gold
Became man's ruling passion,
And before each dame and maid became
Slaves to the tyrant Fashion!

There are no girls like the good old girls—

Against the world I'd stake 'em!
As buxom and smart and clean of heart
As the Lord knew how to make 'em!
They were rich in spirit and common sense,
A piety all supportin';
They could bake and brew, and had taught school, too,
And they made the likeliest courtin'!

There are no boys like the good old boys—

When we were boys together!
When the grass was sweet to the brown, bare feet
That dimpled the laughing heather;
When the pewee sung to the summer dawn
Of the bee in the billowy clover,
Or down by the mill the whippoorwill
Echoed his night song over.

There is no love like the good old love—

The love that mother gave us!
We are old, old men, yet we pine again
For that precious grace—God save us!
So we dream and dream of the good old times,
And our hearts grow tenderer, fonder,
As those dear old dreams bring soothing gleams
Of heaven away off yonder.

—Eugene Field.

RICHES IN THE TRANSVAAL

The yield of these Kimberley diamond-mines is said to average about fifty-five hundred carats a day. They furnish nine-fifths per cent of the world's diamonds. Mr. Kunz, of Tiffany's, estimates that so far nine and a half tons, worth three hundred million dollars in the rough and double that when polished have been taken out of the Kimberley "yellow" and "blue." On a nominal capital of less than twenty millions the DeBeers company pays annual dividends of fifty per cent.

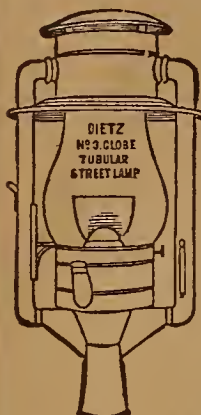
But the record of Kimberley should not obscure the fact that elsewhere in South Africa there are "infinite riches in a little room." For instance, the largest diamond known to exist was found at Jagersfontein, eighty miles away—a gem two and a half inches long, one and a quarter inches thick and two inches wide, weighing nine hundred and seventy-one carats, or nearly half a pound avoirdupois. And in many parts of South Africa gold is plentiful, notably in the Witwatersrand region of the Transvaal. When the present war began the Transvaal was yielding annually about sixty million dollars' worth of gold—or more than one fifth of the world's production, of which, by the way, the United States is credited with nearly sixty millions.

Conservative authorities have estimated that, carried down to a depth of four thousand feet, the Rand mines will yield in all more than three and a half billion dollars worth of gold, of which almost a third will represent clear profit.

The old phrase of "a king's ransom" seems thin and meaningless when one realizes the enormous wealth destined to be controlled by the victor in the present struggle.—The Youth's Companion.

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THE SERVANT QUESTION IN GERMANY

Every person going into service must be provided with a "Dienstbuch," a service-book. Although these books are bought at an ordinary stationer's, they are by law required to be of a certain description. They must be octavo size, and consist of eight pages. The first page must bear the signalment; that is, the full name and description of the owner and date of birth. The left side of the other pages in the book must have five divisions—the first for the number of the situation, the second for the name, occupation and residence of the employer, the third for the office of the servant, whether engaged as housemaid, cook or butler, the fourth for the date of arrival, and the fifth for the date of departure. The right side of the pages must have two divisions—one for the reason of departure and the certificate of behavior and competency, given by the employer, the other for the verification and possible remarks of the police.

Before beginning service the owner of such a book must take it to the police, who assure themselves the applicant fulfills the necessary conditions and has the right to take a situation. If this cannot be proved the book is not authorized. In applying for a place this book must be shown. If a servant refuses to do so, the "householder" simply dismisses him or her, or reports the case to the police, and the offense is punished by a fine up to \$1.50, or corresponding imprisonment. When a servant leaves a situation the employer is obliged to inscribe in the service-book a full and honest "character." Should he refuse, a fine of from seventy-five cents up to \$3.50 would be imposed. A servant is obliged to allow the testimony to be written in the book, and a refusal to do so justifies the police in using force. If a servant is punished by law it is recorded in the Dienstbuch, and if the book be lost, the police, after making inquiries regarding the man or woman who has been guilty of the offense, may authorize a new one by stamping it with the official seal, not omitting, however, to write on the first page that the preceding one was lost. If a bad "character" has been inscribed, servants can claim a new book if they can prove that for two years since the time it was given their conduct has been irreproachable. The average cook or maid-of-all-work is content with a wage of \$5 a month, while a housemaid usually receives from \$3.75 to \$4.50. A very experienced cook, "eine perfekte kochin," as she would probably dub herself, may draw \$7.50 a month. Such wages are, however, comparatively rare.

But it is not only in regard to remuneration that German domestics are less exacting than their American cousins and cousins in America. In every Berlin flat, and flats are used here almost exclusively, there is a little room, generally above the bath-room, and only half as high as the other apartments, called the "haueboden," or loft. In the newer houses a narrow stairway is provided for the ascent to this closet, but in many of the older buildings it is reached by a ladder. This since time immemorial has been the bedroom of the servants, and it is only within the last few years that the health officers have required that they be provided with windows if used as sleeping-rooms. The bedding for the domestic is, almost without exception, of checked cotton material, usually red and white, pure white sheets and pillow-cases being reserved for the "herrschaft," that is, employing classes or gentry.

Although wages are low, it is always expected that they will be supplemented by fees and gifts. Tipping is carried to absurd lengths in Germany. If the street-car conductor helps you on the tram or changes a gold piece for you he expects five pfennings (one and one fourth cents) for his pains, and in return will touch his cap most respectfully to you and wish you good-day when you leave the car. It is also quite usual to give him the change from a fare if it does not amount to more than five pfennings. If a maid delivers a note at your door she expects at least ten pfennings (two and one half cents), and generally receives more. Another opportunity for obtaining fees is given butlers and housemaids by the Berlin custom of locking the street doors and extinguishing the gas on the staircase at ten o'clock at night. Tardy guests must then be lighted to the door, and the servant who performs this office often makes several marks from an evening party. Gifts to domestics are usually made at Christmas and New-Years, when much more is done for servants here than is customary in America.—New York Tribune.

FUN IN CARTOONS

An amusing game for the pastime of either old or young can be made from the funny pictures and small cartoons appearing in the newspapers and weeklies. Cut out the funniest ones, the titles to which have a double meaning, and paste the titles cut from each picture upon separate tags. When you have, say two dozen or more of such pictures, spread them on a table before the players, shuffle the tags with the various titles to the pictures, and distribute an even number of them to all playing. The player who uses up his tags first, giving the names to the proper pictures, is the winner. This may seem an easy thing to do, but the queer names are misleading and seem suitable to other pictures before the comic ideas of the pictures are understood. Simpler pictures may be selected for younger players. But the game is certain to be accomplished by hard thinking and laughable mistakes, besides developing skill in giving names to pictures.

"I received my Atlases Saturday and delivered them in a short time to-day, and got the money for all without any trouble. Every one seems delighted with the bargain offered in the Peerless Atlas and a year's subscription for Farm and Fireside or the Woman's Home Companion free.

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At wholesale prices, thus saving you every penny usually pocketed by agents and dealers. SEND TO-DAY FOR OUR NEW

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We furnish with each Piano a \$10 hard wood Piano Chair Free, also Plush Scarfs and \$10 worth of the latest sheet music. Complete Organ outfit, free. Our factory, with its enormous capacity, enables us to sell you a high-grade instrument at a figure much below that of any other company in the world.

INCORPORATED FOR 50 YEARS.
WE LEAD, OTHERS FOLLOW.

Beethoven Piano and Organ Co.,
Box 628, WASHINGTON, N. J.

Take this Watch

or either of the articles mentioned below.

PRINTING PRESS CAMERA TELEPHONE TELESCOPE VIOLIN
BRASS CORNET RAZOR TYPEWRITER STEAM ENGINE
RIFLE DIAMOND RINGS CASH

Our Watch is a good one. It is fitted with an American movement, and keeps correct time. We have it in two styles, gold plated or Silverine. We give this beautiful watch or either of the above mentioned articles, for selling only 15 packages of our perfume, at 10 cents per package.

Our perfume is something that does sell, and you can sell it quickly, as we give a fine gold plated ring to every person who buys perfume from you. Order the perfume at once and earn one of our costly premiums. We send the perfume postpaid, also our Grand Premium List.

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Postman Trading Co. 102 Plymouth Place, dept. J-44, Chicago.

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No money required. We send the Blaine at our own risk. You go among your neighbors and sell it. Send us the money that you get for it and we send you the Watch, Chain and Charm, prepaid.

This is an American Watch, Nickel-Plated Case, Open Face, Heavy Bevelled Crystal. It is Guaranteed to keep Accurate Time, and with Proper Care should last ten years.

BLUINE CO., Box 392 CONCORD JUNCTION, MASS.
The Old Reliable firm who sell honest goods and give Valuable Premiums.

Free! YOU FREE

can earn this beautiful Gold Plated Hunting Case, Stem Wind and Set Watch, Chain and Charm, (lady's or gent's) in a few hours spare time, selling our double feed asbestosized Lamp Wicks. It is warranted a perfect time keeper. Our Grand 60 Day Offer. Write us a letter stating you will sell 12 of our wicks at our regular retail price, and return us the money, and we will send you one dozen of our wicks with premium list. When sold you are to send us the cash, and we will send you at once, by mail a beautiful Gold Plated Watch-Chain and Charm (ladies' or gent's as desired) also a handsome Gold Filled Kruger Diamond Ring in a handsome box, and a Beautiful Pearl Paper Cutter or letter opener with Genuine Sterling Silver Handle, .925 fine, not plated but solid silver. Now understand it is not simply one article you get, but every one mentioned in our grand 60 day offer, which is made to secure agents. This is a straight honest offer and we do just as we advertise. Address, **Carlson & Co., 35 Frankfort St., Dept. 22, New York.**

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These beautiful Royal Lace Parlor Curtains are of the newest Savoy design, three yards long, 36 inches wide, are washable and will last a life time. You can get two pairs of these choice curtains, (same design as in cut), and four beautiful, Sat. Curtains (one yard square each) FREE by selling our GREAT COLD REMEDY and HEADACHE CURE. Cures Cold in One Day! Relieves Headache at Once! We will give the curtains absolutely free to anyone taking advantage of the great offer we send to every person selling six boxes of our Tablets. If you agree to sell only six boxes at 25 cents a box, write to-day and we will send the Tablets by mail postpaid. When sold, send us the money and we will send four Sat. Curtains, unhemmed, so they may be made to fit any window, together with our offer of two complete pairs of Royal Lace Parlor Curtains, enough to furnish a room, same day money is received. This is a grand opportunity for ladies to beautify their homes with fine Lace Curtains of exquisite design. All who have earned them are delighted. Address: **NATIONAL MEDICINE CO., 1010 Chapel St., New Haven, Conn. Box 59 A**

FOR SELLING OUR JEWELRY NOVELTIES.

Watches, Cameras, Bracelets, Gold Rings, given away ABSOLUTELY FREE for selling our Jewelry. No money required. Send us your name and full address on a postal card, and we will send you 18 gold plate scarf and stick pins, all set with different colored stones, to sell for 10 cents each. The best sellers offered by any firm. When you have sold them we will send you your choice of a Watch, a solid Gold Ring and any other valuable premium on our large illustrated list, which we send you with the pins. We pay all postage.

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TWO COSTLY PRESENTS; YOU GET BOTH.

WE TRUST AGENTS with 12 new style, Stone set, Enamel Scarf and Stick Pins, different patterns. Everybody wears them. Sell to your friends for 10 cents each, and we give you Free a Fine Gold or Silver lald Bracelet (with lock and key), also this magnificent Solid Gold lald Band Ring, handsomely engraved, a perfect beauty, wears a lifetime. Send name; no money required until pins are sold; we take all not sold. Address **PEARL PIN CO., Providence, R. I.**

WE OFFER EXCEPTIONALLY LIBERAL TERMS TO CLUB-RAISERS

FARM AND FIRESIDE is the most popular and best-known farm journal published, and it does not require any effort to get subscribers for it. See our "Liberal Picture Offers" and start a list to-day. Write for our Premium-List.

Address **FARM AND FIRESIDE, Springfield, Ohio**

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There's nothing so bad for a cough as coughing.

There's nothing so good for a cough as Ayer's Cherry Pectoral.

The 25 cent size is just right for an ordinary, everyday cold. The 50 cent size is better for the cough of bronchitis, croup, grip, and hoarseness. The dollar size is the best for chronic coughs, as in consumption, chronic bronchitis, asthma, etc.

Ladies' or Gents' size

FREE WATCHES, RINGS, WATCH-CHAINS AND CHARMS, &c. As a grand premium, any one can earn this Beautiful Gold Plated Hunting Case Stem Winder Watch, Charm and Chain, a perfect time-keeper, by selling our **ELECTRIC LAMP WICKS**. They can be sold in a few hours. They are practically indestructible. No trimming; no smoke; no smell.

OUR SPECIAL 90-DAY OFFER, which is apart from the above: Send us your name and address (no money); we will send you 20 wicks, postpaid; sell them at 5 cts. each and remit us \$1, and we will mail to your address, **Free**, a Beautiful Gold Plated WATCH-CHAIN AND CHARM, also a Handsome Gold Finished Ring.

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THROW AWAY YOUR HAT PINS

The Ideal Hat Fastener

is a perfect device for holding the hat on the head without a pin, no matter how hard the wind blows.

Just the thing for cyclists, in fact, every lady, young or old. Price 25 cents, by mail. Agents wanted.

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WANTED MAN with horse and buggy, to sell Pasture Stock Food. Salary \$15.00 per week and 10 per cent on all sales. Farmer preferred. Previous experience not essential. **PASTURE STOCK FOOD** is the greatest discovery ever made in practical and scientific feeding, and is sold on an absolute guarantee. Steady, permanent trade easily established. Sample bag, sufficient for two weeks' feeding, free. Send 25 cents in stamps or silver to cover express charges. **PASTURE STOCK FOOD COMPANY,** 301 Boyce Building, Chicago.

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Our agencies are worked on three different plans at agent's option. They pay exceptionally well. Some are particularly suited for work at odd times, or as side-lines. One of them is making book-agents and others as much money as any other two in America. We furnish outfits **FREE** that are good for a business of \$5 to \$8 per day. We furnish even our costliest outfits on a plan by which they do not take one cent from the agent's pocket. For full particulars address **The Crowell & Kirkpatrick Co.,** Springfield, Ohio.

LOVELY BOOK FREE

Only a few copies left; send to-day. The volume is gorgeously illustrated with numerous engravings of mining scenes and the grandest scenery in the Rocky Mountains. The edition cost \$1,000 to publish. It is not an adv. for any one. Merely to introduce our big illustrated family weekly we will send a copy of the above fine book free to all sending us 9 two-cent stamps for a 13 weeks' trial subscription. Our paper publishes each week stories of adventure, all the latest mining news and illustrations of scenery. Tenth year. Clubs of 3 for 50c., 7 for \$1 bill. Mention the **FARM AND FIRESIDE** and address **WESTERN WEEKLY,** Denver, Colorado.



THE WAY GOD UNDERSTANDS

My little son, who looked from thoughtful eyes,
And moved and spoke in quiet, grown-up wise,
Having my law the seventh time disobeyed,
I struck him, and dismissed
With hard words and unkind—
His mother who was patient, being dead.
Then, fearing lest his grief should hinder sleep,
I visited his bed,
But found him slumbering deep,
With darkened eyelids, and their lashes yet
From his late sobbing wet.
And I with moan,
Kissing away his tears, left others of my own,
For on a table drawn beside his bed
He had put within his reach
A box of counters and a red-veined stone,
A piece of glass abraded by the beach,
And six or seven shells,
A bottle with bluebells,
And two French copper coins, 'ranged there with
careful art,
To comfort his sad heart.

So when that night I prayed
To God I wept and said,
"Ah, when at last we lie with tranced breath
Not vexing thee in death,
And thou rememberest of what toys?
We made our joys,
How weakly understood
Thy great commanded good,
Then fatherly, not less
Than I whom thou hast molded from the clay,
Thou'lt leave thy wrath and say,
'I will be sorry for their childishness.'"

THE MORAL SUASION OF A SUNDAY DINNER

THE tempter met John on the church steps at the close of the morning service.

"John," said the sinuous voice, "you are a stranger. Come with me to Euclid place. The nice young men all go there. You can read or play games, just whatever you like. And there you will hear some of the finest singing and playing to be found in the city."

"I—I think I will go!"
Just then a kindly hand was placed on John's shoulder. "Come home with us to dinner," said his employer. John hesitated. The tempter was whispering in his ear. Then his mother's face seemed to come before him, a sweet face from heaven it was, too.

"Mr. Irwin, I will go with you, and I thank you for your kind invitation."

A few weeks later Mr. and Mrs. Irwin received a letter from John's home. "I want to thank you," they read, "for your kindness to my boy. His own mother is dead, but I am trying to fill her place. John wrote me how he was on the point of going to one of your fashionable resorts, and how your kind invitation saved him. He says he thinks that was the turning-point in his life. May God bless you."

Mr. Irwin read and re-read the letter, very tenderly folded it, and put it away with a "keepsake" letter he once received from his own mother when he was traveling the same road that John now is.

"Frank," said Mrs. Irwin, "we did not know that our invitation to dinner that Sunday meant all that to John."

"No," replied Mr. Irwin, very thoughtfully, "but I think God knew!"

MEN AND THEIR MANNERS

Why is it that some men, as soon as they have reached that period in their lives when age, if nothing else, could entitle them to be called gentlemen, seem to think that added years is all that is necessary to give them the right to the above appellation? They need do nothing themselves to earn the title, that is theirs by inheritance, or natural laws, or some other obscure reason. At any rate, they seem to consider it an established fact, and therefore needs no further attention.

Take, for example, the father of a family. He of all people, one would think, would be the most particular, the most watchful of his own actions—that is, if he has any care for the manners of his children, particularly his sons, for they will take father for a pattern, and the way he conducts himself in private or public life will influence them to a great extent. The man who sits down to the table, helps himself bountifully, takes no notice of any one else, drinks his coffee with great swoops, dips into all the dishes near him with his knife, and thus conveys

the food to his mouth, is really no better than a pig. He selects the best of every dish on the table, leaving others to fare as they can. Take such a man in the sitting-room or parlor; he invariably sits in an easy-chair, cross-legged, with a dirty boot or shoe thrust out for ladies to wipe their dresses on, never noticing how much it is in the way. He fills his pipe and puffs away, blowing the smoke in great clouds around him and filling the room, and spitting anywhere that seems handy. Now, there is no excuse for such unmannerly actions. There is no one in this age of the world but knows better than to act in any such way. Men like to see their sons and daughters mannerly, but unless the mother does the training their politeness is apt to be below par. The only idea that ever enters the head of the "man without manners" is that of self. If he could forget himself and think of the comfort and happiness of those around him just for a little while he would see how his actions look; but habit is a great thing, and when one follows a habit for years it is very hard to change.

Boys, take notice while you are young, and see how much pleasanter the home will be if the head of the house is a thoughtful and mannerly person. When you go among your acquaintances notice these things and judge for yourselves how your future life shall be, whether you will be a perfect boor or whether you will be a gentleman—a gentleman in every sense of the word; a gentleman in your own home as well as in public; one whom your wife and children will delight to honor, one who treats with courtesy the poor as well as the rich, and is really the noblest work of God. A. M. M.

THE POWERS OF THE SOUL

It is a great thing—yea, more, the great thing—to live a life deeper than the surface of things, a life which shall carry all the circumstances and the vicissitudes of material things like froth on the steady flowing volume of its spiritual experience. How easily we forget that all these physical possessions, conditions, affairs, are not substance, but shadow; that all wealth and power and joy and life is not objective, but subjective! How we run after shadows! How we search for the fountains of delight all abroad, when, behold, they are all within! We strive to gather in to ourselves, when our only possible way of growth is to spend ourselves. The grasping miser is a fool. The martyr is the only true and practical philosopher. Yes, we see it, we know it, some of us, the most of us, but here the inexplicable perversity of the human heart shows itself. I wish I were able to eradicate it, to do my best to take care of those whom God has given me, and then be just as happy in the storm as in the sunshine. I wish I were able to find delight neither in the storm nor in the sunshine, but in that exercise of the ineffable powers of the soul which transcends both.—Irving L. Stone.

FOLLY OF BORROWING TROUBLE

There are some unhappy persons who seem fated to go through life with a constitutional tendency to despondency. We all know them and meet them daily, and they can always see a cloud where none exists. With most of these persons, however, it is simply a matter of exercising the will. Anxiety about present trouble or prospective difficulties never brought any good to those who indulged in it. The successful ones in life are those who have been buoyant in spirit, and who resolutely refuse to allow the cares of life to unduly depress them. Instead of allowing the mind to brood over things that cannot be helped, it should be set to work upon the duty that lies nearest to it. Worrying about matters does not improve them in the slightest degree; on the contrary, it weakens the purpose, robs the physical nature of its vitality, and totally unfits us to cope with the obstacles that lie in our path. The most shocking mistake, and one that is unfortunately only too frequently made, is to meet troubles half way. These will come soon enough; they do not want any encouragement, and very often when they do come they are not half so formidable as we imagined they would be. Anticipation in some cases is worse than the reality.

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Our line this year represents the largest and handsomest assortment of wall papers ever shown in the United States. You cannot obtain the new styles in your local market or buy half so cheap.

One price everywhere and we pay the freight

If you have only one room to decorate, see our new patterns before you select the paper.

An Agent Wanted in every town to take orders from our large sample-books, showing hundreds of beautiful patterns. Every design new, none of which can be found at your local dealers. We furnish free handsome advertising signs, illustrated circulars and refer customers to our agents who write us for samples.

The business pays well from the start, for no one can compete with you in variety, quality or price. (Over 11,000 agents now selling our papers.)

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ALFRED PEATS & Co.
41-43 W. 14th ST., NEW YORK
143-145 WABASH AVE., CHICAGO.

REDUCED TO \$4.50.

To place our best \$10.00 **TOLEDO BATH CABINET** in every home we send it complete for 80 days with best alcohol stove, directions, formulas to any address upon receipt of \$4.50. Face Steamer 75c extra. Order today. Ours best of all Cabinets, has real door, steel frame, top curtains, rubber lined, folds flat 1 in. space. Money refunded after 80 days use if not just as represented. It's a home necessity. Turkish and vapor baths 3c each prevent disease, cure without drugs colds, la grippe, rheumatism, female ills, all blood, skin, kidney, nervous troubles. **WRITE FOR CATALOGUE FREE.** We make Cabinets from \$2.25 up. Agents Wanted. Easy terms. Exclusive territory. **TOLEDO BATH CABINET CO.,** 614 Cherry St., TOLEDO, OHIO.

SENT FREE

Solid GOLD or SILVER

plated Bracelet sent free to any one for selling 5 sets of our **LADIES' GOLD** plated Dress Pins for 25c. a set (each pin jewel). Simply send us your name & address & we will send you the gold, send us the money & we will send you the Bracelet. The chain is beautifully engraved & the lock opens with a dainty little key. We trust you & will take back all the pins you cannot sell. Write to-day.

THE MAXWELL CO., Dept. 555, St. Louis, Mo.

FREE SILVER WATCH FREE!

These Watches are Solid Silver, Ladies' or Gents' size, and at retail would cost upwards of \$5. or \$10, but to introduce our Persian Perfumery we will send you this Watch Free if you take advantage of our marvelous offer. If you want one **CUT THIS OUT** write to us without delay. With your letter send us your name & postoffice address and we will send you on confirmation, to sell for 5 cents each, 20 cases of Persian Perfumery and our offer. After you receive the beautiful Watch we shall expect you to show it to your friends and call their attention to this advertisement. The Watch is sent Free, by Registered Post, on your complying with our advertisement, and the marvelous offer which we send, and it is Fully Warranted. You will be more than satisfied. Address at once, **PERSIAN PERFUMERY CO.,** 19 Warren St., New York.

\$14 IT COSTS NOTHING

to try our Sewing Machines. We ship direct from factory to consumer. Save agents profits. 30 days free trial. 117,500 sold. Warranted 20 Years. All attachments free.

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| \$40.00 | Arlington for..... | \$14.00 |
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Can be profitably employed in making your friends acquainted with the merits of the

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"The Monarch of the World's Rural Press"

We give most attractive premiums. Our 1899-1900 Premium-List is now being distributed, and it is FREE for the asking. Write for it to-day. Address **FARM AND FIRESIDE,** Springfield, Ohio

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\$250 A Month AND EXPENSES MADE. MAGIC LAMP

Makes Its Own Gas.

Gives 90 to 100 Candle-power light at a cost of ONLY **1 cent for 10 hours**

No danger, no risk, no trouble, no smell. The Magic Lamp is made a standard by fire insurance Underwriters.

AGENTS make \$250 and upward a month selling these Lamps. They sell on sight to stores and families. Write today for territory and sample lamp.

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To prove that Electricity (being Nature's cure) is a positive and unfailing cure for *Rheumatism, Lumbago, Sciatica, Catarrh, Asthma, Headache, Emaciation or Wasting, Indigestion, Neuralgia, Sleeplessness, Paralysis, Epilepsy, Urinary Diseases, Nervousness, Dyspepsia, Constipation, Torpid Liver, Throat Troubles, Spinal Diseases, Heart Troubles, Female Complaints, Cold Extremities, Kidney Complaints, Pains in the Back, Head and Limbs and all Nervous and Weakening Diseases.*

We shall give away, Free of Any Cost for advertising purposes, a large number of our New Improved, best and most powerful \$20.00 Electric Belts with Suspensory Attachment. We mean just what we say—FREE OF ANY COST. There are no charges of any kind to be paid by you. We are making this offer to further introduce our Electric Belts and Appliances in new localities, believing that it will pay us in the end. We have already given away hundreds of these Belts to introduce them and it has always paid us and we believe it will continue to pay us or we could not afford to do so. If you are a sufferer, write at once as this offer is limited, state the nature of your disease and give size around body at base of spine. All correspondence treated with the utmost confidence. Address, Dr. Horne Electric Belt and Truss Co., 985 North Clark St., Dept. 100, Chicago, Ill.

\$1000 Reward paid to any person proving this advertisement is not honest in every word it contains.

BEST FOR THE BOWELS

If you haven't a regular, healthy movement of the bowels every day, you're sick, or will be. Keep your bowels open, and be well. Force, in the shape of violent physic or pill poison, is dangerous. The smoothest, easiest, most perfect way of keeping the bowels clear and clean is to take

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Pleasant, Palatable, Potent, Taste Good, Do Good, Never Sicken, Weaken, or Grip, 10c, 20c, 50c. Write for free sample, and booklet on health. Address: Sterling Remedy Company, Chicago, Montreal, New York. 322a

KEEP YOUR BLOOD CLEAN

Rheumatism, Gout, Lumbago

AND ALL OTHER DISEASES RESULTING FROM URIC ACID IN THE BLOOD. Positively Cured

THE SWISS-AMERICAN CO. 4 OPERA BLOCK WINDSOR, ONT. 4 OPERA BLOCK CANADA DETROIT, MICH.

RUPTURE Sure Cure at home; at a small cost. No operation, pain, danger or detention from work. No return of Rupture or further use for Trusses. A complete, radical cure to all (old or young). Easy to use; thousands cured; book free (sealed). DR. W. S. RICE, Box F, Adams, N. Y.

WE WANT AN AGENT

In every county to sell to the farmers, threshers and mills our superior brands of Lubricating Oils and Greases. Salary or commission. Experience not necessary; our instructions explain fully. For particulars address The Victor Oil Company, Cleveland, Ohio.

CANCER CURED WITH SOOTHING, BALMY OILS. Cancer, Tumor, Catarrh, Piles, Fistula, Ulcer and all Skin and Womb Diseases. Write for Illustrated Book. Sent free. Address **DR. BYE, Kansas City, Mo.**

ONE YEAR FOR 10 CENTS

We send our large 16-page, 64-col. monthly paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents, if you also send names and addresses of six lady friends.

WOMAN'S FARM JOURNAL, 4306 Easton Ave., Saint Louis, Mo.

CARDS Send 2c. stamp for ELEGANT SAMPLE BOOK of all the FINEST and Latest Styles in Gold, Beveled Edge, Hidden Name, Silk Pringe, New Envelope Cards, etc. Greatest Outfit Ever Offered. UNION CARD CO., B14, Columbus, Ohio.

GOLDOMETER In pocket case for hunting Minerals, Gold and Silver, also Rods and Needles. Circular 2 cents. B. G. STAUFFEL, Dept. F. F., Harrisburg, Pa.

Dr. Isaac Thompson's EYE WATER

If afflicted with SORE EYES USE

PLAYS Dialogues, Speakers for School, Club and Parlor. Catalogue free. T. S. DENISON, Publisher, Chicago, Ill.

SPECTACLES at wholesale. Send for catalog. Agents wanted. COULTER OPTICAL CO., Chicago, Ill.

CASH for acceptable ideas. State if patented. THE PATENT RECORD, Baltimore, Md.



SMILES

WHEN THE MINISTER COMES TO TEA

Oh, they've swept the parlor carpet, and they've dusted every chair,
And they've got the tidies hangin' jest exactly on the square;
And the what-not's fixed up lovely, and the mats have all been beat,
And the pantry's brimmin' over with the bully things ter eat.

Sis has got her Sunday dress on, and she's frizzin' up her haugs;
Ma's got on her hest alpacky, and she's askin' how it hangs.
Pa has shaved as slick as can be, and I'm rigged way up in G.
And it's all because we're goin' ter have the minister ter tea.

Oh, the table's fixed up gaudy with the gilt-edged chiny set,
And we'll use the silver tea-pot and the comp'ny spoons, you bet;
And we're goin' ter have some fruit-cake and some thimble-berry jam,
And "riz biscuits" and some doughnuts, and some chicken and some ham.

Ma, she'll 'polergize like fury and say everything is bad,
And "sich awful luck with cookin'" she is sure she never had;
But, er course, she's only bluffin', for it's as prime as it can be,
Aud she's only talkin' that way 'cause the minister's ter tea.

Everybody'll be a-smilin' and as good as ever wuz;
Pa won't growl about the vittles, like he generally does,
And he'll ask me would I like another piece er pie; but, sho!
That, er course, is only manners, and I'm s'posed to answer, "No."

Sis'll talk about the church-work and about the Sunday-school;
Ma'll tell how she liked that sermon that was on the Golden Rule,
And if I upset my tumbler they won't say a word to me;
Yes, a hoy can eat in comfort with the minister ter tea!

Say! a minister, you reckon, never'd say what wasn't true;
But that isn't so with ours, and I jest can prove it, too;
'Cause when Sis plays on the orgau so it makes yer want ter die,
Why, he sets and says it's lovely; and that, seems ter me, 's a lie.

But I like him all the samey, and I only wish he'd stay
At our house fer good and always, and eat with us every day;
Only think of havin' goodies every evenin'—Jimmiee!
And I'd never git a scoldin' with the minister ter tea!

—Joe Lincoln, in Puck.

THE RIGHT KIND OF HEAD

EVERYBODY has heard of President Lincoln's reply when asked the question, "How long ought a man's legs to be?" that he had "always thought that a man's legs ought to be long enough to reach from his body to the ground."

Somewhat similar was the answer given by a Western farmer who went to town one windy day in March. Seeing several men chasing their hats along the street at a considerable sacrifice to dignity, he remarked:

"If them fellers had the right kind of heads they wouldn't have no such trouble as that."
"Do you have the right kind of head, uncle?" inquired a hystander.
"Yes."
"Don't your hat ever blow off?"
"Never."
"Well, what is the right kind?" he was asked by several.
"Why," rejoined the old farmer, "the right kind of a head is one that you can push up into a hat fur enough to hold it on tight."

THE REASON WHY

Army surgeon—"You are standing at eighteen feet. Can you read these letters?"
Recruit—"No, sir."
Surgeon—"Approach two feet nearer. Now?"
Recruit—"No, sir."
Surgeon—"This is strange! Come four feet nearer. Now?"
Recruit—"No, sir."
Surgeon—"Most hopeless case I ever met. Stand four feet away from the chart. Can you read now?"
Recruit—"No, sir."
Surgeon—"Great Scott! Young man, you are the most remarkable case that has come within my experience. You conquer me. You may know more about yourself than I do. Have you any idea why you can't read these letters?"
Recruit—"I never learned to read."

BENNY'S ANSWER

Benny was a new hoy at school, and as the teacher enrolled his name in her book she asked, "Where do you live, Benny?"
"On Blinker street," he answered.
"You should say, 'In Blinker street.' That is considered the proper form now."
"Yes'm."
"You have lately come to town, have you not?"
"Yes'm."
"Where was your home befor?"
"Boonville."
"Where is Boonville?"
"In the Erie canal, ma'am," said Benny.

THE ONLY ONE

Tommy's mother—"Why is it, Tommy, that you are always fighting with Willie Simpkins? I never heard of you quarreling with any of the other boys in the neighborhood."
Tommy—"He's th' only one I can lick."

HIS RULING PASSION



The train-bell was clanging when a blustering knight of the grip hustled in and sat himself down in the seat in front of a staid, middle-aged individual.

Presently, after considerable fumbling through pockets, the knight turned around to his neighbor, waving a bill in his hand, and in a loud, jocular tone of voice offered to bet him a "fiver" that the train would not get to Chicago on time.
"But I do not care to bet," said the staid individual, settling himself behind his paper.
"I'll go you a ten, then, that this train does get in on time," persisted the traveler.
"I don't care if it does," snapped the individual.
"I tell you I am not a betting man."
"Then take a chance on the price of—"



Just then there came a crash as the engine bumped noses with a down train loitering on the flyer's track, and in the temporary ascension of passengers that followed the staid individual on their sudden flight skyward, but found time in that brief instant to call back:
"I bet you twenty-five I'll be blowed higher than you!"

FREE A NEW CURE FOR KIDNEY AND BLADDER Diseases, Rheumatism, etc.

Disorders of the Kidneys and Bladder cause Bright's Disease, Rheumatism, Gravel, Pain in the Back, Bladder Disorders, difficult or too frequent passing-water, Dropsy, etc. For these diseases a Positive Specific Cure is found in a new botanical discovery, the wonderful Kava-Kava Shrub, called by botanists the *Piper methysticum*, from the Ganges River, East India. It has the extraordinary record of 1,200 hospital cures in 30 days. It acts directly on the Kidneys, and cures by draining out of the Blood the poisonous Uric Acid, Lithates, etc., which cause the disease.

Rev. John H. Watson testifies in the *New York World* that it has saved him from the edge of the grave when dying of Kidney disease and terrible suffering when passing water. Mr. Calvin G. Bliss, North Brookfield, Mass., testifies to his cure of long-standing Rheumatism. Mr. Jos. Whitten, of Wolfboro, N. H., at the age of eighty-five, writes of his cure of Dropsy and swelling of the feet, Kidney disorder and Urinary difficulty. Many ladies, including Mrs. C. C. Fowler, Locktown, N. J., and Mrs. Sarah Sharp, Montclair, Ind., also testify to its wonderful curative power in Kidney and allied disorders peculiar to womanhood.

That you may judge of the value of this Great Discovery for yourself, we will send you one Large Case by mail Free, only asking that when cured yourself you will recommend it to others. It is a Sure Specific and cannot fail. Address The Church Kidney Cure Company, 425 Fourth Ave., New York.

FAT

How to Reduce it

Mrs. L. Lanier, Martin, Tenn., writes: "I reduced my weight 2 1/2 lbs. in 15 days without any unpleasant effects whatsoever." Purely vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 4 cents for postage, etc.

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offering unsurpassed opportunities. Tuition, board and room, six months' course, \$78. This can be reduced one half. School organized 1874. Catalogue free.

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Orisk Mountain Herbs for restoring Gray Hair to its Natural Color, Beauty and Softness. Prevents the Hair from falling out, cures and prevents Dandruff. Will not stain the scalp. Is superior to the many advertised preparations. Package makes one pint. Price 25c. by mail. Address **K. DUBY DRUG CO., ROLLA, MISSOURI.**

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DO YOU KNOW of any worthy person in your neighborhood who would like an opportunity to earn some money either by working all or part of the time? If so, please send us the name and address, or ask the party to write us at once for particulars. Address
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EVERY WOMAN Can buy a **WORLD'S** **WASHER** on trial and no money paid. Magic Gold perfectly satisfactory. Washes easy. Clothes clean, sweet and white as snow. Child can use it. I pay freight. Circulars free.

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OUR CAT catalogue fully describing **ROOT'S** Cobblers' Outfits, **Blacksmiths' and Carpenters' Tools**, Hardware, "Common Sense" Harness Goods, and thousands of other Farm and Household Conveniences at unheard of prices. **MAILED FREE.**

THE J. A. ROOT CO., 111 St., Plymouth, Ohio.

HOUSEHOLD

[CONTINUED FROM PAGE 11]

EGG DAINTIES

THE possibilities of a half dozen eggs are numberless, but it is as the ubiquitous fry they are best known. This is a pity, for it is their least wholesome form. An omelet offers insuperable obstacles to the average housewife, but the most amateurish cook can produce one that is toothsome and dainty by the following receipt:

OMELET.—Allow one tablespoonful of milk to each egg. Beat the yolks, add the milk, and last the stiffly beaten whites. Do not stir them more than possible. Pour in a hot skillet that has been well buttered, and place in the oven until a delicate brown. When done fold over into a roll and slip on a warm plate. To this may be added, for the sake of variety, a little minced chicken or ham warmed and slightly moistened with milk or gravy and spread before rolling the omelet, or a spoonful of any rich preserve or marmalade. In their season fresh mashed and sweetened fruits can be used.

SHIRRED EGGS.—Beat as many eggs as desired, allowing a tablespoonful of milk to each egg. Stir just enough to break the yolks and mix the milk, then pour into a pan containing a tablespoonful of melted butter. Stir with a fork all the time until thick and creamy. Sprinkle with salt and pepper, garnish with parsley, and serve in a warm dish. This is more delicate if cooked slowly.

BAKED EGGS.—Cut as many slices of bread as there are persons to be served. The bread should be three inches thick, the crust removed and a hole made in the middle, but not all the way through. These are then fried in melted butter, placed in a shallow, buttered baking-dish, an egg broken in every cavity, the tops strewed with salt, pepper and bits of butter, and baked five minutes.

HAM AND EGGS.—Chop enough cold boiled ham to fill a pint cup; take an equal quantity of fine bread-crumbs and mix with the meat, softening to a paste with hot milk. Put in a shallow, buttered baking-dish, and make depressions in the top of the mixture. Break an egg in each, dot with bits of butter, and bake.

MARY M. WILLARD.

BUTTONHOLES

To make a good buttonhole is quite an achievement among the common sewers. Of course, a dressmaker is perfection, but often those who make no pretense in that line desire to make a buttonhole equal to a professional. Mark the desired place with pencil or chalk as long a line as width of button to be used. Some run a thread around this line with a needle, but an improvement is to stitch once and a half around the line with the sewing-machine, and then you need not stop to tie threads. The stitching should be as closely together as will allow the scissors to cut between without the threads pulling out. In ordinary cloth the buttonhole is now ready to work, as the machine-stitching holds the cloth together so firmly that overcasting is not necessary, unless the cloth frays very badly.

Commence at the inside point of the line, taking care not to set the needle too deeply, and have the stitches of uniform length and same distance apart, and work toward the outer edge. At this point take the stitches a little deeper, and draw the thread well over to the upper side of the cloth, working close across the point. This makes the round eye so much admired on dressmakers' garments. At the inside point do not work across, but catch thread to opposite side and fasten firmly beneath.

GYPSY.

SOME HOUSEHOLD HINTS

To the lovers of home-made rugs I would like to tell of a very pretty one I have for the front of a bed or sideboard. It is made of blue carpet-rags wound with white ones, each twisted a little, then twisted together and woven one and one fourth yards wide by two or two and one fourth yards long, like a carpet. It will require about three pounds of rags for a yard of carpet, the selvage smooth, and finish the ends either with a fringe or tie in warp for a fringe. Some prefer red, white and blue rags, but the warp for either should be one thread white and one blue. They are a clean-looking rug, and protect the carpet very much.

Perhaps it is not generally known that a cloth dampened with vinegar will remove the lime formed by water standing in any dish. I find it of great value in cleaning the aquarium.

FRANCES.

LET US START YOU—\$125 A MONTH SURE

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Introduce our Vegetable Pills, a sure cure for constipation, indigestion & torpid liver. If you agree to sell only six boxes of Pills at 25 cts. a box write to-day and we send Pills by mail, when sold send us the money & we send you one dozen plated tea spoons together with our offer of a 144 piece dinner set same day money is received. This is a liberal inducement to every lady in the land & all who received the spoons & dinner set for selling our Pills are delighted.

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are sold in any quantity, but only under seal. They are always genuine as dated, and are fairly described in **BURPEE'S FARM ANNUAL FOR 1900.** This is a bright new book full of practical information, which we are pleased to mail free to progressive planters, who desire to raise the choicest Vegetables or most beautiful Flowers. Write To-day.

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FOR SALE We have for sale five (5) "West-ern" and one (1) "New Era" Graders, with forty-two (42) Dump Wagons. These were purchased new for our work at Massena, N. Y., and only used one year. They are in first-class condition and will be sold reasonable. Address **THE T. A. GILLESPIE COMPANY,** 26 Cortlandt Street, NEW YORK.

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102 Fulton St., New York, sell all makes under half price. Don't buy before writing them for unprejudiced advice and prices. Exchanges. Immense stock for selection. Shipped for trial. Guaranteed first-class. Dealers supplied. 62-page illustrated catalogue free.

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WANTED men, each town, open small office to handle my goods. Position permanent. **A. T. MORRIS, Cincinnati.** Illustrated catalogue 4c. stamps.

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OPIUM and Liquor Habit cured in 10 to 20 days. No pay till cured. Write **DR. J. L. STEPHENS CO.,** Dept. A3, Lebanon, Ohio.

PATENT secured or money all returned. Exam. Free. **COLLAMER & CO.,** 1040 F. St., Wash., D. C.

Genuine Diamond Brand Scissors... Premium No. 147...

These are the genuine Diamond Brand Scissors, made and warranted by the largest scissors-factory in the world. They are made of fine steel, hand-forged, ground edges, tempered by experts, heavily nickel-plated, highly polished. Length 7 1/2 in.

We Will Send the Farm and Fireside One Year and These Nickel-plated Steel Scissors for... 70 Cents

(When this offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

Given as a premium for a club of only **THREE** yearly subscriptions to the Farm and Fireside.

Postage paid by us **Address FARM AND FIRESIDE, Springfield, Ohio**

SIX SILVER-PLATED NUT-PICKS



In New England there is a factory which manufactures most of the nut-picks sold in America. We have contracted with them for a large number of sets of their most popular style, which is shown here. They are made of steel, handsomely turned handles and well silver-plated. They are packed six in a cloth-lined box. These picks sell in jewelry-stores for 50 cents a set and upward. We give you a set for procuring two yearly subscriptions for the FARM AND FIRESIDE.



Premium No. 125

Each set of these silver-plated nut-picks comes in a cloth-lined box which measures 5½ inches long, 3 inches wide and ½ of an inch thick. They make a handsome as well as a useful present.

Last season we sent out many thousands of these picks and did not receive a single complaint. Having given such universal satisfaction we are pleased to offer them again for the benefit of those who did not receive a set last year. Order a set and we know you will be pleased. Entire satisfaction guaranteed.



Exact Size

We Will Send the Farm and Fireside One Year and This Set of Six Silver-plated Nut-picks for **50 Cents**

(When this offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

FREE This Set of Six Silver-plated Nut-picks given FREE for TWO yearly subscriptions to the Farm and Fireside.



1,000 FAVORITE RECIPES in the Standard Cook Book

Premium No. 17

The Standard Cook Book is the product of many good cooks, the recipes being selected from over 20,000 submitted by experienced housekeepers in all parts of the country, in a prize contest. Over 1,000 of the choicest of these were selected by competent judges. These prize recipes have been printed in

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Each page is 5½ inches wide by 7½ inches long. Already over 500,000 copies have been sold. No French "stuffs," no fancy "fixin's," no recipes from men cooks, in the Standard Cook Book. They are all tested recipes, known to be excellent for plain, wholesome, delicious home cooking. With this book in hand it is an easy matter to arrange a splendid variety, which is one of the secrets of good cooking. The book is printed on good paper, and to any housekeeper is worth One Dollar.

We Will Send the Farm and Fireside One Year and the Standard Cook Book for... **40 Cents**

(When this offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

Given FREE as a Premium for a Club of TWO Yearly Subscriptions to the Farm and Fireside.

NOTE THIRTY-FIVE CENTS is the clubbing price for yearly subscriptions to the Farm and Fireside without a premium to the subscriber. And members of clubs may accept any of our premium offers at the advertised prices and their names can be counted in clubs (unless otherwise stated in the advertisement). RENEWALS and new names, including a club-raiser's own subscription, can be counted in clubs. No reduction allowed in the clubbing prices.

Order by the Premium Numbers

Address FARM AND FIRESIDE, Springfield, Ohio

FINE SILVERWARE FREE

THIS SILVER-PLATED WARE can be used in cooking, eating and medicines the same as solid silver. The base of this ware is solid nickel-silver metal, and being perfectly white and hard it will never change color, and will wear a lifetime. This ware will not, cannot turn brassy, corrode or rust. We absolutely guarantee that each and every piece of this ware is plated with the full STANDARD amount of pure coin-silver. In beauty and finish it is perfect.

FULL SIZE

All of the ware is full regulation size. Dessert-forks are specially designed for cutting and eating pie, and dessert-spoons are proper spoons with which to eat soup.

GUARANTEE

We guarantee every piece of this ware to be exactly as it is described and to give entire satisfaction or money refunded.

Will Stand Any Test To test this silverware use acids or a file. If not found to be plated with the full standard amount of pure coin-silver and the base solid white metal and exactly as described in every other particular we will refund your money and make you a present of the subscription. If returned to us we will replace free of charge any piece of ware damaged in making the test.



INITIAL LETTER Each piece of this ware (except the knives) engraved free of charge with an initial letter in Old English. Only one letter on a piece. Say what initial you want.

The base of the table-knives is fine steel highly polished. They are first plated with nickel-silver, which is as hard as steel, then plated with 12 pennyweights of coin-silver. The best silver-plated knives on the market. For want of space pictures of the Gravy-ladle, Berry-spoon, Pie-knife and Child's Set are not shown here, but they are all of the same design and full regulation size.

PREMIUM OFFERS

We will send the Farm and Fireside one year and the Silverware to any one at the following prices:

| | |
|--|------|
| Farm and Fireside 1 year and a Set of 6 Teaspoons for | .75 |
| Farm and Fireside 1 year and a Set of 6 Forks for | 1.25 |
| Farm and Fireside 1 year and a Set of 6 Tablespoons for | 1.25 |
| Farm and Fireside 1 year and a Set of 6 Knives for | 1.75 |
| Farm and Fireside 1 year and a Set of 6 Coffee-spoons for | .75 |
| Farm and Fireside 1 year and a Set of 6 Dessert-spoons for | 1.00 |
| Farm and Fireside 1 year and a Set of 6 Dessert-forks for | 1.00 |
| Farm and Fireside 1 year and Berry-spoon for | .65 |
| Farm and Fireside 1 year and Pie-knife for | .65 |
| Farm and Fireside 1 year and Gravy-ladle for | .65 |
| Farm and Fireside 1 year and Butter-knife and Sugar-shell (both) for | .60 |
| Farm and Fireside 1 year and Child's Set (A small Knife, Fork and Spoon) for | .60 |

(When any of the above offers are accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

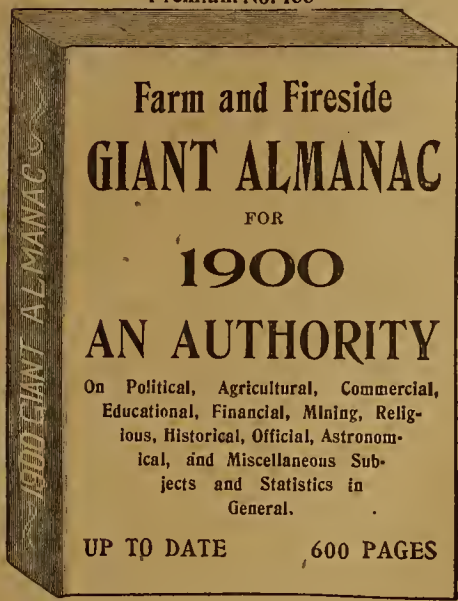
SILVERWARE FREE

For Clubs of Subscribers to the Farm and Fireside

- Set of 6 Teaspoons given free for a club of four subscribers.
- Set of 6 Forks given free for a club of six subscribers.
- Set of 6 Tablespoons given free for a club of six subscribers.
- Set of 6 Knives given free for a club of twelve subscribers.
- Set of 6 Dessert-spoons given free for a club of six subscribers.
- Set of 6 Dessert-forks given free for a club of six subscribers.
- Set of 6 After-dinner Coffee-spoons given free for a club of four subscribers.
- One Berry-spoon given free for a club of four subscribers.
- One Pie-knife given free for a club of four subscribers.
- One Gravy-ladle given free for a club of three subscribers.
- Sugar-shell and Butter-knife (both) given free for a club of four subscribers.
- One Child's Set (A small Knife, Fork and Spoon) given free for a club of four subscribers.

1900 GIANT ALMANAC

Premium No. 155



Miniature out of the Almanac. Actual size of each page, 6 3/4 x 8 1/2 inches.

The Best Year-book Ever Published

Our Giant Almanac is the most complete, reliable and up-to-date Political Register, Treasury of Facts and Annual Reference-book ever published. We guarantee this absolutely or money refunded. It is an authority on the things you want to know about. The book contains such a voluminous array of facts and figures, and so many subjects are treated, that it is an utter impossibility to give more than a faint idea of its contents in so small a space. Give the book a chance to speak for itself. It will surely please.

600 PAGES

EACH PAGE 5 1/2 x 8 1/2 INCHES

ESPECIALLY VALUABLE THIS YEAR—1900 brings the Presidential and State elections again, and as the Giant Almanac contains the detailed statistics of all the elections, including those of 1899, it is indispensable for purposes of comparison.

ANSWERS THOUSANDS OF QUESTIONS which come up in connection with current events.

It is a veritable encyclopedia of useful, up-to-date and authentic information.

We Will Send the Giant Almanac, and the Farm and Fireside One Year, for **50 Cents**

(When this offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

The Giant Almanac for 1900 Given as a Premium for a Club of TWO Yearly Subscriptions to the Farm and Fireside.

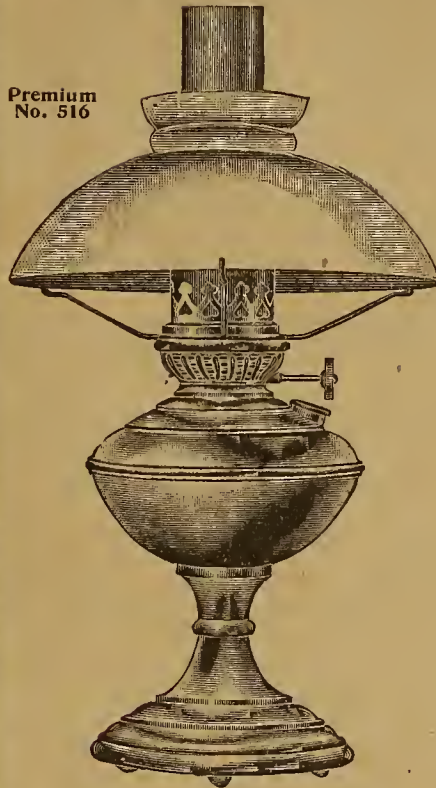
Here is a Hint of Its Contents

A Complete Record of Political Information, as Popular and Electoral Votes by States and Counties for President, Congressmen, State Officers, etc.; Party Platforms, and other political facts. Statistics of all Recent State Elections, including the Fall Elections of 1899. Complete Monetary Statistics, including those on Silver and Gold. Tariff History and Laws and Rates in United States and Foreign Countries. Government Statistics, Officers, Salaries, Names of Congressmen, etc. Population Statistics, States, Counties, Cities, etc. Educational and Religious Statistics. Immigration Statistics. Manufacturing, Commercial and Railroad Statistics. Postal Information, etc. A complete Calendar and Almanac for 1900, and other facts and information too numerous to mention in ten times this much space.

THE SUCCESS

Reading Lamp.....

Premium No. 516



FOR LIBRARY AND PARLOR

Height, 20 inches.
10-inch opal dome shade.
75-candle power.
Fitted with a No. 2
Success Central-draft Burner.
Practical and ornamental.

It will illuminate brilliantly a room 20 feet square; it gives an intense pure white light, perfectly steady—no flickering. Produces 20 per cent more light than any other No. 2 lamp in the market, with less consumption of oil. It is superior to either gas or electric light, and a great deal less expensive. Lamp does not get hot, hence it is not in the least dangerous.

GUARANTEED FOR THESE TEN POINTS OF EXCELLENCE

1. Made of brass, highly polished and heavily nickel-plated.
2. Perfect combustion; will not smoke, does not give any odor; does not heat the lamp, hence no possibility of explosion.
3. Consumes less oil than any other No. 2 burner and gives 20 per cent more light. The saving in oil will pay for the lamp.
4. Will give you a pure, white, steady light—no flickering whatever. Will illuminate a room 20 feet square brilliantly.
5. Superior to and less expensive than gas or electric light.
6. Readily rewicked. Can be done in half a minute.
7. Easily cleaned. Simple of construction. Nothing to get out of order.
8. Ornamental as well as useful for all practical purposes of a lamp.
9. Best ratchet movement yet devised. Gives full control over the wick. No hitching. No clogging.
10. Light equal to 72-candle power.

Pronounced by lamp experts the best lamp ever made. Every lamp guaranteed satisfactory.

This Lamp, and Farm and Fireside One Year, \$2.25

(When this offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

This Lamp Given as a Premium for SIXTEEN Yearly Subscriptions to the Farm and Fireside

(The lamp will be sent by express, charges to be paid by receiver)

Sterling Silver Bracelet.....

LATEST AND MOST ELEGANT STYLE

We offer a genuine hollow-wire, sterling silver bracelet in the most approved pattern. The bracelet is fitted with a lock and key. The links are the size links shown in the illustration, and are elegantly engraved. Not including lock the bracelet is 7 3/4 inches in length. This bracelet is genuine and is backed by our guarantee. We will replace any bracelet not proving as represented and fully satisfactory to the wearer.

Such a bracelet is usually sold for not less than \$1.25. We have arranged for an immense supply of this bracelet at an especially low price, and in this offer give our subscribers the benefit of the same.

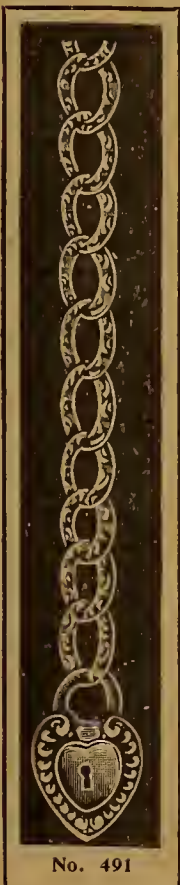
The bracelet is not sold alone. Every order must be accompanied by a subscription or as a premium for a club.

We Will Send This Sterling Silver Bracelet, and the Farm and Fireside One Year, for **\$1.10**

(When this offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

This Sterling Silver Bracelet given as a premium for a club of SIX yearly subscriptions to the Farm and Fireside.

ORDER BY THE NUMBER AS GIVEN UNDER THE BRACELET.



No. 491

Premium No. 23

Helena The Charming Romance.....

BY CAPTAIN H. S. IRWIN

HELENA is a strong story entwined about a thrilling life's romance. It promises to be one of the remarkable books of the day. The plot is well conceived and skillfully carried out, and the reader is led from chapter to chapter with growing interest till the culmination is reached at the very end of the book. The strange career of Captain Presley Brannan, his disappearance, the dual life, and the sensational disclosure under startling circumstances, is not fiction, but facts. The author has adhered to truth with all the art of a finished story-writer.

This is one of the most readable as well as most suggestive of recent novels. It is a story of American life, and most effectively illustrates the saying that truth is often stranger than fiction, for many of its most striking incidents and most interesting characters are drawn from real life.

The story had its counterpart in real incidents which occurred in Memphis, Corinth, Louisville and southern Ohio not many years ago. The characters combine to create scenes of Southern life that are true to experience. Made up of cordiality and despicable enmity, subserviency and chivalry, pathos and pleasantry, all in an ingenious manner.

The book contains 278 pages well printed on good paper and attractively bound.

It is published in the regular edition at \$1.25, but we have made up a special edition for the readers of the FARM AND FIRESIDE which we are able to offer at a great bargain.

THIS BOOK GIVEN FREE AS A PREMIUM FOR TWO YEARLY SUBSCRIPTIONS TO THE FARM AND FIRESIDE

We Will Send This Book, and the Farm and Fireside One Year, for Only - - - - - **60 Cents**

(When this offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

NOTE THIRTY-FIVE CENTS is the clubbing price for yearly subscriptions to the Farm and Fireside without a premium to the subscriber. And members of clubs may accept any of our premium offers at the advertised prices and their names can be counted in clubs (unless otherwise stated in the advertisement). RENEWALS and new names, including a club-raiser's own subscription, can be counted in clubs. No reduction allowed in the clubbing prices.

Order by the Premium Numbers

Address **FARM AND FIRESIDE, Springfield, Ohio**

FARM SELECTIONS

A "FAKE" CHURN

WE HAVE received circulars describing what is known as the scientific mechanical wonder of the age. The name of this great machine is the "Instantaneous Air Blast Butter Separator." It is said to separate, in less than one minute, butter from sweet milk or cream. Some of the scientific explanations given in this circular are enough to give a station director a pronounced case of nervous exhaustion. The air blast is supposed to be driven through the milk, "which dissolves the albumen capsules, liberating the butter in its natural globule form. The oxygen in the air is taken up by the hydrogen in the milk, which forms peroxide of hydrogen, which immediately dissolves the albumen capsules, incasing the butter globules, thus liberating the butter. The particles being cohesive unite in crystals, forming into flakes of pure butter." There is only one word that can be properly used to describe such ridiculous stuff as that, and that word is "Rot!" The circular is a mere lot of bombast, aimed to deceive an innocent public, and under no circumstances would we advise the purchase of this "air-blast" separator. The scientific statement about its workings is a fake, pure and simple, and while we have not tried the separator itself, the air blast of words blown through this circular dissolves all the albumen capsules that form any desire to give it a trial.—Rural New-Yorker.

CRACK VENTILATION

A cow kept in a barn ventilated with cracks will require at least one pound more hay to keep her warm than she otherwise would a day. That means two hundred pounds for the winter season. At ten dollars a ton the hay would be worth one dollar. Of extra grain she will need an equal value. So it would require for a herd of twenty cows forty dollars more feed to winter a dairy in a cold barn. Pretty expensive cracks.—Farm Journal.

RECENT PUBLICATIONS

BOOKS NOTICED

FERTILIZER FACTS FOR FARMERS. By William Morrow, Hartwell, Ohio. Price 25 cents.
ELECTRO HORTICULTURE. Electricity on the farm and in the garden. By George S. Hull, Pasadena, Cal.
CORN-PLANTS; THEIR USES AND WAYS OF LIFE. Frederick Leroy Sargent. Cloth, 106 pp, illustrated. Houghton, Mifflin & Co., Boston.
EGGS IN COLD STORAGE. Theory and practice in preserving eggs by refrigeration. Price 15 cents. By Madison Cooper, Minneapolis, Minn.
FRUITS AND HOW TO DEAL WITH THEM. By Henry Wallace, editor of Wallace's "Farmer." Price 35 cents. Published by Wallace's "Farmer," Des Moines, Iowa.
THE HONEY-MAKERS. By Margaret Warner Morley, author of "A Song of Life," "Life and Love," and "The Bee People." Illustrated, 12mo, 432 pp. Price \$1.50. Published by A. C. McClurg & Co., Chicago, Ill.
THE COST OF LIVING AS MODIFIED BY SANITARY SCIENCE. By Ellen H. Richards, instructor in sanitary science in the Massachusetts Institute of Technology. 12mo, 124 pp, cloth. Price \$1. Published by John Wiley & Sons, New York.
FORAGE CROPS OTHER THAN GRASSES. How to cultivate, harvest and use them. By Thomas Shaw, professor of animal industry at the University of Minnesota. Illustrated, 300 pp, cloth. Orange Judd Company, New York. Price, post-paid, \$1.


CATALOGUES RECEIVED

Noxall Incubator and Brooder Co., Quincy, Ill. Catalogue of incubators and brooders.
 Page Woven Wire Fence Co., Adrian, Mich. Illustrated circulars of the Page woven wire farm, poultry, lawn and park fences.
 Green's Nursery Co., Rochester, N. Y. Green's Fruit Book for 1900. Specialties: Red Cross currant, Loudon red raspberry and the Champion peach.
 Aspinwall Manufacturing Co., Jackson, Mich. Illustrated catalogues of potato-planters, diggers, sorters and cutters, sprayers, post-hole diggers, lawn-swing, churns, etc.

SOLID TRAINS TO NORTHERN MICHIGAN

The Chicago, Milwaukee & St. Paul Railway is now running solid trains of palace sleeping-cars, dining-cars (serving meals *a la carte*) and first-class day-coaches through from Chicago to Calumet, Houghton, Hancock and other points in the Copper Country without change of cars, with direct connection for Marquette, Negaunee, Ishpeming, etc., and passengers from the East, South and Southwest will find this a most desirable route.
 All coupon ticket agents sell tickets via the Chicago, Milwaukee & St. Paul Railway.

The "Ship of the Desert"—"Planet Jr." Rudder.



We have not read anywhere that the "Ship of the Desert" required a rudder, but certainly we could suggest no more profitable or appropriate one than appears in this cut. This "PLANET JR." Horse Hoe is extensively used in Egypt for the cultivation of cotton. In this country it is the standard machine for cultivating that crop and also corn, potatoes, tomatoes, cabbage and all other crops which are cultivated with one horse. We were the original inventors of Horse Hoes nearly thirty years ago, and have steadily maintained our position as leaders among the makers of this class of goods.

We make also a complete line of Horse-hoes, Wheel-hoes, Pivot Wheel Cultivators, Spring Tooth Orchard Cultivators, Four-row Sugar Beet Cultivators, Sugar Beet Seeders, &c., each equipped with a variety of attachments for many purposes. Our new 1900 catalogue—of which we issue 350,000, is the handsomest, best and most instructive book ever issued on a similar subject. Gives an extended treatise on agriculture at home and in foreign lands. Full of little points that bring profit. Full of true and handsome illustrations. We mail it free to any address on application.

S. L. ALLEN & CO., Box 1107-F. PHILADELPHIA, PA.

WE SAVE YOU MONEY ON FERTILIZERS

Buy your fertilizers Direct at Wholesale Prices, and get your money's worth

SPECIAL OFFER TO CLUB PROMOTERS

WRITE FOR PRICES, SAMPLES AND PAMPHLET

WALKER, STRATMAN & COMPANY, PITTSBURGH, PA.

Notice to Club-raisers

Valuable premiums are given FREE for clubs of subscribers to the FARM AND FIRESIDE. Instructions "How to Get Up Clubs" will be sent free upon request.

Address Farm and Fireside, Springfield, Ohio.

In the play of MACBETH, Shakespeare makes Banquo demand of the witches,

"If you can look into the SEEDS OF TIME, And say which grain will grow, and which will not, Speak then to me, who neither beg nor fear Your favors nor your hate."

Had Banquo lived in the year 1900, he would need no witch to tell him which seeds will grow. He would just take down his

Burpee Farm Annual

and make out his list, and Banquo's garden in the spring would make the mouth of an anchorite water and turn his neighbors green with envy. Banquo is dead; but you are alive. Get the best. For the "Leading American Seed Catalogue," send your address to

W. ATLEE BURPEE & CO., Philadelphia.

200 BU. A DAY

with the OTIS BALL BEARING NO. 2 MILL. Grinds ear corn and all other grain, fine or coarse. Grinds faster than any other 2-horse mill made because burrs are 25 in. in diameter, of improved shape to draw the grain down into them. Pulls easier as it runs on a series of 1 in. ball bearings. This is the Largest 2 horse mill made, but our prices are low because we have no agents. We sell it with a binding guarantee to grind twice as much as most others, and more than any other 2-horse mill made of any size burrs or any construction. TRY IT. If it don't do as we say return it. 500 bu. a day with No. 3 Otis, 4-horse mill, grinds fine or coarse; holds 4 bu.; Wt. 1,330 lbs. This mill is a giant in size and capacity. Guaranteed to grind more than any other sweep mill made. For large feeders this is the mill to buy. Sweep Gearing Mill of new pattern, rapid grinder. 7 styles sweep mills. Price Sweep Mills \$14.50 and up. We also have 55 kinds belt and geared mills 2 to 25 H. P.

CORN SHELLERS 19 sizes and kinds for hand or power. Hand sheller 90c; 1-hole sheller for hand or power \$5.50; 2-hole \$10.50; self-feed sheller shells 500 bushels a day.

SHREDDERS AND CUTTERS 53 sizes & combinations for hand & power; largest cuts ton in 5 min.

POWERS 1-h Tread, with governor, \$54; 2-h \$77; 3-h \$103. 2-h Sweep \$24.90; 4-h \$34.75; 6-h \$36.95; 8-h \$51.25

Full line Blankets, Robes, Harness, Cutters, Bobs. Send for FREE fall catalogue giving latest prices.

Marvin Smith Co., 55 N. Jefferson St., E-26, Chicago, Ill.

No. 3 "PRIZE" FEED MILL

OVER 30,000 IN USE.

All Iron and Steel. Automatic Shake Feed. Perfect Adjustable Feed Slide.

Grinds as fine or coarse as desired. Will run by any power, one to five horse sweep, tread, steam or wind. Will not choke down the smallest power. Sold at a low price to advertise the fact that we are the largest manufacturers in the world of labor saving farm machinery. Send for special offer on this mill and large illustrated catalogue of "Horse" and "American" Grinding Mills, 25 sizes and styles, Feed Cutters, Pock's Corn Threshers, Tread Powers, Sweep Powers, Goodhue Galvanized Steel and Wood Wind Mills for power and pumping, Wood Saws, Corn Shellers, etc.

APPLETON MFG. CO., 9 Fargo St., BATAVIA, ILLS.

IRON AGE AIDS

Market gardeners felt the need of just such a tool as the No. 8 IRON AGE HILL AND DRILL SEEDER. It is simple, light, strong, and holds four quarts. Accurately drills or hills all the smaller seeds. A single move of the finger changes from hill dropper to row drill or the reverse.

BATEMAN MFG. CO., Box 138, Grenloch, N. J.

SEWING MACHINE \$13.95

No money in advance. A fine \$40 High-Arm Three-Drawer Machine at \$13.95 sent anywhere on 3 months' trial—guaranteed 20 years—made with Piano Polished Solid Oak Cabinet, beautiful Bent Cover, the best High-Arm Head made, has every known improvement, guaranteed the equal of any \$40 machine. Don't buy before you see our Big Free Catalog in which we describe and illustrate this machine and many others. Write today. **THE LOUIS Z. VEHON CO., 157 W. Jackson St., CHICAGO, ILL.**

1200 FERRETS for sale Small, medium and large sized; some trained; first-class stock. New price-list free. Rochester, Lorain County, Ohio

UNEXCELLED LADIES' KNIFE

Premium No. 150

This Ladies' Penknife is neat and tasty in every respect. It is manufactured by an old reliable manufacturing company, and is guaranteed by them. It is 2 3/4 inches long, has two blades made of razor-steel, hand-forged, oil-tempered, carefully sharpened and highly polished. The handle is of clear white bone, the trimmings of German silver, and the linings of brass. The cut shows the exact size and shape of the knife. Fully warranted. This knife is usually sold in stores at from 75 cents to \$1.00, but as an extra inducement to our club-raisers and subscribers we make the following very liberal offer.

We Will Send the Farm and Fireside One Year and This Penknife for . . . **Only 80 Cents**

(When this offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

Given as a premium for a club of only FOUR yearly subscriptions to the Farm and Fireside.

Address FARM AND FIRESIDE, Springfield, Ohio

BARGAIN OFFERS

In Connection With the Farm and Fireside

For 35 Cents

We will send the Farm and Fireside one year and ONE MAGNIFICENT PICTURE

(When this offer is accepted no cash commission will be allowed and the name cannot be counted in a club)

For 40 Cents

We will send the Farm and Fireside one year and your choice of any ONE of the following premiums:

GLEASON'S HORSE BOOK STANDARD COOK BOOK PILGRIM'S PROGRESS SAMANTHA AMONG THE BRETHERN SAMANTHA AT SARATOGA

For 50 Cents

We will send the Farm and Fireside one year and your choice of any ONE of the following premiums:

CAREER AND TRIUMPHS OF ADMIRAL DEWEY PHOTOGRAPHIC PANORAMA OF OUR NEW POSSESSIONS PEOPLE'S ATLAS OF THE WORLD LIFE OF WASHINGTON IN HIS STEPS LIFE OF LINCOLN SET OF SIX SILVER-PLATED NUT-PICKS

For 60 Cents

We will send the Farm and Fireside one year and your choice of any ONE of the following premiums:

SILVER-PLATED CHILD'S SET, SILVER-PLATED BUTTER-KNIFE AND SUGAR-SHELL

For 75 Cents

We will send the Farm and Fireside one year and your choice of any ONE of the following premiums:

ANY ONE OF THE TWELVE SILVER NOVELTIES OFFERED IN OUR PREMIUM-LIST RAZOR-STROP SET OF SIX SILVER-PLATED COFFEE-SPOONS SET OF SIX SILVER-PLATED TEASPOONS

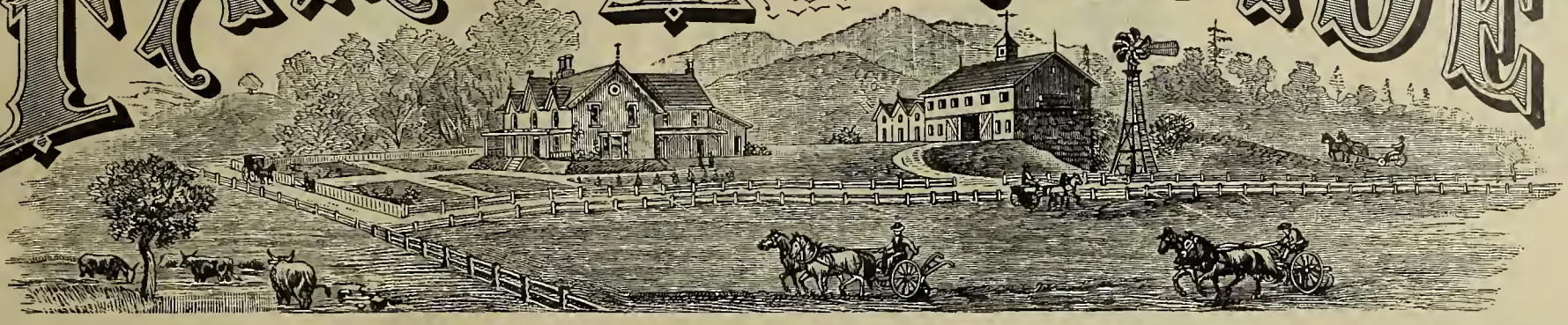
(Upon the acceptance of any of the above offers, except the first, the club-raiser may have either the regular cash commission or the name may count in a club)

For detailed information concerning the premiums offered see our Premium-List. If you do not have it send for it TO-DAY. It is FREE.

All the above premiums are sent post-paid Address FARM AND FIRESIDE, Springfield, Ohio

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FARM & FIRESIDE



Vol. XXIII. No. 9

EASTERN EDITION

FEBRUARY 1, 1900

Entered at the Post-office at Springfield, Ohio, as second-class mail matter

TERMS 50 CENTS A YEAR 24 NUMBERS

ONE Masterpiece of Art FREE

To every one sending 35 Cents, the clubbing price, for One Year's Subscription to the Farm and Fireside.

TWO Masterpieces of Art, and the Farm and Fireside One Year, 50 Cents.

THREE Masterpieces of Art given as a reward for sending TWO yearly subscriptions to the Farm and Fireside, new or renewals.

STYLE These pictures are reproduced in the LATEST style. They are not cheap chromos or attempts at color reproduction, which usually bear no resemblance to the originals. In an artistic way every line and shadow of the originals is preserved in the pictures here presented.



SIZE These pictures, including the margins, are twenty by twenty-five inches in size, five hundred square inches, or about FOUR TIMES the size of this printed page. The pictures without the margins are about sixteen by twenty inches, varying somewhat according to the subjects.



The clubbing rate of the Farm and Fireside without a premium is THIRTY-FIVE cents, but as a SPECIAL METHOD of introducing these magnificent pictures we will give any ONE of these pictures FREE to every one who sends THIRTY-FIVE cents for one year's subscription to the Farm and Fireside, provided the picture is selected when the subscription is sent in.
(When this offer is accepted no commission will be allowed and the name will not count in a club)

35 Cents



Premium No. 794 Can't You Talk Size 20 by 25 inches

VALUE Art-stores are now selling engravings of these famous paintings at from \$2.50 to \$10.00 each. Many competent judges, having made a careful comparison, pronounce our reproductions superior to and more desirable than these expensive engravings.



The paper on which the pictures are produced is the very finest picture-paper, good and heavy, and suitable for framing. The illustrations on this page can convey no adequate idea of the size, beauty and elegance of the pictures.



**Choose
From
This List**

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|-----------------------------|----------|-----------------|
| "THE IMMACULATE CONCEPTION" | Murillo | Premium No. 784 |
| "PHARAOH'S HORSES" | Herring | Premium No. 785 |
| "QUEEN OF FLOWERS" | Lester | Premium No. 786 |
| "AFTER WORK" | Holmes | Premium No. 787 |
| "CHRIST BEFORE PILATE" | Munkacsy | Premium No. 788 |
| "DEFIANCE," or STAG AT BAY | Landseer | Premium No. 789 |
| "KISS ME" (Child and Dogs) | Holmes | Premium No. 790 |
| "THE LITTLE SHEPHERDESS" | Koller | Premium No. 791 |
| "PORTRAIT OF WASHINGTON" | Stuart | Premium No. 792 |
| "THE FINDING OF MOSES" | Schopin | Premium No. 793 |
| "CAN'T YOU TALK" | Holmes | Premium No. 794 |
| "WATERFALL BY MOONLIGHT" | Rieger | Premium No. 795 |
| "THE HORSE FAIR" | Bonheur | Premium No. 796 |

Farm and Fireside One Year and Any Two of the Pictures for Only **50 Cents**

(When this offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

Three Pictures Free Any THREE of the Pictures Given as a Premium for TWO Yearly Subscriptions to the Farm and Fireside.



Premium No. 795 Waterfall by Moonlight Size 20 by 25 inches

The pictures will be sent by mail, securely packed and postage paid. Entire satisfaction guaranteed. A beautiful twelve-page circular giving illustrations and descriptions of the pictures sent FREE on request. Write to-day.

Order by the Premium Numbers

Address **FARM AND FIRESIDE, Springfield, Ohio**



Special Trial Offer New and GRAND PANSIES

Did you ever see 7 straight or circular rows of Pansies, side by side, each a different color? If so, you know that the effect is charming beyond conception. Did you ever see Child's Giant Pansies, marvelous in beauty and true to color? If not, you have not seen the beauty and perfection now attained.

- As a trial offer, we will mail for 25 cents: 50 seeds Pansy Giant, Pure Snow White, 50 " " " Coal Black, 50 " " " Cardinal Red, 50 " " " Bright Yellow, 50 " " " Azure Blue, 50 " " " Bright Violet, 50 " " " Striped, Variegated.

A little book on Pansies, telling all about culture, etc. A Booklet of 85 pages on House Plants; tells just how to care for every kind of window plant.

THE MAYFLOWER magazine 3 months; finest publication on Flowers and Gardening. And our Catalogue of 156 pages and 9 Colored Plates. The 7 Pansies, 2 Books, Mayflower and Cat's, 25c. Our Catalogue for 1900—25th Anniversary Edition—greatest Book of Flower and Vegetable Seeds, Bulbs, Plants and New Fruits, 156 pages, 500 illustrations, 9 colored plates, will be mailed free to any who anticipate purchasing. Great Novelties in Sweet Scented and Tuberosus Rex Begonias, Geraniums, Fragrant Calla, Treasure Vine, Gooseflower, Caladiums, Everblooming Tritoma, Cannas, Gladiolus, Roses, Phloxes, Giant Peony, Lilies, Palms, Carnations, Primroses, Asters, Pansies, Sweet Peas, Verbenas, Tomatoes, Strawberries, etc.

John Lewis Childs, Floral Park, N. Y.



Extra Early Admiral Dewey

Originated and introduced by HARRY N. HAMMOND, Seedsman, Box 43, FIFIELD, MICH. Largest grower of Seed Potatoes in America. The Dewey is the most wonderful New Potato. Its merits are fully described in Hammond's 1900 Catalogue. Free for the asking. Address as above. Write to-day, 20 other varieties of potatoes. Also Vegetable and Flower Seeds.

FERRY'S SEEDS

Thousands of gardeners depend on Ferry's Seeds every year and never suffer disappointment. Cheap substitutes bring loss, not paying crops. It takes to pay a little more for FERRY'S SEEDS. Five cents per paper everywhere, and always worth it. Always the Best. 1900 Seed Annual free. D. M. FERRY & CO., DETROIT, MICH.

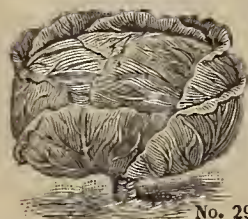


Have Hundreds of Carloads

of Fruit and Ornamental Trees, Shrubs, Roses, Plants, Bulbs, Seeds.

Choice new and old. Mail size postpaid, safe arrival and satisfaction guaranteed, larger by express or freight. The best are cheapest, try us. Elegant Catalog free. 46th year. 1000 acres. 4 greenhouses.

THE STORRS & HARRISON CO., Box 684, PAINESVILLE, OHIO.



SEEDS.

Send today for FINEST Catalogue of Best Reliable SEEDS mailed Free Large packets only 2 cents. Market Gardeners ask for Wholesale PRICE LIST. ALNEER BROS., No. 29 A Bldg, ROCKFORD, ILL.

15 CTS. FOR A POSTAL

We have published this year the finest catalogue of seeds, plants, etc., ever issued by any western dealer. 100 pages, hundreds of illustrations, elegant colored plates, truthful descriptions and BARGAIN PRICES. These books are expensive, costing us about 15 cents each, but we will mail one to you FREE if you mention this paper. A postal request is sufficient. Better write for it today. IOWA SEED CO., DES MOINES, IOWA.



SENT ON TRIAL

We have so much faith in our mills, supplemented by past experience, that we will ship any mill we make anywhere on trial subject to return if not satisfactory.

QUAKER CITY GRINDING MILLS do everything that any mill will do and do it better. Don't buy at least until you send for our 31st annual catalog I-free.

A. W. STRAUB & CO., 8737 Filbert St., Philadelphia, Pa. The A. W. STRAUB CO., Canal & Randolph Sts., Chicago, Ill. Also Western agents for Smalley Powers, Shellers, Cutters, &c.

FOR SALE

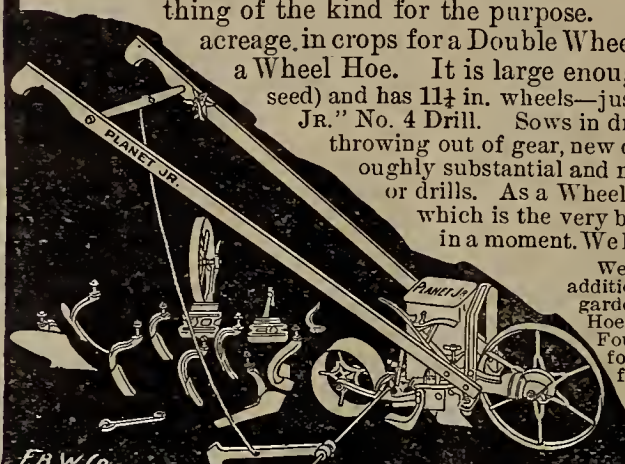
We have for sale five (5) "West-ern" and one (1) "New Era" Graders, with forty-two (42) Dump Wagons. These were purchased new for our work at Massena, N. Y., and only used one year. They are in first-class condition and will be sold reasonable. Address THE T. A. GILLESPIE COMPANY, 26 Cortlandt Street, NEW YORK.



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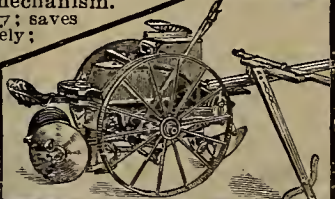


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THE FARM AND FIRESIDE

FARMING VERSUS MINING IN COLORADO

BY H. A. CRAFTS

THE temptation to dabble in mining ventures is ever before the citizen of Colorado, and no class of society appears to be exempt. The farmer, the merchant, the banker, the professional man, the day-laborer, all have their turn at it. Not that they shoulder pick and shovel and hie away to the mountains to dig their prospective fortunes out of the ground, for there is no end of stock companies into which one may be admitted on the ground floor. Then there are syndicates that are constantly forming to prospect new mining-fields, into which anybody with five dollars or upward may enter and share the possible profits of the undertaking, and it is always easy to find some honest miner who is willing to be grub-staked for a share in such bonanzas as he may discover. Ten years ago silver-mines were the dream of the fortune-hunter, but now gold and copper are the much-sought-for metals.

The fair hillsides of the entire state are being punctured by the seekers after hidden wealth. One finds it, a hundred do not, yet so fascinating an occupation is it that the ranks of the gold-hunters are always full. Of course, the fever and excitement ebbs and flows, now attacking this community and then that, or raging during one season and dying out later on.

The farmer of Colorado is possibly as sorely tempted to shy his castor into the ring of mining as any other individual class. It matters not on which slope his land may lie, he has constantly presented to his eye that great range of mountains wherein all these hidden millions are locked; he reads weekly of the great discoveries and wonderful profits of some great producing mine, or the enormous advance in the stock of some mining company, and then he reverts regretfully to the slow, laborious and not always profitable processes of his own humble occupation. Beyond is the blue mass of mountains, where all are at liberty to seek and possibly find the wealth of the Golconda. Why should he remain here and delve year after year for a mere living? It is winter, and the farms have something of a bare and uninviting aspect. Perhaps the farmer is quite idle save for the doing of a few chores about the house or the corrals, and idleness begets discontent. His visits to town are more frequent, and there he falls in with the smooth-tongued mine promoter who has shares to sell—shares of capital stock beautifully printed, and he has them by the ream; and he has partnership interests in prospect-holes, which are dignified by being called mines, or he has mines singly or in groups to sell at great bargains. And to clinch his argument he exhibits triumphantly various assayers' certificates showing how rich in gold, silver or copper is

this or that claim or lode. And he has piled in one corner heaps of broken, dingy rock, and as the glowing argument grows warmer he will take some of the rock, pound it to a fine powder, and with pan and water and deft turns of the wrist reveal to the granger's astonished gaze a fine line of "colors" down in the hollow of the pan.

Round about the comfortable office stove sit a group of congenial spirits, ruminating upon the wonderful possibilities of some budding mining camp, and talking learnedly

ness to an equity in your ranch. Then you return homeward filled with visions of great future profits, and the precious shares or deeds, as the case may be, are carefully deposited in some place of safe-keeping to increase in value while you wait.

Fortunately the warm tide of spring soon spreads over the fields, the frost comes out of the ground, the buds swell upon the branches, the fowls cackle loudly in the yards, proclaiming springtime, and the farmer's heart is gladdened, and his thoughts turn from

succumbed, even for a moment, to that insinuating tongue, and he kicks viciously at the first clod of earth that comes in his way, and flourishing his short whip as if about to flagellate some imaginary offender, he vows he will never speak to that creature in town again so long as he lives! Thou leech! Thou parasite!

Yet from the great masses the army of gold-hunters is continually recruited, from the farm as well as from the factory, and all among the hills and gulches of Colorado the mad quest of wealth goes on. The summer sojourner, wandering among rocks and crags and overspreading pine-trees, in search of health and rest, meets them in his walks or stumbles on their handiwork wrought upon the face of Mother Earth in the shape of unsightly prospect-holes or chasm-like shafts. And occasionally one stumbles upon a collection of rude log houses in the midst of picturesque mountain tracts, where have centered the hopes of ambitious prospectors who see in their humble beginning the nucleus of a future prosperous mining town.

One of these I have often visited during my summer rambles in the mountains. Curving through the midst of a small hollow in the vicinity of various rocky crags and outcroppings is a narrow roadway bordered on either side by a row of low buildings, mostly of logs. Some attempt has been

made toward adornment in the way of fancy gables and latticed porches. The hamlet boasts of a town hall, a long building of rough boards, a store, a hotel, and a reduction-mill, which never yet has turned out an ounce of mineral. The pride of the little town, outside of the numerous bonanzas that lie in the contiguous territory, is the spring that supplies the inhabitants with water. In a small hollow, and bubbling up between some loose rocks, is a crystal spring of ice-cold water. A cup hangs from the twig of a tree standing near by, so that all who wish may drink, and at all hours of the day the dwellers in the town, both old and young, may be seen carrying water from the spring to their homes for domestic use.

For more than fifteen years has this little town felt the alternate ebb and flow of hope and despair. The hillsides round about have been literally honey-combed by the pick, the drill and the powder of the miner. Still not a dollar has been returned for all the labor thus far expended. Enthusiasm at times flares up and the town hums with activity; then it flickers like the flame of a dying candle, and a period of dullness falls upon it like a pall. One set of gold-seekers goes and another comes. Sometime, per-

haps, the true vein will be found, and capital will flow in and the hills will teem with human activity.

In all of these untiring efforts to wring wealth from hidden recesses of the hills the farmer takes no unimportant part. Mayhap he throws down the spade and hoe and takes up the sledge and drill as a permanent occupation, and figures in after years as one of

[CONCLUDED ON PAGE 8 OF THIS ISSUE]



A MINING TOWN IN EMBRYO



A HAVEN OF REST IN THE ROCKIES

upon the merits or demerits of this or that lead. And the interest waxes more and more lively and filters even out into the streets, where in groups on the sidewalks and street-corners the citizens indulge in earnest and oftentimes excited confabulations, wherein there is a strange admixture of terms, applicable both to agriculture and "mineology," and seems to the casual listener but little less than jargon. Drifting through the general

castle-building to the actual things of everyday life. He passes from a morbid state of unrest to the cheerful realm of occupation. He hitches his team of sturdy farm-horses to his turning-plow, and tries a furrow across the edge of his field just to test the condition of the soil. At first the earth sticks to the rusty plowshare and the plow moves clumsily through the glebe. But the farmer turns the mold-board over on one side, kicks loose

conversation may be heard such irrelevant terms as "pigs" and "porphyry," "pork" and "pyrites," "Herefords" and "hematites," until one wonders if he has not accidentally run against a group of confirmed but harmless lunatics. In the meantime the oily-tongued operator in stocks and shares secures his victim by easy stages. If you have not the cash he will trade you his wares for anything from a set of second-hand har-

the cloying earth, polishes up the steel with the sole of his boot, and soon it is slipping through the moist and yielding soil as if assisted by careful lubrication. Under the combined influence of the genial airs of spring and the healthy exercise of his labor his heart swells with new-born comfort and happiness, and his mind reverts to those mining-shares with a feeling of remorse if not rage. To think that he should have

FARM AND FIRESIDE

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IN A notable speech on the Philippines, Senator Beveridge, of Indiana, said:

"I address the Senate at this time because senators and members of the House on both sides have asked that I give to Congress and the country my observations in the Philippines and the Far East, and the conclusions which those observations compel; and because of the hurtful resolutions introduced by the senators from South Carolina and Georgia, every word of which will cost and is costing the lives of American soldiers.

"Mr. President, the times call for candor. The Philippines are ours forever, 'territory belonging to the United States,' as the Constitution calls them. And just beyond the Philippines are China's illimitable markets. We will not retreat from either. We will not repudiate our duty in the archipelago. We will not abandon our opportunity in the Orient.

"This island empire is the last land left in all the oceans. If it should prove a mistake to abandon it, the blunder once made would be irretrievable. If it proves a mistake to hold it, the error can be corrected when we will; every other progressive nation stands ready to relieve us.

"But to hold it will be no mistake. Our largest trade henceforth must be with Asia. The Pacific is our ocean. More and more Europe will manufacture all it needs—secure from its colonies the most it consumes. Where shall we turn for consumers of our surplus? Geography answers the question. China is our natural customer. She is nearer to us than to England, Germany or Russia, the commercial powers of the present and the future. They have moved nearer to China by securing permanent bases on her borders. The Philippines give us a base at the door of all the East. Lines of navigation from our ports to the Orient and Australia; from the Isthmian canal to Asia; from all Oriental ports to Australia, converge and separate from the Philippines. They are a self-supporting, dividend-paying fleet, permanently anchored at a spot selected by the strategy of Providence, commanding the Pacific. And the Pacific is the ocean of the commerce of the future. Most future wars will be conflicts for commerce. . . .

"The Philippines command the commercial situation of the entire East. Can America best trade with China from San Francisco or New York? From San Francisco, of course. But if San Francisco were closer to China than New York is to Pittsburg, what then? And yet American statesmen plan to surrender this commercial throne of the Orient where Providence and our soldiers' lives have placed us. When history comes to write the story of that suggested treason to American supremacy, and therefore to the spread of American civilization, let her in mercy write that those who so proposed were merely blind and nothing more.

"But if they did not command China, India, the Orient, the whole Pacific for purposes of offense, defense and trade, the Philippines are so valuable in themselves that we should hold them. I have cruised more than two thousand miles through the archipelago, every moment a surprise at its loveliness and wealth. I have ridden hundreds of miles on the islands, every foot of the way a revelation of vegetable and mineral riches. No land in America surpasses in fertility the plains and valleys of Luzon. . . .

"Our trade with the islands developed will be \$125,000,000 annually; for who believes that we cannot do ten times as well as Spain? Consider their imperial dimensions. Luzon is larger and richer than New York, Pennsylvania, Illinois or Ohio. Mindanao is larger and richer than all New England. Manila as a port of call and exchange will in the time of men now living far surpass Liverpool. If we are willing to go to war rather than let England have a few feet of frozen Alaska, which affords no market and commands none, what should we not do rather than let England, Germany, Russia or Japan have all the Philippines? And no man on the spot can fail to see that this would be their fate if we retired.

"Two years ago there was no land in all the world which we could occupy for any purpose. Our commerce was daily turning toward the Orient, and geography and trade developments made necessary our commercial empire over the Pacific. And in that ocean we had no commercial, naval or military base. To-day we have one of the three great ocean possessions of the globe, located at the most commanding commercial, naval and military points in the Eastern seas. Shall we abandon it? That man little knows the common people of the republic, little understands the instincts of our race, who thinks we will not hold it fast, and hold it forever, administering just government by simplest methods.

"It has been charged that our conduct of the war has been cruel. Senators, it has been the reverse. I have been in our hospitals, and seen the wounded Filipino as carefully, tenderly cared for as our own. Within our lines they may plow and sow and reap and go about the affairs of peace with absolute liberty. And yet all this kindness was misunderstood, or rather not understood. Senators must remember that we are not dealing with Americans or Europeans. We are dealing with Orientals. We are dealing with Orientals who are Malays. We are dealing with Malays instructed in Spanish methods. They mistake kindness for weakness, forbearance for fear. It could not be otherwise unless you could erase hundreds of years of savagery, other hundreds of years of Orientalism, and still other hundreds of years of Spanish character and custom.

"Our mistake has not been cruelty; it has been kindness. It has been the application to Spanish-Malays of methods appropriate to New England. Every device of mercy, every method of conciliation has been employed by the peace-loving President of the American republic, to the amazement of nations experienced in Oriental revolt. Before the outbreak our military governor of the islands appointed a commission to make some arrangement with the natives mutually agreeable. I know the members of that commission well—General Hughes, Colonel Crowder and General Smith—moderate, kindly, tactful men of the world—an ideal body for such negotiation. It was treated with contempt. We smiled at intolerable insult and insolence until the lips of every native in Manila were curling in ridicule for the cowardly Americans. We refrained from all violence until their armed bravos crossed the line in violation of agreement. Then our sentry shot the offender, and he should have been court-martialed had he failed to shoot. That shot was the most fortunate of the war. For Aguinaldo had planned the attack upon us for two nights

later; our sentry's shot brought this attack prematurely on. He had arranged for an uprising in Manila to massacre all Americans, the plans for which, in Sandico's handwriting, are in our possession; this shot made that awful scheme impossible.

"Mr. President, reluctantly and only from a sense of duty am I forced to say that American opposition to the war has been the chief factor in prolonging it. Had Aguinaldo not understood that in America, even in the American Congress, even here in the Senate, he and his cause were supported; had he not known that it was proclaimed on the stump and in the press of a faction in the United States that every shot his misguided followers fired into the breasts of American soldiers was like the volleys fired by Washington's men against the soldiers of King George, his insurrection would have been dissolved before it entirely crystallized. It is believed and stated in Luzon, Panay and Cebu that the Filipinos have only to fight, harass, retreat, break up into small parties, if necessary, as they are doing now, but by any means hold out until the next presidential election, and our forces will be withdrawn. All this has aided the enemy more than climate, arms and battle. Senators, I have heard these reports myself: I have talked with the people; I have seen our mangled boys in the hospital and field; I have stood on the firing-line and beheld our dead soldiers, their faces turned to the pitiless Southern sky, and in sorrow rather than anger I say to those whose voices in America have cheered those misguided natives on to shoot our soldiers down that the blood of those dead and wounded boys of ours is on their hands, and the flood of all the years can never wash that stain away. In sorrow rather than anger I say these words, for I earnestly believe that our brothers knew not what they did."

ONE of the first results of the passage of pro-Boer resolutions by hyphenated Americans in various parts of the country is a study of the real merits of the question and the expression of conservative opinion by the press. The Kansas City "Journal" says:

"That Great Britain is waging a war of conquest in Africa is not to be denied. Whether it is to be successfully defended in argument depends entirely upon the point of view. However, it is quite certain that the pro-Boer papers in America are not adding anything to our store of information when they indulge in buncombe about a democratic government being subverted to the tyranny of a monarch. As we conceive of a democratic government, England is twice as liberal as the so-called republic of the Transvaal. Indeed, the Dutch republic has less of political liberty than any monarchy in Europe. It is a religious oligarchy of the most pronounced and intolerant type, and the cause of human freedom cannot suffer by its overturning.

"In the view of narrow moralists the strong nation is always wrong and the weak nation always right in any contest which may come between them. And yet the history of the advancement of the world has been one ceaseless round of conquest by the more efficient over the less efficient. Here in America every foot of our soil was conquered from races and governments which had the same fundamental right to preserve their own dominion as that now ascribed to the Boers. We of all people should talk little of the tyranny which forces a less civilized people to give way before the progress of the world. We have built here what we conceive to be the grandest civilization and the most liberal government on the face of the earth, and yet it is built in every part on the ruins of other governments which had, from the view of abstract morality, the right to endure forever without conforming to the rules and precepts which others sought to force upon them. They were stricken down in the interests of advancing humanity. They disappeared in obedience to the immutable laws which have governed man collectively and individually from the birth of the race. The Boers are going the same route. They are obeying the same force of circumstances that drove Spain out of Cuba and the Philippines.

"In this era it is well to beware of the advocate who preaches too strenuously about eternal vigilance being the price of liberty. As a rule he is a demagogue who will bear any amount of watching. The whole tendency of the human race is toward the goal of greater liberty. It is a movement of such

colossal proportions and such irrepressible force that it seems to run without effort and without special forcing. In centuries there has not been a world's movement which made for less governmental or individual freedom. The talk about there being danger of backward flight is wholly nonsense. The people everywhere have learned their power or are learning it rapidly, and the chance for tyranny and oppression is growing less every day. For the past three hundred years every new government which came to replace an old, whether by internal revolution or foreign conquest, tended to improve the political condition of the population. The inception of the war in South Africa was a revolt against restraints imposed upon the civil, religious and political privileges of the people. England may be wholly selfish in her desire for territorial aggrandizement, but her conquest of the Boers will result in a better government and a more advanced civilization. This much we must grant to the efficiency of the British nation, just as we ask that it shall be granted to ourselves in our use of the victory over Spain.

THE steady and rapid growth of the beet-sugar industry," says the "Cincinnati Price Current," "is shown in the following interesting table, which gives the average annual world's production of beet-sugar, cane-sugar, total production and average price a pound for the periods indicated:

| Period. | Beets, yearly av. 1,000 tons. | Cane, yearly av. 1,000 tons. | Total, yearly av. 1,000 tons. | Price, cents. yearly av. |
|------------|-------------------------------|------------------------------|-------------------------------|--------------------------|
| 1870-75... | 1,216 | 1,707 | 2,923 | 4.81 |
| 1876-80... | 1,437 | 1,854 | 3,291 | 4.54 |
| 1881-85... | 2,211 | 2,236 | 4,447 | 3.58 |
| 1886-90... | 3,090 | 2,339 | 5,389 | 2.95 |
| 1891-95... | 3,985 | 3,149 | 7,134 | 2.67 |
| 1896-98... | 4,934 | 3,919 | 8,853 | 2.32 |
| 1899.... | 5,510 | 2,904 | 8,414 | |

"Cane-sugar is produced mostly in the tropics, while the beet is grown in the temperate zone.

"It is thus shown that the sugar-producing area is gradually shifting northward, and that the farmer of the temperate zone is able not only to compete with the low-priced labor of the tropics, but in doing so to reduce one half the cost of the article produced."

The development of the beet-sugar industry in this country is assured because the growers here are the most progressive in the world, and the quickest to use improved methods and machinery. There need be no fear that the supremacy in sugar production will soon, if ever, return to the tropics, or that our beet-sugar industry is threatened by the prospect of better government in the West India islands.

SPEAKING of the wool outlook for 1900 the "American Wool and Cotton Reporter" says:

"The year 1899 has passed into history as probably the most profitable ever witnessed in the wool trade of this country, certainly the most profitable in the career of those now engaged in the business. What the future of prices will be is of course a matter of uncertainty, but it is a matter that a great many persons are thinking about at this time, consequently it is in order for us to present a few considerations which may affect the problem. Since October 1st the purchases of wool in the Boston, New York, Philadelphia, Chicago and St. Louis markets have aggregated about 200,000,000 pounds. If we should set down twenty-five per cent of this to speculation, and consider that the balance was bought to be ground up in 1900, we should find that the manufacturers had bought for actual consumption in these five markets (in which the great bulk of the trading of the country occurs) about 150,000,000 pounds. The exact amount of wool which the mills of the United States will require in 1900 can only be estimated, but if the demand for the finished product comes up to expectation, they certainly will need 500,000,000 pounds, and possibly nearer 600,000,000. Deducting the 150,000,000 pounds purchased in the five markets mentioned above since October 1st from 500,000,000 pounds, we find that very likely the mills have still to provide themselves with 350,000,000 pounds for 1900 consumption. Against this amount we must place the 157,000,000 pounds of wool carried over in this country from 1899, and also the 1900 clip, for which 300,000,000 pounds would be an excessive estimate. This would afford the manufacturers a leeway of about 107,000,000 pounds. If the manufacturers' needs should approximate 600,000,000 pounds in 1900, an amount would be called for practically equaling the total amount now in the United States, together with all that now being grown here."



ABOUT RURAL AFFAIRS

Heroes and Hero-worship Opportunity makes heroes with much greater certainty than it makes thieves. In the great majority of cases where there is safe opportunity for stealing the thief is lacking, and the opportunity was lost. But an opportunity given for heroism never fails to find the hero. This is because the woods are full of heroes—and so are the plains and the high seas. Every true American, every true man, in fact, has something of a hero in him. May he be rich or poor, educated or ignorant, black or white, the man who does his duty as he sees it, irrespective of consequences, is a hero. The pioneer who pushes into the wilderness, using the ax to fell the trees of the primitive forests, and thus make room for the growing of corn and grain, and carries the gun to defend himself and family against the attacks of wild beasts and still wilder savages, is a hero. So is the man who risks his own life to save that of another—the fireman who unhesitatingly enters the burning building; the coast-guard who pushes the life-boat out into the turbulent waters and heads it toward the stranded vessel regardless of raging storm and biting cold. A hero is every one, man or woman, who earns support for self and family by hazardous work. And there are thousands, nay, millions of them. And very little fuss is made over them, either. This heroism is so common that it hardly excites comment. And yet it is admirable and deserving of just as much honor as the heroism on the battle-field or in a naval engagement.

In short, I honor and admire the hero wherever I find him—and we find him often and sometimes in unexpected places. But I do not see fit to make of any hero an idol at whose shrine I must worship. The senseless adoration and flattery of which some of our heroes are made the object is an injustice to them, and frequently a source of much discomfort. Even Dewey and Hobson had to discover that there are penalties connected with heroism, and they may have wished at times that they had never been found out. Even heroes are but human, and it is unreasonable to expect them to be without fault or weakness, unreasonable to cry "hosanna" one day and "crucify" the next. Make allowance for human failings.

Handling Poisonous Drugs Familiarity breeds contempt. I remember how very carefully I handled the first package of Paris green which I bought for bug-killing purposes. I hardly dared to touch the package or to breathe when it was opened. And then how much I was in a hurry to use it up in order to get rid of it! I am a little more hardened to the task of using poisons at the present day, and yet I always feel uncomfortable when I see the number of poison packages on the shelf. There I have white arsenic by the pound, Paris green, parargene, white hellebore, etc., in cans and packages. Every package is properly labeled and placed on the highest shelf, where it is out of the reach of the smaller children. At times, however, I think that I ought to have a tight closet or box to keep these things closely locked up all the time. I believe that it is a poor plan to leave poisonous drugs lying about in papers, even if properly labeled. It would be much better to have them in tin cans or glass jars, but the label—plain and in large letters—should never be left off. There is danger in unlabeled packages of poison, and a near friend of mine can tell you quite a story about it, too.

He keeps some fine flocks of Black Langshans, among them a big lot of capous that are his pride and promise of profit. One day his wife tells him that she has found a package of ginger which has become rather stale and might do as a stimulant for the fowls. Next morning while he is fixing up his big kettleful of warm breakfast for his flocks he sees a package lying in the woodshed, and thinking it is the ginger spoken of, takes it up and puts a generous sprinkling all over the feed, then mixes the mess in the usual way and feeds it to his flock of capous. In the evening a hundred or more of the fowls refused to eat; next day they are lying about apparently at death's door. The birds that had been fed with a mess

without "ginger" were all right. This led to an investigation, which developed the fact that the "ginger" was nothing more nor less than white hellebore. What to do was the next question. The sick fowls' crops were full. The hellebore had apparently arrested the process of digestion. It seemed necessary to empty the crops at once.

Saving Poisoned Fowls One of the little two-flame hand kerosene-stoves was placed upon a barrel and lighted, and upon it a tank having an outlet or faucet near the bottom. To this faucet he attached a piece of rubber tube with an ordinary small nozzle, both tube and nozzle being taken from an ordinary fountain syringe. The tank was filled with water and this kept at about blood-heat—it being a



very cold day. Now one after another of the sick fowls was picked up and the contents of the crop removed by means of washing or flooding. The nozzle was held in the bird's mouth, and the crop worked and pressed with the hand until all the stuff was disgorged. It was a job of much labor and discomfort, but it led to success. A dose of weak stimulants was administered after the washing. Next day the birds began to eat, and in a day or two more seemed as well as ever.

A Good Lesson When a thing like this once happens it is usually not soon forgotten, and serves as a most impressive lesson. Accidents resulting from carelessness in leaving poisons lying around in loose and unlabeled packages are quite common. It is a good time now to examine the stock of poisons on hand, to destroy any drug which we cannot identify with absolute certainty, to plainly label what we want to keep, and then put it all away together where we can keep it under lock and key.

Feeding-stuff Law On December 1, 1899, the new feeding-stuff law enacted by the New York state legislature at its last session took effect. This law is on the same lines as the fertilizer law which has been in operation in this state for years, and seems to meet the requirements of the case pretty well. Every manufacturer or importer must file in the office of the New York experimental station, at Geneva, annually during December the same statement that is required on every bag; namely, 1. Trade name of the feeding stuff. 2. Name of manufacturer and place of business. 3. Place of manufacture. 4. Percentage of protein. 5. Percentage of fat. The stuffs to which this law applies are linseed-meals, cotton-seed meals, pea-meals, cocoanut-meals, gluten-meals, gluten feeds, maize feeds, starch feeds, sugar feeds, dried brewers' grains, malt sprouts, hominy feeds, cerealine feeds, rice-meals, oat feeds, corn and oat chops, ground beef or fish-scrap, mixed feeds, etc. Bran or middlings or clear ground grains are not covered by this law. The manufacturer has to pay a license fee of twenty-five dollars on each brand of feeding stuff into the treasury of the station. Samples of each brand taken by an authorized agent of the station in open market are to be analyzed to determine whether the stuff is up to the guaranteed analysis, and violations will be prosecuted. Undoubtedly some of the mixed feeding

stuffs put on the market have been adulterated, and this law will put a stop to this practice. And this is not all. It will serve to make farmers better acquainted with the principle of the balanced ration. This question of compounding feeding material for our different animals is yet the great problem before us. Its solution is the key to profitable stock-keeping. I have to buy many tons of feed every year, but I seldom care to buy mixed stuffs. They have heretofore been of uncertain value and composition. A guaranteed analysis will help us over some of the difficulties. But why not apply the principle of home mixing to feed stuffs as well as to fertilizers? I have tried the H. O. company's dairy feed, which costs about twenty dollars a ton and contains about as much protein as bran. It seems to give good results, but on the whole I prefer to buy bran and oil-meals to get the required proportion of blood and muscle makers; and I still hold to the proportion of four parts bran, two parts corn-meal and two parts ground oats, with a little linseed-oil meal mixed in. If you can find a better feed for milk-cows—or for working-horses, either—let me know. Ten pounds of such mixture a day is about the limit that should be drawn in feeding a cow of about seven hundred and fifty pounds' weight.

T. GREINER.

SALIENT FARM NOTES

Forestry For many years I have advocated the planting of wind-breaks on the west and north sides of every home and farm-yard on the prairies, and the planting of all rough and steep hillsides and deep ravines to the best hard-wood trees, in full confidence that such action will prove beneficial to the land and profitable to the owner. To show that I have been right in this matter, I give a portion of a letter just received: "I wish you could see the grove of Catalpa speciosa and white ash that I, acting upon your advice, planted on the west and north sides of my house and yards sixteen years ago. I value it at one thousand dollars right now. I have cut an immense quantity of fuel out of it already, and last year I took out enough good posts to build a half mile of fence, and yet one would hardly believe that an ax had ever been in the grove. It is increasing in value all the time. The planting of this grove was the most profitable and best three days' work I ever did on the farm. I send you a thousand thanks every year for the excellent advice you gave in the article which led me to plant those trees. I have that article yet, and old and yellow as it is I prize it above anything I ever read in an agricultural journal."

Such a letter as the above does make a fellow feel a little bit better. It makes one feel that he has cast bread upon the waters, so to speak; that he has done some good in the world; that he is not wholly made of "sounding brass and tinkling cymbals."

Thirty-six years ago I lived on a farm in the northern part of this state. About three miles from this farm was one of the finest bodies of hard-wood timber in the West. It was about ten miles wide and forty long, and was made up of grand oaks, hickories, walnuts and other trees, many of them of immense size. I was a boy then, and the old farmers in the neighborhood used to tell me that my children's children would, if they lived there, be able to buy fire-wood and fence-posts from the owners of that forest. Two years ago I stood on a hill overlooking that tract, and, with the exception of a small grove here and yonder, not a stick was left standing. The land was in farm crops or pasture, and every steep hillside was bare and seamed with deep gullies.

The story of that forest is the story of all others in this country. Wherever trees stand can be heard the sound of the ax and saw. The forests are going down like grain before the sickle, and none are rising to take their places. Eight years ago I rode one hundred and forty miles through what once was one of the grandest forests of pine in Minnesota and Wisconsin, and all that is left is stumps, patches of tamarack and rocks. The millions of feet of pine have disappeared and none is growing to take their place. Those who cut the timber made a clean sweep of all that was of any value, and forest fires destroyed everything they left. It is plain to every one who is at all conversant with the facts that a wood famine is imminent. The "exhaustless" forests of this great country will be gone in a few years. Those who deal in lumber are well aware of this fact, and prices are going upward by leaps and bounds, and ere long will be almost prohibitive.

In view of these facts it would seem to be mighty good policy on the part of landowners to begin planting forest-trees without delay. Every farmer must have lumber and posts, and it is plain now that he will have to grow them or pay a price that he can ill afford, and the sooner he gets them started the better will it be for him and those who come after him. While lumber and posts were abundant and cheap he could not see any good reason for planting forest-trees on land that would grow corn and wheat, but rapidly advancing prices will convince any one that the time to begin is now here. On almost every farm there are one or more corners or rough spots of an acre or two that can be set with trees and not missed. If every acre of the farm is good, tillable land the grove should be so located that it will serve as a wind-break to house and yards. Those who own rough and hilly land should lose no time in planting thousands of forest-trees in clumps and belts so as to form terraces on the hillsides to prevent the washing away of the best of the soil. Those who own forest lands from which the best timber has been removed can put it to no better or more profitable use than to reforest it.

Among the best varieties of forest-trees for groves, wind-breaks and plantations on farms, for rough lands, and for reforesting the hills and valleys where once stood the mighty oaks, elms and hickories, are the white ash and Catalpa speciosa. In its native forest this catalpa often reaches a diameter of three to four and one half feet, and sometimes rises straight for fifty feet without a limb. I have had it grow to a height of five feet in one year from seed planted the previous autumn, and at five years to stand eighteen to twenty-five feet high. Set singly it often becomes a scraggy, misshapen tree, but when set in groves or in single rows it generally shoots straight up. In groves it should be planted about five feet apart in rows seven or eight feet apart, and a little care and pruning the first three or four years will insure straight trees. The wood is close-grained, easily worked, and takes a fine polish, and is suitable for the very best cabinet-work, as well as for all building purposes. One of its most valuable qualities is its durability. Posts have been known to stand for nearly a century in the old forts and stockades built by the early settlers and remain sound both above and below ground. It has been used for railway ties alongside of the best white oak, has stood up under the heaviest traffic, firmly held the spikes and is still sound, though the oak ties have been replaced three times. It is a tree that all who are wise enough to begin growing lumber can confidently plant.

The white ash is a tree that is easily grown from seed, and it stands transplanting as well as any tree I know. It is a clean, rapid grower, and can be set quite closely. It is a better grower singly than Catalpa speciosa, going straight up instead of lopping this way and that. The wood is used for all indoor work, for implements and furniture. It works well, looks well, and is strong and lasting. When perfectly dry the wood weighs about forty pounds to the cubic foot, while sugar-maple (generally supposed to be a much heavier wood) weighs forty-two and one half pounds. For fence-posts it is not valued highly, but it makes good fuel, and is excellent for rafters and all indoor work.

Probably the best way to obtain a stock of these two trees is to sow the seeds in rich, mellow soil as early in the spring as the ground can be worked. I sow thinly in drills two or three feet apart. If the trees are to be taken out after one year's growth two feet is far enough apart for the drills. If the soil is rich and is kept clean and well cultivated the seedlings will make a growth of two to five feet, and they are most easily handled and set out when that size. If one does not care to grow them from seed they can be obtained from any large nursery at a low rate. I would, however, advise farmers to grow their own trees. Seed can be procured from any leading seedsman, it does not cost much, it is easily planted, and there is little work about caring for the seedlings. Then one usually gets a finer lot of trees and they can be dug and set out when convenient.

In setting out the seedlings I would aim to have the roots about six inches long, cut off all branches, but don't cut the bark of the tree. I would set them out as early as I could work the soil, any time after the first of March; the earlier the better. If they are set on rough or brushy land I would begin the work as soon as frost is out. As they grow keep the leader going straight up and it will be beyond your reach in a very few years.

FRED GRUNDY.

OUR FARM

FARM THEORY AND PRACTICE

RED CLOVER.—Notwithstanding all that has been said in favor of clover in the last twenty years the acreage of good clover-sod does not increase in the older states, and there is reason for believing that it has grown less within the last ten years. One reason for the decrease is the common practice of seeding the fields to timothy as well as clover, the timothy being sown in fall and becoming so well rooted by spring that the clover has a poor chance to get a firm foothold. Another reason is the frequency of failure in clover-seedings even when there is no timothy to crowd it out. Yet another reason is a disinclination to sow clover-seed because of the uncertainty of getting a sod and crop. These conspire to make fields of heavy clover comparatively rare in many of our best agricultural districts, thus making more puzzling the big problem of maintaining soil fertility.

EARLY SEEDING.—We certainly must do what we can to insure crops of clover. The value of hay, even when rightly made, is not nearly so important a matter as the fertilizing value of the crop. We can turn to nothing that will provide available fertility so cheaply to the soils of our Northern states as the clover, if it will only grow. There is not much difficulty about getting a stand of plants, but it is lost so often after the grain harvest. The seeding may be done before the ground is settled by spring rains, the frost action giving an open seed-bed, or it may be done later in the spring, when a harrowing before and after sowing the seed insures germination. But I am sure that the earliest seedings make the best root growth and withstand the effects of heat and drought better than late seedings. A late freeze occasionally kills the tiny plants, but the loss from drought and heat, in the case of late seedings, is probably many-fold greater.

THE SEED.—Too often it is assumed that seed is all right if it will grow. We should know that seeds vary in the degree of vitality. This is seen in the case of corn. Fire-cured seed from thrifty plants will germinate and grow well under conditions that will not germinate poor seed, or else will secure a stand of weak corn-plants. We need seeds that are chock-full of vitality, and in the case of clover this means plump, bright and new seed. I want no low-priced clover-seed. The crop is too important for any indulgence in false economy along this line. Careful re-cleaning that takes out all the light seeds with the filth must make the price comparatively high. Weedy seed is an abomination always, and with the weed-seed should the light clover-seeds go out. A good clover-sod for the land and a good crop for hay are worth too many dollars an acre to let a difference of twenty-five cents in cost of seeding an acre be an important matter.

REMOVING THE HAY CROP.—Some farmers say that it is unreasonable to grow clover as a fertilizer and then harvest the first crop for hay. This is a mistaken view. If the hay crop be taken off as early as it should be to secure the best quality, the plants then put forth their best efforts to make a crop of seed. The energies of the plants are bent upon reproduction of their kind, and that means growth. The root system becomes greater, and a big amount of plant-food is stored in the roots, while fertility goes into the second crop. It is not robbery to remove the hay crop, if it is done on time—early in the season—so that more growth can be made. The manure from the hay crop should be saved for thin portions of the fields, but in the sod and turf there is more available fertility than could be found before the clover was grown. Nitrogen is added from the air, and tough plant-food in the soil is made soluble. To a degree almost marvelous clover is a worker for the farmer.

MAMMOTH CLOVER.—If timothy was seeded in the wheat last fall, and the chances are for a timothy meadow rather than a clover-sod that should be turned under after a year for the sake of soil improvement, then I should try the mammoth clover this spring in such a field. One reason for giving it the preference over the medium red under these circumstances is that it ripens more nearly with the timothy. Sow early, and take the chances of loss by late freezes. The harrow cannot be used in the timothy safely, and if

one waits until the soil has lost its honey-combed condition, the clover-seed has a poorer show. Let the seed fall into the crevices made by frost action and the drying of the land. Deep covering is good for it. In the latitude of Cincinnati that time comes usually late in February. In the latitude of Cleveland the time extends into March.

AMOUNT OF SEED TO THE ACRE.—There are enough grains in a bushel of good clover-seed to furnish plants for twenty acres of land if every seed grew and thrived. But this does not occur. Ten to fifteen pounds an acre is about right. There are sixty pounds in a bushel of seed. One bushel to five acres suits me, though on old land many farmers now sow one peck of seed an acre. If timothy was sown the preceding fall, and the alleged clover-field is really to be a meadow largely timothy, it may be a waste of seed to use more than eight pounds to the acre. For actual clover-fields I like the use of very little timothy-seed, and want it to go on them in the spring with the clover, thus giving the clover pretty full swing. When seeding with oats, use less than the usual amount of seed-oats, and thus give the clover a chance if good clover is really wanted. A heavy growth of oats kills out the tiny clover-plants or else retards their growth so that the sunshine after harvest finishes the job in hot and dry summers.

THE THIN FIELD.—The field that fails to grow clover is a trial and a puzzling problem. Try a light application of lime. Top-dress with the available stable manure. Use good seed, and sow early. But if there is reason to expect failure, and if clover is really appreciated and wanted, try seeding with rye. Having sown thinly to rye in the fall, seed to clover with a little timothy in the spring. In dry weather pasture the rye somewhat heavily for a time, then remove the live stock. When the rye begins to head, clip it with mower for a mulch to the clover. Or, having hogs, let the rye head out and then pasture with the hogs, clipping the field later on. In such a seeding, with some grazing, there is a moderate protection of the clover-plants, good growth in partial sunlight, and a mulch on the ground during the summer. Any effort to secure a heavy growth of clover can hardly be too great. DAVID.

2

THE NEW YORK STATE DAIRYMAN'S ASSOCIATION

The twenty-third annual convention of the New York State Dairyman's Association was held at Cortland, N. Y., December 13 to 15, 1899. The first day was given to the exhibition of dairy products and machinery in the large hall that had been provided.

The second day the convention met in the opera-house, and was formally called to order at 10:30 A. M., by the vice-president, George A. Smith. The attendance through all the sessions was large. Mr. Smith introduced Judge J. E. Eggleston, who delivered the address of welcome, which was responded to by Mr. George R. Royce.

The president, S. Brown Richardson, next delivered an address. He spoke of the changed conditions of the markets, and how produce of a better quality was now demanded. Better milk, butter and cheese must be furnished, and this must be produced at a less cost if the business of dairying is to be made profitable. To place our products on the market we must more than ever before study the economics of feeding. The farmers need to be more universally educated along the line of scientific feeding of the dairy-cow than in the handling of the milk, and be made to realize that "cleanliness is next to godliness." The New York State Dairyman's Association wishes to go on record as being opposed to all kinds of substitutes and fraudulent imitations of butter and other dairy products.

Ex-president of the association, J. S. Shattuck, made a short address on the "Mistakes of Dairymen." "One mistake that many dairymen are making is keeping too many cows. Better keep fewer cows, and keep only those that pay a profit. Farmers should raise their cows and not buy them. They cannot buy good cows. I have been able to raise my cows much cheaper than I could buy those of the same grade. Many farmers who are shipping milk are making a mistake. They ship away more fertility from the farm than the butter-maker, and drawing milk takes so much of their time that the farm is not well worked. Keep the cows warm in the winter and everything around them clean. Keep good cows, feed them well, and treat them with kindness."

Prof. H. H. Wing, of Cornell University, delivered an address on the condition of the "Butter and Cheese Factories in New York." Mr. Wing reported the condition of the factories which he had investigated. He had made a list of all the requirements which should be found in a factory in perfect condition, and in every factory visited one or more of these were found wrong. Among the more prominent defects was lack of personal neatness of the butter and cheese makers; many of them used tobacco freely when at work. In many factories the floors and walls are not kept clean. Again, the family of the butter or cheese maker live in the factory, and the odor from the cooking is not kept from the milk. At more than one half the factories was found imperfect drainage, and again the pig-pen was too close to the factory.

The main address of the afternoon was delivered by Ex-Governor W. D. Hoard, of Wisconsin, his subject being "The Conformation of the Dairy-cow." He paid a very high tribute to the dairy-cow, and said "she was the foster-mother of the human race. In her we find an expression of the principle of maternity. Sixty per cent of the children in the cities are raised by this foster-mother. The dairymen who do not recognize this principle of maternity—this motherhood in the cow—make a great mistake. The cow deserves the very best treatment you can give her, and the dairymen who give her this treatment will be the most successful. Breed the cow with due attention to the development of her motherhood. Stable and feed her with due consideration of her motherhood. Remember that when you handle a cow that you are dealing with motherhood. Breed only cows of the dairy type and temperament. You cannot afford to feed high-priced food to a flesh-making machine. The Jerseys, Guernseys, Ayrshires and Holsteins represent the dairy types. Breed animals with large nerve-force and a good constitution."

An address was delivered by E. B. Voorhees, Director of the New Jersey Agricultural Experiment Station. He said, in part: "Dairy-farming should be looked upon as a manufacturing business to which we should apply business principles, from the growing of the crop we feed the cow until the product is in the hands of the consumer. We should work to reduce the cost and improve the quality of the goods. We decrease the cost of production by growing the crops best adapted for feeding the cow in the cheapest way. The corn crop gives us more food to the acre than any other crop, but this is not a complete food, for it contains only the carbohydrates which furnish the animal with fuel. The protein makes flesh and milk. This is furnished by such legumes as clover, oats, peas and alfalfa. You can grow protein cheaper in oats and peas than you can buy it in bran. Alfalfa is a cheap source of protein. One acre at the experiment station furnished protein that in wheat-bran would have cost over one hundred dollars. The manufacturer who makes the largest profit will have the best machines for doing his work, those which least waste the raw material. In her power to convert food into milk and butter we have found a difference in cows that is represented by a ratio of forty-four one hundredths. Having the best machine for converting the food into milk or butter-fat, then we should feed a balanced food that has all the elements in the right proportion for their production. The ration should be composed of a part ensilage to provide the succulence needed. In feeding the crops to the cows there should be no loss of the manurial elements, for these must be returned to the soil to grow more crops. The fertility is best saved and utilized by applying the fresh manure to the soil every day."

Prof. W. H. Jordan, Director of the New York State Experiment Station, next discussed the subject of "Cattle Foods." He told how our cattle foods have been adulterated, so that some of them were sold for several times their cost. The oat feeds have been adulterated to a large extent. Large quantities of oats are used in making the breakfast foods. The hulls are sold for a small price to dealers in cattle foods, who mix them with corn-meal and sell them for oat foods. The fiber of these oat-hulls is so indigestible that they have but little value. It has been the custom to take out the oil from the corn foods and sell them for making paints, and then to sell the grain without the oil at about the price of the whole corn. There are also the patent cattle foods which are sold at the rate of one hundred and fifty to five hundred dollars a ton, which cost less than fifty dollars a ton.

Mr. George L. Flanders, First Assistant Commissioner of Agriculture, gave a history of the fight which has been made against

the unlawful selling of oleomargarine in New York. He said the result is that no oleomargarine is now made or sold in the state except in very small quantities secretly.

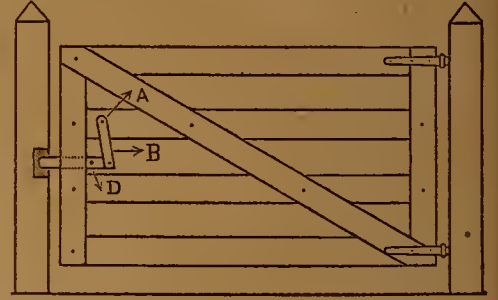
Mr. Charles Knight, of Illinois, advocated the ten per cent tax on oleomargarine. He said, "This tax added to the cost of making the best grade would raise the price to twenty-four cents a pound, and it could no longer be made with a profit. W. H. I.

2

A SIMPLE GATE-LATCH

Here is a simple gate-latch that can be made at home, and that will allow the gate to open either way.

The gate is built of four-inch stuff, the upright end pieces being double, one on each side of the horizontal bars. It is braced and hung in the usual way. At a point about an inch from the upright a hole is bored and a



one-fourth-inch iron pin is inserted in the second horizontal bar, or if preferred in the top one. The latch consists of six pieces of hickory, or other tough, strong wood. The piece B is made long enough to reach almost from one horizontal to the next below, and has a piece of wood clinched to each side of it at its upper end.

In each of these pieces a hole is bored for the pin A. At the lower end of B a horizontal piece is nailed, the angle being less than a right angle. At D a wooden pin is placed so that the latch will not slip too far through the gate. On the post a latch-slot twice as large as the thickness of the latch is chiseled out as shown at C, each side being beveled and shod with iron.

To open the gate, the piece B is pulled back. It falls into place of its own weight when released, and slides into the latch-slot when the gate closes. M. G. KAIN'S.

2

CLEANING UP THE FARM

During the hurry of the crop season most farmers are obliged to let go such little jobs as picking up and carrying away the rubbish that accumulates about the fields and yards. They have not time to clean up, so put it off until there comes a lull in the work. This usually does not come until in the winter. Where it gets attention then this is all right; but too often it is then put off until warm weather, when comes the rush of work once more, and the rubbish is left to add another season's strata.

To clean up a neglected farm is a hard task; but to keep a farm tidy after it has once been cleaned up does not take so much time; in fact, there will be but little rubbish if the litter is not allowed to accumulate.

A tidy housewife knows that it is little more, if as much, work to keep house where everything is kept in order as where things are allowed to get misplaced and scattered. Work to run smoothly and to advantage must run orderly. Order and neatness are one and the same, and a farmer who ignores this will work with everything against him. Rubbish and litter means waste, and waste means loss, and loss failure.

The winter season, while there is no grass or weeds to hide old boards, broken machinery, dead limbs and branches of trees, etc., is a good time to clean up the farm. Do not let next spring's work find you with the mark of a degenerating farm upon your premises. J. L. IRWIN.

2

HORTICULTURAL PROVERBS

Unhandiness is the bane of spraying. The greater the risk, the less must be left undone.

Mastery of local conditions is the key to success.

Tillage is the hinge of successful fruit-growing.

Prune and till the man and the land will take care of itself.

Mediocrity is the mother of glut; excellence is never overdone.

The smaller the room for improvement, the greater the chance for sale.

That fruit is most profitable that has the most by-products, or that can be turned to the greatest number of uses in time of glut. M. G. K.

NOTES FROM GARDEN AND FIELD

PET STOCK.—I am quite a fellow for having pets on the farm, especially useful ones. In my boyhood days I kept and petted pigeons, guinea-pigs, rabbits, birds of different kinds, even snakes and lizards. But on account of their more substantial value I favored pigeons and rabbits more than any of the others, and since I got to be a farmer and gardener I have taken a fancy also to poultry, pigs and calves. All these things help to arouse and add interest to farm-life and farm-work in most people, especially the young. Pigeons when allowed their liberty are more or less of a nuisance, especially on account of their habit of alighting and resting on the roofs of the buildings and befouling the cistern-water, and yet I can scarcely screw my courage up to the point of killing these birds all off, although I often wish that I was rid of the whole lot. I keep their numbers down by letting all the squabs that I can get hold of, as soon as they are nearly ready to leave the nest, go into the soup-kettle. I think much more of my Belgian hares than of pigeons, and have often referred to them in these columns, even many years ago when the majority of people in the United States yet asserted that they would as soon eat a cat as one of these rabbits. I have just made a visit to Nichol's stock-farm, and after seeing the many hundreds of fine Belgian (or German) hares that he keeps, probably between one and two hundred breeding-does alone, and having been informed of the ready way in which he disposes of them at profitable prices, I have become more enthusiastic about hare-raising than ever before. The demand for both breeding stock and for meat stock seems to be far ahead of any possible supply for years to come. The cry with the breeders is only that they cannot raise the animals fast enough to supply even their regular customers. And yet the industry is only just in its beginning. In portions of California there seems to be a regular Belgian-hare craze. On the whole, however, I believe that the development of this branch of stock-raising is timely, healthy and practical. At another time I will tell of Mr. Nichol's rabbit-ranch and how the animals are managed. I confess I have learned more about this business in the one day of my visit there than in years of handling my own stock in a limited way.

RAISING CALVES.—Everybody knows that pet animals grow faster than the same kind of creatures kept as they are ordinarily kept. Everybody knows, too, that it is much easier to buy a poor cow than a good one. A really good cow is scarce, and always brings a good price. For people who wish to keep good cows (and these are the only ones that pay a profit), the proper and safest way to get them is to begin with a few good ones, and by using males of known quality raise their own. I have a couple of really superior new milk Jersey grades. I always have the cows served by good pure-bred Jersey bulls, and never would consent to have one of the heifer-calves killed. The best thing to do with a good heifer-calf is to make a good cow of it, and the way to do that is to first make a pet of it—first a pet calf, then a pet cow. I do not think as much of my pet calves or yearling heifers as I do of my children, but I treat them with about as much consideration. The consequence is I have large, well-developed, gentle and good-natured animals, and can handle them in the stable or loose in the field or yard just as I please. And of course they are profitable. In fact, I take much comfort and pride in their possession. I usually take the care of the calves myself for real love of the business. I believe that market-gardening and keeping cattle (and rabbits, also) go well together. I have so much waste in vegetables, and find it is so easy to raise roots for my stock, too, that I think I should have stock that will turn all this stuff to some profitable use.

I like to have calves come in the fall or in early winter, surely not later than January. I then have a full flow of milk all winter long. For the sake of getting eighteen or twenty quarts of rich milk a day, worth here nearly one dollar (and this is what each of my two cows gives me), I can well afford to feed ten pounds of grain, worth ten cents a day, with their rations of cut corn-stalks and a bushel of chopped beets. This flow of milk is increased in June, and maintained until the pastures get old in August or September, and even then I can

prevent the flow from decreasing materially by giving full rations of oats and peas and protection from hot sun and flies. These are not all the advantages of having the cows come in at the season aforesaid. The calves are well taken care of during the winter, and soon begin to eat hay. Then when spring comes they are ready to take advantage of the best pasture-time, and in consequence they are great big animals ready to be served when less than a year old. Then comes another season of good care in the stable, and another season of quick growth during the best pasture-time of the year. Finally, in September or October, I have a nice new milk-cow less than two years old, but large, well developed, gentle as a lamb, and altogether profitable. I may give a little rest then, so as to have the next calf come in during December or January, but I invariably try to crowd the animal afterward, so as to bring the time of calving back into the fall.

THE SEED-CATALOGUE CROP.—I believe there will be a big demand for garden-seeds this year, and with some of the varieties of vegetables, such as beans, peas, onions, etc., reported in rather shorter supply than usual, seedsmen may have their hands full trying to fill the spring's orders. The only safe way for the gardener to do is to lay in his stock of seeds without delay. Seedsmen now are less rushed than they will be later, and less apt to be out of just what you may wish to have above other things. Catalogues this time of year are always interesting reading, and they give me many reminders and suggestions. For instance, I had entirely forgotten that I wanted to try the Cos lettuces for forcing this winter, and I would surely have neglected to do it if I had not seen in Burpee's "Farm Annual for 1900" the picture of the Dwarf White-heart Cos lettuce. Just as soon as my eye fell upon this I was reminded of my neglect, and I at once ordered some of the seed. The first catalogue that came to my table this season was John A. Salzer's, but the Philadelphia seedsmen are not slow, either. Immediately after that I had one from William H. Maule and one from W. Atlee Burpee & Co., all handsome publications well worth having. I may possibly speak of the varieties offered in them in next issue. But where are the other seedsmen? Come on; spring will soon be here.

T. GREINER.

INQUIRIES ANSWERED

BY T. GREINER

Paper on Canning Industry.—S. S., Vine-mount, Pa., writes: "Is there a paper printed relating exclusively to the canning business?"

REPLY:—I remember having seen a copy of a paper relating chiefly to canning and canning machinery, and I believe that it was published in Baltimore. I am unable, however, to recall the name or address. Possibly some one of our readers may be able to give us the information desired.

Squash-vine Borer.—J. H. T. (no address given) writes: "Last summer, not long after my Hubbard squashes came up, they were nearly destroyed by worms. Please tell me how to prevent this."

REPLY:—I know of no "worms" which might destroy squash-vines except the borer. I keep them away by liberal applications of tobacco-dust and bone-meal around the stem of the plants, and try to repair any damage that the borer may have done or be doing by covering the first joints of the plants after they begin to run with moist soil, thus inducing them to form roots at these joints and make the plant independent of the original root.

Soil for Forcing Vegetables—Bulletins on Feeding-stuffs.—J. S., Arlington Heights, Ill., writes: "Kindly inform me what is the best way of preparing soil for raising radishes and lettuce in greenhouse, and how deep the soil ought to be on the benches.—Where can I find a book or bulletin giving the analysis or feeding value of different kinds of feed?"

REPLY:—For forcing radishes and lettuce in the greenhouse bench I like a rather sandy soil, and it must be very rich. The way I usually prepare it is as follows: Cut some sods from an old pasture-field or cow-yard. Put down a layer, and upon this an even layer of any kind of good manure, fresh loose manure being as good as any. Have this layer about as thick as the sods. Then put on another layer of sods, another of manure, and so forth until done. Now keep this pile well moistened, and after some months cut it down with a spade, mixing the whole well. Do this a number of times, and if the soil from which the sods were taken is not of quite a sandy character, add a good proportion of sand and perhaps a little lime to kill the excess of worms developing in the manure. Sometimes I add a little sifted ashes. When the whole has become one homogenous mass, then it is ready for the bench. I usually give the benches a good depth, not less than seven or eight inches. If I have not soil enough I put a few inches of old manure in the bottom of the bench, and upon this the prepared soil. This plan seems to me a good one in any case. Most of my benches have such a layer of rotted manure in the bottom. For radishes I prefer the bench soil especially sandy.—For a bulletin on feeding-stuffs apply to your own station or to any other whose bulletins you can get. I believe most of them have issued such bulletins. Or apply to the department in Washington, D. C.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

INQUIRIES ANSWERED

Black Scale on Blackberry-bushes.—G. O. M., Coronado, Cal., asks how to kill the black scale on blackberry-bushes.

REPLY:—Prune back the plants and burn the trimmings, and you will destroy many scales. While the plants are dormant spray with a strong alkaline wash made of one pound of concentrated lye to three gallons of water, or one and one quarter pounds of commercial potash. If the plants are very badly infested cut off all of them at the soil and burn, and then treat the stumps with a very little kerosene, but not enough to wet the ground. In this latter way you are sure of destroying all the scales, but you will lose one crop of fruit.

Gano and Ben Davis Apples.—A. M., Vera, Ill. 1. The nursery concern which you inquire about is generally considered reliable. 2. The Gano apple is a new variety which is highly recommended, and it is probably adapted to your section, but if I were in your place I should be very careful about planting out very many of them until it has been tried for a number of years. I think, however, that it is well worth experimenting with. 3. I would say the same of the Black Ben Davis as of the Gano. You will find by writing to your state experiment station, at Champaign, that you will get excellent advice in regard to what variety of apples to plant, and I think they can furnish you a bulletin on this subject. 4. I know that many dealers prefer apples of better quality than the Ben Davis, and yet as an all-round variety I doubt if there is any other that is liable to prove so profitable to the apple-grower in your section, for while it is of a poor quality it generally sells well, and it is very hardy, vigorous and productive.

Strawberries in Mississippi.—A. R. H., Cleveland, Miss., writes: "I plant Michel's Early and Gandy in the fall, and get a fair crop of fine berries in the spring. Michel's Early yields best and is very early, but Gandy is finer in quality. With me the first crop from fall-planted beds is the best—larger berries, easy to pick, and requires less cultivation. I shall never again plant berries in this latitude in the spring, as in my experience I get a better crop from fall planting than from a planting the spring previous. But from fifty plants planted in the spring one can get plants enough to set out an acre in the fall. When planted in the spring the great trouble with them is to keep the runners out off. I suppose if one had a large field, and so could afford special tools for keeping them out off, he could profitably work old beds, but for my use I would like to get a variety that puts out few runners (will you please let me know of such a one?), and plant for only two crops. I think Gandy is hard to beat in quality."

REPLY:—We should be glad to hear from our readers in regard to their experience with strawberries, especially in the South.

Leaf-crumplers.—J. M., Newton county, Mo. The worms you find on your apple-trees this winter are the larvae of the leaf-crumpler. The mature insect is a pale brown moth which measures about seven tenths of an inch across its wings. It appears about the middle of June, or a little later, and the females lay their eggs in July, which hatch into the worms you describe. These worms feed on the leaves in the latter part of summer, but their work is seldom noticed at that season. After the leaves have fallen, however, there will be seen curious little cases partly hidden by portions of crumpled leaves, which are fastened to the case by silken threads, and the case itself is made up of silk interwoven with dried castings. In these cases the worms live over winter, and in the spring feed on the new growth and buds as soon as growth starts, first drawing the leaves of the opening bud together as a shelter in which they can feed. When full grown they are a little over half an inch long. This insect is occasionally very abundant, when it may do serious injury. The best way to destroy them is by picking off and burning the cases in winter. Besides the apple, it feeds on the quince, cherry, plum and sometimes other trees.

Locust Grove.—J. G., Harrisburg, Ohio. The best way to start a locust grove is by sowing seeds. For this purpose the seed should be gathered at this time, when they are in the pods on the trees, or seed may be bought through the larger seedsmen. In any case the seed should not be sown until the land is in good condition in the spring. Just before sowing the seed should be scalded as follows: Place it in a shallow dish like a wash-basin, and cover it with water that is nearly boiling. Some of the seeds will at once swell up. The water should then be poured off, the swollen seeds picked out, and the remainder scalded again until all are swollen. These swollen seeds should then be sown at once, when it will be found that they will come up promptly; while if not scalded they would come up very unevenly, if at all, the first year. Such seeds produce very strong seedlings the first year. If your land cannot be sown to seed the first year, the seed can be sown elsewhere and the seedlings transplanted when one year old; but if your land is in good condition it is far better to start with the seed, and sow it about six inches apart in rows eight feet apart. The sprouts are not worth bothering with in making a start. It is probable that you can gather your own seed from near-by groves.

Pine Sawdust—Sugar-maple.—J. C. H., Stringtown, Indian Ter., writes: "Is sawdust from yellow pine of any value as manure?—What soil is best for raising the sugar-maple? What per cent of seed may be expected to germinate? At what age can the trees be tapped for procuring the sugar-water?"

REPLY:—The sawdust from any of the pines is practically of no value for manure; in fact, it is apt to injure the soil on which it is placed, although a small amount of it may be used with manure for bedding without any serious injury.—The sugar-maple does best on an open, retentive, clay subsoil. What is called a loess loam is best; this has many small shells through it. But the maple will grow on any good soil. The seed of sugar-maple germinates very easily. I cannot tell you exactly what per cent you should expect, but in a general way I should expect at least fifty per cent of the seed to grow. Sugar-maples are seldom tapped until they are over six inches in diameter, and it is seldom they are tapped as small as this. I should say that the trees could be safely tapped when they are about fifteen years of age, although they will not yield very much when so small.

Ashes and Scab.—T. W., Salem, N. H. Unleached hard-wood ashes are generally regarded as valuable for fruit. It is customary to use them at the rate of about thirty bushels to the acre, but three times this amount can be safely used on the land if they are scattered broadcast. Pine ashes, leached ashes and coal ashes are practically of no value so far as furnishing plant-food is concerned, but it may sometimes be well to apply them to certain soils in order to improve their physical texture. The ashes on your beet-bed did not make the beets scabby, and they would not have been scabby unless there had been the germ of the scab disease in the soil. Scab on beets is caused by the same fungus that causes scab on potatoes. It is a disease that lives at least several years in the soil. On this account it is important in growing potatoes to use seed that has no scab upon it, and to plant in land that has not had scabby potatoes on it. If the potatoes are scabby they may be treated with a weak solution of corrosive sublimate, which destroys the germs of the scab, as described in many publications. While sweet-potatoes may be raised to some extent in the extreme Northern states, yet it is doubtful if they can be raised at any profit.

Curculio—Loudon Raspberry.—A. R., Irwin, Pa. It is probable that your plums drop off because they are infested by the curculio. This insect, in its mature form, is a dark-colored snout-beetle. It begins laying its eggs in the fruit soon after the flowers fall, and the egg batches into a small worm, which by burrowing around the pit of the plum causes it to ripen prematurely and fall off. Spraying, while occasionally successful, has not on the whole been found satisfactory for this pest. The best treatment is jarring the trees early in the morning, having previously laid on the ground under the trees some sheets. The beetles are dumpish in cool weather, and any sudden jar of the tree at that time causes them to fall to the ground, where they are easily gathered. This treatment is followed by all the best plum-growers in this country who are troubled with this insect, and most of them are. It is really very little work when it is attempted in a businesslike way and carefully attended to. The trees require this treatment about once in two or three days for two or three weeks, beginning as soon as the flowers have fallen. Then, too, if attention is paid to gathering and destroying the plums which fall, a good many of the insects will be destroyed in them.—I regard the Loudon as the best all-round red raspberry for general cultivation. The only general objection to it is that it does not separate readily from the stub until it is fully ripe. In your section the Cutbert generally does well when carefully cultivated, and it is a very nice, well-known red raspberry.

Composting Manure—Fertilizers for Grapes.—S. M. M., Parkersburg, Va. The best way to care for fresh manure so as to get the most out of it for the garden would be to make it into piles sufficiently large to beat well, and cover it with three to five inches of loam or peat. It should be made up on about twelve inches of loam. As soon as the manure-pile has beaten well turn it over, mixing the soil on top and bottom well through it. Apply when about one half rotted. Grapes should not be fertilized at all if they are making a satisfactory growth of vine.—As a rule much stable manure is not desirable for grape-vines, but in the case of a very sandy soil it would probably be a good thing to use if the vines lack vigor, since it adds humus to the soil, which makes it more retentive of moisture and plant-food. On ordinary good grape soil it is generally found that fertilizers containing considerable potash and phosphoric acid and not much nitrogen are best. On this account good unleached hard-wood ashes are one of the very best of fertilizers for this purpose. The reason why your crop of grapes was inferior, decayed and dropped off before maturing was probably not due to the fact that there was not plenty of good plant-food in the soil, but it undoubtedly resulted from some disease, probably from what is known as black-rot. The remedy for this is spraying with Bordeaux mixture, commencing as soon as the flowers have dropped from the vines, and spraying about once in two weeks until the fruit begins to color, after which the carbonate-of-copper solution should be used. You will find directions for making and applying this material in the back numbers of the FARM AND FIRESIDE. The vines should be cultivated thoroughly, but there is no use of doing anything to the vineyard unless you treat it for this fungous disease, which is undoubtedly the chief source of your trouble.

FARMING VERSUS MINING IN COLORADO

[CONTINUED FROM PAGE 3]

those who has "struck it rich." Or he may take up mining as a side issue to farming, doing his "assessment work" annually between the busy seasons on the farm. Or, again, he may join with a few of his neighbors in exploiting some venture in partnership. And no doubt if a census were taken of all the successful miners throughout the West it would be found that a large proportion of them were born and raised upon the farm.

In marked contrast to the would-be mining town is the non-conventional pleasure resort that is found nestled among the pine-clad slopes of the neighboring hills. Here there are no evidences of the strife for sordid gain. A charming idealism pervades the entire surroundings. The location is selected with an eye to beauty. Charming cottages are clustered about beneath the spreading arms of the sturdy pines that stand upon the grassy slopes. Childish voices echo from rock to rock, and childish forms flit among the trees. Beneath the cottage awning or the shades of the pines the ladies indulge their novel-reading or the fabrication of wonderful specimens of needlework. Care and trouble have been banished, and no harsh sound of human traffic grates upon the ear. It is the heyday of rest and repose.

2

"UNUSUAL TOMATO CULTURE"

The illustrated article on staked and pruned tomato-vines published in a recent issue of the FARM AND FIRESIDE was read by me with special interest, for I have followed the "Mississippi system" for six years, and see no reason to agree with the suggestion that this method of culture is less well adapted to the North than the South. Indeed, with me, a few miles north of New York City, there has been unvarying success in all sorts of seasons, even in the rainless summer of last year. Mine is an amateur's garden, and I raise fruits and vegetables for home use only; but when I have tomatoes in abundance at a time when I would have to pay four dollars a crate for them in the market, if I could afford the luxury, I count it so much money earned. This has been the case the past three summers, and the same vines have continued to bear until the frost cut them down.

In addition to staking my vines, which I learned to do while visiting in Illinois, I vary considerably from the usual method in transplanting them. In this latter matter I am alone, so far as I know, but hope I shall not remain so. There is nothing in my practice which may not be adopted in the most extensive field culture. I will say in the beginning that for test purposes I have given to neighbors having gardens in some respects superior to mine plants equal in every respect to those retained for my own use, and have beaten them from one to two weeks in earliness of mature fruit, and very greatly in the amount of production for the season.

I begin early in the career of the plant. I sow in deep boxes, placing the seeds one inch apart. When the second permanent leaf appears I transplant into four-inch pots, sinking each root three inches or so below the surface. Here they remain until it is safe to put them into the ground—late in May in this latitude.

In the meantime the ground is prepared. As soon as the garden is spaded up, holes are dug the depth of the spade and a foot in diameter, they are two feet apart in the row, with the rows three feet apart. The holes are half filled with rich manure mixed with earth, and well trodden down. When the proper time comes, the plants with the earth unbroken are taken from the pots and sunk in the center of the holes. I stake them at once, for it is the season of high winds, using a crowbar and placing the stake within an inch of the plant, and tie at once. As the plants grow the holes are gradually filled, and the tomato-patch is perfectly level, ready for cultivation, and a dust mulch close up to each plant, an impossibility when the old method of hilling-up is pursued. The bottom root may be a foot or more below the surface, and examination in the fall shows that several sets of lateral roots have been sent out, which continue to grow throughout the season. The vigor of the plant is thus limited only by the food available for it to draw upon. It is also less likely to be affected by drought than when most of the roots are little below the general level of the garden.

The stalk as it grows should be tied closely to the stake below each set of blossom-buds and before the fruit forms.

My tomatoes are large and solid, and in

many cases grow in bunches weighing from three to six pounds each; so the twine should be soft and heavy.

I see no reason for cutting off all the side shoots. Suckers are worse than useless, but each branch is often as productive as the main stem. I have made a test in the same row of plants with only the stalk and with one, two, three and four branches, and the results are certainly not favorable to the smaller number. The grower must be guided by the relative vigor of the different plants. I thought a few years ago that the closely trimmed vines gave me earlier fruit, but I have not proved it to my satisfaction. The earliest tomatoes are pretty nearly matured before the branches begin to draw heavily on the plant. The vines are tied so closely to the stakes that the ground is not too much shaded; the rake or hand-cultivator may be used throughout the season, and there is a constant succession of fruit until frost.

If I were planting many acres for the market or canning-factory I should not change my method except as to the distance between the plants. C. S. CUSHMAN.

2

CONTRACTING WOOL

The ranchmen who are selling and mortgaging their wool on the sheep's back five and six months in advance of the shearing, must have failed to note the "signs of the times" in wool circles the world over.—American Sheep-breeder.

2

CORRESPONDENCE

FROM VIRGINIA.—This country is all right for a man who has a little push and management about him. We have been plowing for spring crops while our Northern brothers are housed up. I think this could be made a great sheep country, as the sheep make their own living except when there is snow on the ground. With cheap land, mild climate and close to the great markets, I cannot see why this country doesn't settle up faster. Midland, Va. B. B. S.

FROM IOWA.—I think Iowa is as good a place for general farming as any in the United States. When one looks at our farms, with white houses, red barns, and windmills for pumping water, grinding feed, sawing wood, etc., he sees that everything is prosperous. Farm-hands here get \$20 a month and board, and most of them have a horse and buggy that they expect kept for them extra. We get up at five o'clock, do the chores and have breakfast, and go to the field about seven o'clock. We quit work in the field at six o'clock, have supper and do the chores, and by 7:30 P. M. the work is done. Last summer and fall hands were hard to find. Our crops are corn, oats, wheat and hay. Every town or village has a creamery that runs from one to four separators. Most farmers keep from six to twenty cows, and from twenty-five to one hundred hogs. Land bought fifteen years ago for \$10 an acre now sells at from \$35 to \$50 an acre. Corn is worth 22 to 25 cents a bushel; oats, 20 cents; hogs, \$3.50 a hundredweight; timothy hay, \$7 a ton; wild hay, \$5 a ton; coal, \$4 to \$6 a ton; potatoes, 25 cents a bushel. Cows are selling for \$35 to \$40 each; horses, \$50 to \$80 and upward. J. F. Alden, Iowa.

FROM WASHINGTON.—I saw an article in the issue of December 1st written by a farm-hand from Troutville, Virginia. I can sympathize with him. Fifty-two years ago I was working in western New York for \$12 a month, and not only working from daylight till dark, but before and after dark. I had nine cows to milk, water and feed, and the stable to keep clean. I left that country, and would advise him to do the same. The price of labor on farms here is \$25 a month and board, though some get more than that. Farm-lands in Puget Sound basin are limited, and but few men find steady employment, though there are various other industries that require thousands of men at as good and better wages. Our sawmills, some of which cut 200,000 feet daily, furnish employment to several thousand men in cutting the lumber and in the logging-camps that furnish the logs to the mills. Our shingle-mills, some three hundred of them, that cut from 50,000 to 200,000 shingles a day, employ many men. These shingles are cedar. There are about two hundred steamboats owned and employed on the sound, and furnishing them with wood makes quite an industry. One dollar a cord is the price paid for cutting, and the steamers pay \$2.25 a cord for the wood on the wharves. Our fishing industry is already large, though only in its infancy. The catching of salmon is not with hooks or seines, but in traps made by driving piles and spreading netting on them to turn the fish from their course into pens; and so many force themselves into the pens that they are hoisted out with steam-power. Seventy thousand have been taken from one trap in a day. It is not only interesting, but exciting to witness the taking of these fish from the traps. The trap is a double pen, called the pound and spiller; between the two there is a door. When the pound is full, a steamer with a lighter in tow comes alongside the spiller; a net is then made fast to the side of the lighter, and lowered to the bottom of the spiller pen, coming well up on the opposite side; then the door is opened, and the fish run in. When sufficient are in, the door is closed and the net hoisted, spilling the fish into the lighter. This is repeated until the trap is comparatively empty. A. W. A. San de Fuca, Wash.

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Advertisement for SHOEMAKER'S POULTRY BOOK. Text: 'and Almanac for 1900, two colors, 100 pages, 110 illustrations of Poultry, Incubators, Brooders, Poultry-Houses, etc. How to raise Chickens successfully, their care, diseases and remedies. Diagrams with full descriptions of poultry-houses. All about Incubators, Brooders and thoroughbred Poultry, with lowest prices. Price only 15c. C. SHOEMAKER, Box 838, FREEPORT, ILL.'

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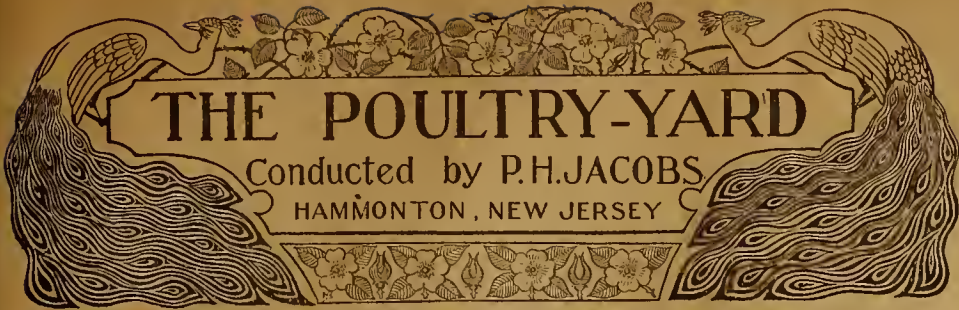
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Advertisement for The IMPROVED VICTOR Incubator. Text: 'hatches all the fertile eggs; is simple, durable and easily operated; 168 page catalogue containing information and testimonials. Sent free. GEO. ETEL CO., QUINCY, ILL.'

Advertisement for 50 CHICKS FROM 50 EGGS. Text: 'The BANTAM Does it. Over 15,000 in use. Thousands hatch 45 to 50 chicks from 50 eggs \$5 30 DAYS' Trial Before you pay a cent. Hot Water or Hot Air Send 4 cents for No. 28 Catalog of valuable information and testimonials. BUCKEYE INCUBATOR CO., Springfield, Ohio.'

Advertisement for SUPERIOR INCUBATORS. Text: 'Success is yours if you buy a Superior machine. Each one guaranteed. Best regulated and ventilated machine made. \$18 from 50 eggs to 400. Price from \$5 to \$40. Send for FREE CATALOGUE, FULLY ILLUSTRATED. Contains many valuable recipes for farm and poultry. Superior Incubator Co., Xenia, Ohio.'



THE POULTRY-YARD

Conducted by P.H.JACOBS
HAMMONTON, NEW JERSEY

CANKER AND ROUP

CANKER and roup are the diseases that destroy the largest proportion of fowls, and they exist in spring and summer as well as in winter. Experiments made by scientists and others show that when first attacked with canker the papillae of the mucous membrane under the tongue are seen to be slightly enlarged, and frothy mucus and dirt commence to collect there. This is immediately followed by more or less fever. The fever, progress and intensity of the disease are in a great measure dependent upon the condition in which the fowl is when attacked. If the fowl has tubercle in its system it is very quickly deposited in cheesy masses in the glands about the throat and face. In this condition of affairs a fat fowl attacked by the disease almost immediately becomes roupy. The amount of exudation in some cases is so great as to very soon cause the death of the fowl by suffocation. In other cases it is for some time so slight as to cause very little inconvenience; but if not arrested the disease slowly, surely and insidiously advances, attacking in patches the mucous membranes in the nostrils, throat and windpipe. Sometimes these patches are at first in appearance like a collection of fine points, which coalesce, and a false membrane forms, completely covering the underlying mucous membrane. At other times the growth is in appearance like fungus. When the false membrane is removed the tissue underneath generally bleeds very freely. Inflammation of the mucous membrane is set up by the disease, and if at this stage it is not checked sloughing takes place, and owing to this and the thickening and decomposition of the natural secretions of the parts attacked the fowl becomes roupy; hence the term "diphtheric roup." Dr. Vale, who gave much attention to this disease, says that when the disease has attacked the windpipe a lot of froth sometimes hangs about the throat and nostrils, and when the nasal passages are blocked up it is forced through the lachrymal glands into the corners of the eyes. A fowl suffering from this disease may be seen occasionally arching and twisting its neck in a peculiar manner, more especially when eating its food. This disease sometimes assumes a chronic form, when there is no discharge. It is then called by some "dry roup." It is no uncommon thing for fowls in this condition to be considered by their owners as in perfect health, and they are sold as such; but when imported into a yard of healthy fowls, after a time there is an outbreak of this disease, and the owner, who probably prides himself upon his knowledge, care and faultless management, is at a loss to account for it. The treatment of the disease is to wash out the mouth and nostrils with a lotion made by adding one fourth part of one ounce of sulphate of copper to one pint of rain-water. Then with the quill-end of a stout feather remove as much of the false membrane as is possible without making the tissue underneath it bleed, and paint with a strong solution of perchloride of iron, one part, oil of turpentine, one part, and glycerin, six parts. Shake well when using it. Add a teaspoonful of the lotion to a wine-glassful of warm water to bathe the eyes if required. Do not attempt to pass feathers or anything else down the windpipe.

SELECTING THE BREEDS

It is almost impossible to produce a breed combining table qualities, market appearance, prolificacy, hardiness and adaptability to all conditions. In the selection of a breed one must conform to circumstances. Study the farm, its location, the buildings, the "lay of the land," and then get the breed that it is believed will be the most suitable for the purpose. There are some breeds that will lay more eggs in a mild climate than they will in those sections where the winters are long and cold, and there are breeds that will thrive on a limited area, while other breeds demand plenty of room for foraging. Breeds that give excellent results in one location may prove very unsatisfactory elsewhere, for which reason each breed has its admirers who are willing to champion its cause and denominate it as the "best breed." Some hens will lay a large number of eggs in a

year when managed by persons who give extra care and attention to the manner of feeding, but members of the same breed may fail when handled by those who make wheat and corn the principal articles of diet. There is one point in selection which should be strongly impressed on all, and that is to procure no fowls unless they are known to be healthy, come from healthy stock and from localities where no disease exists. When the breed believed to be suitable has been selected, then is the time to examine every fowl so as to have only those that are well, strong and to all appearances free from disease and lice. Even eggs from hens that are not known to be in the best condition should be rejected, as disease can be transmitted by parents to their offspring in the eggs.

PROFIT IN PURE BREEDS

The raising of pure-bred fowls in connection with other live stock on the farm is a profitable branch of industry, and for the amount of money invested no stock will yield much larger profits, except bees. A few years ago a great many farmers left this department to the care of members of the family, deeming it too small or insignificant for them to attend to; but some farmers have changed their minds, and are ready to verify the statement that it does pay to raise pure-bred fowls. Some of those living in or near the city, who are restricted to small limits, are stepping forth and reaping the reward derived from this simple work. Why do not farmers arouse themselves, and share the profits that may be gained through such light employment? The cost of pure-bred fowls to commence with will not be great, and they will not eat more than will common or cross-bred birds. Among the pure breeds there will be some extra good ones, and these will bring twice or three times as much as common stock.

SQUABS, BROILERS AND CAPONS

If squabs are killed before they fly the flesh is white, but after that it darkens, reducing the price in market. Those raising them for market should keep the old ones well supplied with food so that the young may become plump and fat. Always dry-pick them, and remove all of the down. Leave on the heads, and leave the entrails in. Have them thoroughly cooled before packing, then wrap in coarse straw-paper, and ship by express. If ice is needed to keep them, if not clean, wrap it in a cloth so that the dirt will not get on the birds. The rules for shipping and packing squabs apply to broilers. Capons should always be dry-picked. Leave all the feathers on the necks, and the large ones on the wings and tails. Slips are dressed the same way. They are readily selected from capons by the growth of their combs and swelling of the spurs. Slips usually sell for several cents less a pound than capons.

MILLET-SEED

A quart of millet-seed to twenty hens in the morning, scattered far and wide so as to make them work, with nothing at noon, and just as much as they will eat up at night, with a variety of other food, is an excellent plan of feeding. To know how much they will eat let them fill up until the last hen walks away satisfied. If fed twice a day, however (fill them), they will become rolling fat. If done three times a day it may kill them. The millet-seed is intended to keep them at work. The seeds being small, they will work hard to find them, and can only eat slowly.

THE NESTS AND ROOSTS

Most persons have the roosts over a board and the nests underneath, which economizes the space. If the house is not crowded, then the nests should be in a separate location and the board roost put lower to the floor. If the floor is hard, then a droppings-board is unnecessary, provided that fresh dry earth, plaster or kaint is used as absorbents; in fact, kaint should be used at all times with dirt or any other material. The only object of the droppings-board is to protect the nests should they be located under the roosts.

DARK EGGS

The breeds that lay brown eggs do not produce them of a dark or uniform color. Even two sisters will vary the color of their eggs. The tendency of fowls is to lay eggs that are white. All non-sitters lay white eggs, and it is claimed by some that the greater the tendency of a hen to sit the darker the color of her eggs. When it is reported that a Leghorn produced eggs that have brown shells it may be claimed as a freak or something unusual, although it is not an impossibility, and where such cases arise it would not be out of place to use the eggs and attempt to perpetuate a dark-egg strain of Leghorns, if such may be desired.

CORRESPONDENCE

GRAVEL AND BONE.—I conceive it to be the duty of every honest, intelligent man to correct errors whenever an opportunity affords. In your issue of December 1st, in an article headed "Gravel and Bone," I found the following remark: "In some parts of the country gravel is not accessible in quantities that admit of gathering it for winter use. The best way is to provide cracked bone. This serves both the purpose of gravel and a lime supply for egg-shells. To get it in small quantities will make the cost from seven to ten cents a pound." I have a Number Three bone-cutter, and I am furnishing bone at three cents a pound in the green state, and four cents fumigated with sulphur (to warrant it keeping any length of time). There is little or no pay in it at that price, but for the benefit of the poultry business I volunteered at that price this winter. Again, you remark "that it saves cost and trouble to have always a good article of bone. Let each reader get a bone-cutter and cut his own." That is had advice. My bone-cutter cost me \$17.10, including freight. I am fully of the opinion that one bone-cutter in a country-school district is sufficient if every person lived in peace and harmony. To have the article clean and wholesome there must be discarded about one pound in every twenty. All particles of fat and gristle that is useless for hen feed, and which sometimes clog the machine, must not be used. When a man has prepared twenty-five pounds, chopped sufficiently fine to enter the machine and grind it, and fumigate it with sulphur, he is tired enough to stop and rest or go about something else. Old, dry bone is worthless, and bone from meat that has been boiled has no nutrition in it. I have eighteen Plymouth Rocks and a cockerel. I feed them wheat in the morning, a pound of bone at noon, and nothing at night when they run on the range; but when confined in yards a light feed of cracked corn is given at night, an hour before roosting-time. These are last spring pullets, and I am satisfied with the supply of eggs. Now as to gravel. I have for the past five years practised pounding glass and old crockery, and I sift out the finest in a sieve of one-eighth-inch mesh. I consider it preferable to gravel, for it is always clean and free from disease substance. The fumes of sulphur have medical properties that are conducive to the health of the fowls. Bone alone is not sufficient for grinding purposes in the gizzard; there must be grit. Hens will not eat any more than is necessary for their good. Green cut bone, when fed properly, is worth eight cents a pound. Shelter and warmth in winter is too often overlooked to make a success in poultry-raising.

Brandon, Wis.

INQUIRIES ANSWERED

Shapes of Eggs.—R. G. writes: "Which eggs are correct for hatching, the long and pointed ones or the round ones? I understand that the long ones produce males and the others pullets." **REPLY:**—The shape of the egg does not influence the sex. Use only eggs of normal size and shape. Shapes of eggs are sometimes peculiarities of individual hens.

Feeding Bulky Foods.—G. C. P., Dunlap, Kan., writes: "What effect upon egg production will winter squash, turnips and potatoes, holed and mixed with wheat-bran and middlings, have if fed frequently or daily to hens?" **REPLY:**—The combination will be highly relished, promote health, and should prove beneficial in several respects. The egg production should be consequently increased.

Sore Heads.—A. M. R. writes: "What is the matter with my chickens, and also the remedy for them? My spring pullets have sores all over their heads. Some of my neighbors have lost some of theirs. I only noticed mine recently, but my neighbors say that the heads get sore, and finally the eyes and throat are swollen, and then they die. We do not know what to do for them." **REPLY:**—It may be due to parasites or chicken-pox, the full symptoms not being given. Anoint once a day with an ointment composed of a dram each of carbolic acid and cedar-oil and two ounces of crude petroleum, first sponging with a solution made by dissolving twenty grains of sulphate of copper in a half pint of water.

Heating a Poultry-house.—L. C. F., Uxbridge, Mass., writes: "I. Do you think it would pay to run a small coal-stove in my hen-house? It is quite a large house, and in cold weather it is very cold, as it is not sheltered from the north winds. 2. Some of my hens act rather dumpy, and their cheeks and heads have turned a gray color, while my other hens are looking fine. Can you tell me what you think the trouble is?" **REPLY:**—1. If a poultry-house is well protected with double boards or paper it will not be necessary to use a stove, but a large house should have several partitions. 2. It will be necessary to mention your mode of management to give a proper reply. It would be well, however, to look for the large body-lice.

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It makes them healthy. Makes them lay. If you can't get it we send one pkge. 25c.; 2lb. can, \$1.20; six, \$5. Sample best poultry paper and "How to Feed for Eggs," free.

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Can be made if you use our incubators to hatch them. It saves money, too, because it takes so much less time and trouble than hens and they hatch a greater percentage of eggs. Our machines have self regulators that

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will hatch all fertile eggs. It is easy to operate! Any ordinary intelligent boy or girl can handle it. Our large 68 page catalogue sent free to any address. It tells all about the Improved Globe Incubators, Improved Globe Brooders, Triumph Hot Water Heaters for Poultry Houses. Wire Netting for Poultry Yards, best strains of pure bred fowls and poultry supplies. Write for it immediately, it only takes a postal card. Address: **C. C. SHOEMAKER, Box 733, Freeport, Ill., U. S. A.**

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Hatches the largest per cent. of fertile eggs at the lowest cost.

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Light Brahmas, Barred Rocks, Buff Cochins, Buff Leghorns, B. Minorans, S. S. Hams, Golden Polish. Circular free. FRANK MYERS, Box 7, Freeport, Ill.

HENS LAY MORE EGGS if given Egg Producing Mixture twice weekly with food. Costs but trifle, pays big! True Recipe, post-paid, 10 cts. Address **ROBT. J. FLURY, Palatine, Ill.**

DEATH TO LICE on hens & chickens. 64-p. Book Free. **D. J. Lambert, Box 303, Apponaug, R. I.**

QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE 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 inclose 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.

To Protect Harness From Mice.—H. L. H., Maysville, Mich. Keep salt in the stable where the mice can get at it, and use fish-oil as an ingredient of the oil used for the harness. Equal parts of fish-oil and neat's-foot oil, with a little lampblack, will make a good harness-dressing.

Lily Bulbs.—M. E. B., Cameron, Va. Lift the old bulbs, remove the small ones, or offsets, around them, and replant the large bulbs in fresh, rich earth where they are to flower. Plant the small bulbs in beds of rich earth, where they are to remain two years or until large enough for flowering. Then lift them, sort out, and plant the large ones where they are to flower, and replant the small ones in the bed again.

Alfalfa.—A. D., Sioux City, Iowa, and others. Write to the Secretary of Agriculture, Washington, D. C., for bulletin on alfalfa culture. In his last annual report Secretary Wilson speaks of a very prominent variety recently introduced. He says: "The unusually severe winter of 1898-99 killed off probably half of the alfalfa of western Kansas, Nebraska, Colorado and Wyoming, and many fields in the central prairie states to the eastward were badly damaged, but the Turkestan alfalfa grown in the states mentioned was not affected. At the Wyoming Experiment Station a plot of Turkestan alfalfa was exposed for two weeks without injury to a daily temperature of thirty-five degrees below zero, Fahrenheit, the lowest point reached being forty-five degrees below. In California it was subjected without damage to a drought which seriously injured ordinary alfalfa. In view of the notable success of this plant in withstanding drought and cold, it has been decided to purchase a large amount of seed grown in America from our imported stock, and to distribute it widely over the arid West until it has been thoroughly tested under all the different climatic and soil conditions existing in that region. From the results already secured it is believed that this one introduction will add millions of dollars to the annual hay product of the United States."

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose 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. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Tartar Emetic.—M. A. E., Jacksonville, Pa. Tartar emetic will only expel the intestinal worms of sheep, and if properly administered only one dose will be required.

A Skin Disease.—S. W. B., Oskaloosa, Iowa. It may be that your neighbor is right, and it may be that you have to deal with a case of foot mange. Your description is altogether too meager to decide. Have the animal examined by a veterinarian.

Nephritis in Hogs.—O. W. J., Stonewall, I. T. Nephritis in hogs, especially if only one kidney is affected, is seldom diagnosed during the life of the animal, and even if it should be a treatment would be of very little use.

Diseased Brain.—C. M., Staunton, Ill. Your calf has a diseased brain. To subject it to any treatment, probably requiring a delicate surgical operation, and very likely not producing the desired effect, does not pay. If the calf is in a good condition as to flesh convert it into veal.

Probably a Case of Botriomyces.—A. L. L., Meadowbrook, Oreg. What you describe looks very much like a case of botriomyces. Please consult answer under the heading, "A Peculiar Ailment," in the FARM AND FIRESIDE of October 1, 1899, and you will find all the information asked for.

Spavin.—C. B., Mammoth Spring, Ark. It must be a very poor drug-store in which an article like hindfoot of mercury cannot be obtained. Not being in the drug business I cannot tell you what a druggist in Arkansas would charge for the quantity needed, but think that fifty cents would be a high price anywhere.

Worms in Cats.—W. M. S., Chester, Vt. Get one grain of santonin in a drug-store, take one third or one half of it, mix it with a little syrup or honey, and smear it on the fore leg of the cat, or on any place of her body where she can lick it off, which she will do immediately unless already too sick and past recovery, then let her fast for a few hours and the worms will pass off. If necessary, use the rest of the santonin in the same way a few days later.

An Old Chestnut.—J. F. B., Oppenheimer, Pa. All horned cattle have hollow horns. "Hollow horn" and "wolf in the tail" are old chestnuts and terms without any meaning used by ignorant people as a makeshift for a proper diagnosis to cover cases of poverty and starvation, and also some diseases causing emaciation and decline.

A Bad Habit.—H. E. B., New Paltz, N. Y. What you inquire about—namely, the persistent urinating of your cows while being milked—is a bad habit for which I cannot give you a remedy. Even if you compel them to make water before each milking, by inserting a finger into the urethra, they will not be apt to cease to make an effort as soon as you proceed with the milking.

Probably Swine-plague.—C. E. S., Avoca, Ark. The cutaneous eruption observed on your pig is quite often a concomitant of swine-plague, or so-called hog-cholera; and as your pigs also cough and die "one after another" it appears to be probable that it is swine-plague that kills them. At any rate, with no other information than what is given in your letter I cannot arrive at any other conclusion.

Accelerating the Shedding of the Coat of Hair.—W. A. G., Stillwell, Ga. The best means of accelerating the shedding of the coat of hair of horses and mules consist in feeding liberal quantities of highly nutritious food, good oats in particular, in thorough grooming at least once a day, in keeping the horses and mules in a clean and warm but well-ventilated stable, and in blanketing the animals. Other artificial means are more or less injurious.

Probably Paralysis.—T. K., Dallas, Ind. The several possible causes of partial paralysis have been so often enumerated in these columns that it will not be necessary to do it again at this time. Besides this, your description does not furnish any clue to the probable cause in your case, and further, if the paralysis, as might be inferred from your statement that your hog can neither walk nor stand on its feet, is a complete one there is no prospect of recovery.

Ringworm.—W. J. C., Vigor, Va. What you inquire about appears to be a case of so-called ringworm. Separate the affected animals from all others, clean and disinfect the stalls that have been occupied by them, and then apply once a day for several days in succession some tincture of iodine to the affected parts of the skin. Around the eyes the application is best made with a small brush, provided care is taken not to have the brush too full, and not to allow the tincture to run into the eyes.

Very Sore Teats.—B. DeL., Kimball, Ohio. If the teats of your cow are as sore as you say they are, see to it that the milking is done with clean and dry hands, that the cow herself, but particularly her udder, is kept clean, that the cow, if kept in a stable or a stall, has a clean floor and dry and clean bedding, that the same is fed with good dry food, and not with any kind of swill or slop, and finally anoint all the sores on the teats and the udder immediately after each milking with a mixture composed of equal parts of lime-water and pure (not rancid) olive-oil.

Lard-worms.—A. B., Comfort, Texas. It is impossible to identify dried-up worms sent wrapped in a piece of paper and inclosed in an envelope from southwester Texas; but from the fact that at least one of them was found in the kidney fat of the hog it is pretty safe to conclude that they are so-called lard-worms. The same, however, very likely are innocent of having caused the paralytic symptoms observed in the living animal, which in most cases are either the result of dietetic mistakes or attendants of other diseases. See answers headed "Paralysis in Hogs" in recent issues of this paper.

Cramps(?).—C. A. K., Baltic, Ohio. All the description you give is contained in the following: "The mare is subject to an annual attack of cramps(?). She had two attacks, one in the spring of 1898 and one in the spring of 1899. When she has an attack she lies down, evidently in great pain, and draws her hind legs up against her body." Now this looks much more like a mild attack of colic than what might be called "cramps." All the advice I can give you under these circumstances is to feed regularly and to avoid, particularly in the spring, all sudden changes in the diet of the animal. If another attack should occur, and you are in doubt, call in a veterinarian.

Diseased Eyes.—A. W., Lyle, Wash. According to your description I must suspect that your cow has some foreign body, perhaps an oat-chaff, beneath the eyelid, now probably embedded in the exudates on the cornea, and therefore not easily removed. If such is the case, and a removal is effected, perhaps with a delicate pincette and a very steady hand, it may yet be possible to have the eyesight of the cow restored. The powerful eye muscles of the eye of a cow make the removal very difficult; it may therefore be necessary to apply first a little cocaine before the operation is undertaken. If my supposition is correct, and no veterinarian is available, ask your physician to perform the operation.

Lice.—G. G. T., Egypt, N. Y. The only perfectly safe remedy to use for lice on horses in cold weather is genuine Persian insect-powder. It is applied by dusting it in beneath the hair with an insect-powder syringe. It is effective if well applied and if six or seven hours after the application all the bedding and manure is removed and the floor of the stall thoroughly cleaned. This is necessary, because a good many lice will tumble off and fall into the bedding before they are dead, and many of them may afterward revive. In about five days the application must be repeated, because within that time the nits that have not been killed by the first application will all have hatched, but the young lice will yet be too young to produce new nits.

Swine-plague.—L. R. S., Genoa, Ohio. What you describe is swine-plague, or so-called hog-cholera. The mortality, especially where such symptoms as hemorrhages and repeated chills make their appearance, is very great, and the greater the younger the animals. Even among aged sows and hogs it is seldom less than twenty-five per cent, while among shoats it amounts to as much as fifty to seventy-five per cent, according to age, and among young suckling-pigs to as much as ninety to one hundred per cent, treatment or no treatment. Early separation of the yet healthy animals from the diseased ones, good care, cleanliness and sound food will save more animals than can be done by any treatment, provided the separation is in every respect a strict one and is made in time.

Multiple Abscesses.—A. J. M., Aurora, N. Y. What you describe is really a local pyemia, produced by an entrance of pus-producing bacteria through probably small sores or wounds, such as are caused by interfering or by so-called scratches. As this cannot reach you until four weeks after your letter was written, I have no means of knowing how the case may be—the horse, unless seriously neglected, will have recovered—when you receive my answer. I can only say that in such a case every abscess must be lanced at the lowest point as soon as it shows that it contains pus, and then must receive a strictly antiseptic treatment until a healing is effected. If your horse is yet ailing when this communication reaches you, it is possible that a more complicated treatment will be required, and I therefore advise you to call in a veterinarian.

A Kicking Mare.—L. J. Z., Weldon Spring, Mo. If your mare indulges in kicking in the stable, you can spoil her that fun and have some fun yourself if you fill a stout grain-bag one third full with sand and then suspend it with a rope from the ceiling or from above, at a suitable height and distance behind the mare, so that the latter can and will hit it each time she kicks. The sand-bag will retaliate each time it is hit, and if it has swing enough, will pay back with interest. A battle royal will take place, but the mare will soon get tired, while the sand-bag will remain as lively as ever and drive the mare into a forward corner of the stall, where she will crouch like a whipped cur. She may try again to indulge in her kicking pastime, but finding her antagonist on watch and prepared, she will soon see the uselessness of kicking against a sand-bag, and will cease; but it will not be advisable to remove the sand-bag too early or the lesson may not be well learned.

Vitiated Appetite.—W. B. M., Chesaning, Mich., and G. T. L., Hubbardton, Vt. There is something wrong with the diet of your calves and cows respectively. Their food is either too poor in phosphates, lime salts and nitrogenous compounds, or it is too rich in acids (lactic acid, for instance). Change this, if not already too late, and at the same time give each animal an hypodermic injection of Apomorphium hydrochloricum dissolved in a little distilled water, to be made once a day for three successive days. The dose for each injection is from one and one half to three grains, and is the same for calves and cows. The larger dose is for cases of recent origin, and the smaller one for older cases. In some localities, especially in such in which the soil rests upon granite, vitiated appetite is a stationary disease, and often very hard in dry years. For such localities a manuring with Chili saltpeter of the pastures and of the fields on which food-plants are raised has been recommended, and at any rate would be worth trying. Animals already very much emaciated and hardly able to stand are past recovery, and without a thorough change of the diet and an improvement in the keeping, stable included, the apomorphine injections will only be a temporary benefit.

Several Questions.—J. F. M., Tillamook, Oregon. 1. You say that one teat of your cow, expected soon to be fresh again, was nearly severed from the udder by a fence-wire when the cow, now going with her fifth calf, was a heifer, and is now perfectly closed and callous. This teat, you say, further has caused you considerable trouble every year. As it is out of the question to restore that teat to a normal condition, the best that can be done will be to cause the quarter to which the teat belongs to become unproductive or barren. To effect this you may rub in on that quarter, but nowhere else, as soon as the udder begins to swell, once a day a salve composed of gum camphor, one part, and soft soap, six to eight parts. If then, when the cow has calved, the quarter should become filled with milk, it will be best not to touch it unless the quarter should become very much inflamed, which probably will not be the case. If it should be, it will be necessary to make a good-sized incision with a sharp knife into the milk-cistern (what you call the duct), let out the contents of the quarter, and inject with a clean syringe a blood-warm solution of either boric acid (four per cent) or of carbolic acid (two or two and one half per cent). Whether and how often this injection has to be repeated will depend upon the condition of the case. A few repetitions will probably be necessary. 2. A cow that has once aborted, but has afterward carried her calf a normal length of time, will very likely carry her future calves the full length of time. 3. Your third question I am hardly able to answer, because a great deal depends upon the condition, breed, constitution and the keeping of the young bull. If you desire to raise good, vigorous and thrifty calves, I would advise you to employ a bull at least a year older; but if it is your sole object to have fresh-milking cows, do not care what kind of calves you will get, nor what will become of the young bull (how much his growth and further development will suffer), I have no doubt that the young bull will be able to do what you require of him.

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THE GRANGE

Conducted by MRS. MARY E. LEE, New Plymouth, Ohio

WHAT are you doing to make your grange a success? Are you a prompt and regular attendant at the meetings? Are you ready to lend a helping hand whenever required? Are you loyal to your grange? Can you tell what the grange has done for the farmer? When we fully realize what the grange has done, and what it is capable of doing, there will be an earnestness and enthusiasm that will overcome all obstacles and place agriculture in the honorable position its importance as an industry entitles it to.

Hon. F. A. Derthick very forcibly says in the "Ohio Farmer:" "If the farmers are really in earnest they can secure any law that is practical. Preparation must be made beforehand, however. Voters must attend their respective party primaries, go to conventions, and then 'vote as they shoot.' It is not good citizenship nor good reform to stand idly by or stay at home while unworthy and dishonest men are nominated and elected, and then cry out against 'the old parties.' The stay-at-homes are the sinners. There are a sufficient number of worthy men in every county in Ohio to dictate the policy and politics of the county, be it Republican or Democratic. It is a grave mistake to suppose that we will receive any more recognition at the hands of any legislature than we demand. Let us get together, then stay together."

We would call attention to the last two sentences. It is useless for us to denounce trusts or anything else unless we back up our denunciations with arguments and persistent petitions and letters to legislators.

A grange that is very successful in maintaining interest in its meetings uses the following method: Aside from the general topics on legislation and the discussion of a subject that is of particular interest, one or more persons are expected to make a report on the work assigned them for the year. For example, one member is expected to study fungous diseases; discover what plants are affected in his own community, and the disease. This brings him into correspondence with the experiment station. The substance is reported to the grange, thus enabling every member to get hints of value to him. Another makes a specialty of botany, another of the geological formation of the surrounding country, another of pomology. There are other lines of study taken up, and the member appointed is expected to take charge of that particular line. To him all questions are referred. This has the decided advantage of always having interesting original matter of value to farmers. It encourages the member in charge to do systematic, thorough work, and keeps the whole grange in touch with the experiment station; in fact, each grange has its local station. Another advantage is that one person has charge of the correspondence in each particular line of work. This obviates the necessity of a multiplicity of correspondence and constant repetition.

The National Lecturer has selected "Trusts" for the February topic. Herewith we present his suggestions. We would urge every grange to thoroughly study and discuss the matter, and follow up their discussion by persistent demands upon senators and representatives for relief from oppression. Systematic, persistent work is essential. We also present the general topic for the quarter, "National Legislation."

TRUSTS

QUESTION.—What Legislation, National or State, is Needed for the Judicious Control of Trusts?

SUGGESTIONS.—The topic "Trusts" was so ably presented by the previous lecturer in the preceding "Bulletin" that its consideration in any form may seem superfluous so soon, but if we consider the great magnitude of this topic, and the prominent attention given it in the able address of Worthy Master Jones at the National Grange, we will realize something of the prominence the subject has assumed in the deliberations of the grange, and will adopt it for February discussion without hes-

itancy. The discussion this month may well take the form of restrictive legislation, and to what extent national or state legislation should regulate the affairs of combinations of wealth known as trusts. It is generally admitted that one of the most damaging features of these combinations is the fictitious stock created, which bears little more relation in real value to the original stock than does the counterfeit bill to genuine currency. Lecturer Messer, in the preceding "Bulletin," said:

"Overcapitalization is considered to be one of the leading evils connected with the trust problem, and one proposition to suppress this evil is to compel publicity in regard to all the affairs of corporations which relate to the public welfare. This, it is believed, would act as a powerful restraint upon their acts.

"Another proposition is to tax the full amount of the capital stock of the corporation or trust. The supposition is that trust promoters would not greatly overcapitalize their stock if they were obliged to pay taxes upon it.

"It is questionable policy, to say the least, to permit one state to legislate for individuals or corporations to do business in another state, and a very sensible proposition is to permit no corporation to do business outside the state in which the charter is granted, except under the supervision of Congress, with such restrictions as will prevent overcapitalization and make publicity of acts compulsory.

"Still another proposition is to remove every artificial advantage which is afforded any monopoly by reason of the tariff. Another is to establish a government commission similar to the Interstate Commerce Commission, with well-defined powers to deal with all trusts which would by law be compelled to apply to the commission for a license that would be restrictive and guard well the interests of the people.

"A dangerous point which is often overlooked in the discussion of the trust problem is the immense sale of the watered stock of these corporations to small investors, who naturally become trust defenders and will use their influence against the restriction or suppression of these combinations."

For further information upon this important matter you are referred to the address of Worthy Master Jones, published in full in the "Bulletin," which contains the most exhaustive discussion of trusts and their control which has come to our notice anywhere. Petitions to Congress for adequate anti-trust legislation should be circulated at once, and forwarded to the legislative committee as elsewhere directed. This feature of the discussion should be given prompt and vigorous attention by all granges.

NATIONAL LEGISLATION

The farmers of the country have been less interested and active in legislative matters affecting agriculture than the importance of such matters seems to demand. Farmers have too generally considered that their duty in securing legislation ended with the nomination and election of men to represent them in Congress, and that there was nothing more to be done, whatever the inclination and probable action of their representatives and senators might be. We as farmers have failed to recognize the fact that legislation affecting any interest is secured only by unremitting toil in convincing those intrusted with the law-making power that the public good requires certain legislation. It is not expected that congressmen and senators will be sufficiently familiar with all the interests of their constituents to be able to act intelligently, however honest they may be, without evidence of their needs. The farmers of the country have not only been negligent in electing those not specially familiar with the needs of the agricultural people, but they have been too modest in letting those that were elected know what the great agricultural interests were entitled to in the matter of national legislation. Those people in other industries have been active in this direction, while the farmers have been indifferent.

Taking this view of the matter, and it must be the correct view, we suggest that every subordinate grange in the country consider matters of national legislation at one meeting in each month during this quarter, and follow up the discussion of each topic with a petition to Congress for legislation along the lines favored by the grange. We believe such systematic action as this will exert such an influence for just legislation touching agriculture as has never before been brought to bear upon the American Congress. These petitions should be signed by members of the grange and by

other farmers who will aid in this matter, and forwarded to the legislative committee of the National Grange at Washington. They should be forwarded promptly after each discussion, and the committee will have all such petitions filed, indexed and properly presented in Congress. The address of the legislative committee is 514 F street, Washington, D. C. Supplement these petitions with individual letters to congressmen and senators, and personal interviews when convenient. Every member of the grange and every farmer in the country can do something to aid in this matter.

A GRANGE COTTAGE

The State Grange of Maine sets an example worthy of imitation. Several years ago the attention of the State Grange was called to Good Will Farm, located at East Fairfield, Maine. Its good work in saving boys and girls and fitting them to help themselves to become intelligent citizens was recognized. It was suggested that the State Grange found and equip a cottage, employ a matron and bear the expenses of the cottage.

The idea was eagerly seized upon by that enlightened body. The cottage was built, equipped, and has been maintained by the Grange. It gives a home to fifteen homeless girls. They are taught the lessons usually taught in our homes—sewing, cooking and housekeeping. They also have school advantages in the school that is maintained by the Good Will Association.

In looking over copies of the Good Will "Record" we find notices of donations to the Grange cottage from granges and individual members. This is a grand work. These girls, who would otherwise grow up without wholesome home influences, are brought to this place, where the home atmosphere is healthful and stimulating. They are trained to be useful, helpful citizens; are encouraged to attain to the highest development, and are taught the nobility of labor. These girls soon become self-supporting, and their gratitude and love are genuine.

At the annual meeting of the State Grange, at Augusta, an offering was taken for the benefit of the cottage. It amounted to \$27.18. This cottage was dedicated December 20, 1897. Surely the granges of Maine are to be congratulated for their public spirit and wise philanthropy. "An ounce of prevention is worth a pound of cure." Maine grangers evidently think it is better business economy to save the girls and help them to become self-supporting than to support them later in reformatory institutions.

When we realize that the opportunities for an uneducated girl to make a comfortable living are limited, the wisdom of the cottage is seen. It is the unfortunates that we must help—those who by untoward circumstances over which they could have no possible control are doomed to narrow, sordid, often criminal lives. The fortunate ones can care for themselves. All honor and praise to the public spirit and philanthropy of our sister state. Let others do likewise.

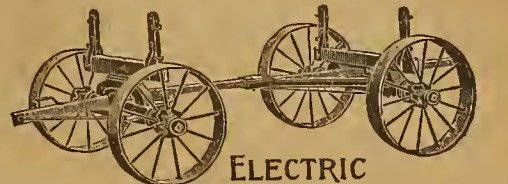
WE ARE PROUD

The grange has just cause for pride in the work of the seventh degree. The ritualistic work is beautiful and impressive, and the lesson inspiring. The court robes of Ceres are classically correct. Dr. George Austen Bowen has spent a great deal of time in studying statuary, friezes, ancient coins, and has delved into the mysteries of Ceres and her court to bring these robes to perfection. To this work he has brought a cultured mind, great wealth and splendid enthusiasm. The Patrons of Husbandry may congratulate themselves that no other order can rival theirs in the excellence and perfection of the regalia. This arduous work was entirely a labor of love on the part of Dr. Bowen. He is worthy of great praise for having given us the opportunity to see exact reproductions of ancient costumes and ancient rites.

SECRETARY TRIMBLE, of the National Grange, gives the following statement of granges organized and reorganized during the first quarter of the grange year, beginning October 1 and ending December 31, 1899:

Table with 2 columns: ORGANIZED and REORGANIZED. Lists states and their counts for both categories.

FARM WAGON ECONOMY The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Co., who make this Electric Handy Wagon and the now famous Electric Wheels, have solved the problem of a successful and durable low down wagon at a reasonable price.



This wagon is composed of the best material throughout—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4000 lbs. These Electric Steel Wheels are made to fit any wagon, and make practically a new wagon out of the old one. They can be had in any height desired and any width of tire up to eight inches. With an extra set of these wheels a farmer can interchange them with his regular wheels and have a high or low down wagon at will. Write for catalogue of the full "Electric Line" to Electric Wheel Co., Box 96, Quincy, Ill.

Advertisement for 'A Joy of Spring' Garden and Farm Manual. Includes text about new seeds and plants, and contact information for Johnson & Stokes.

Advertisement for Burpee's Best Seeds that Grow. Features a trade mark logo and text about the quality and availability of seeds.

Advertisement for Appleton Steel Frame Wood Saw. Includes an illustration of the saw and text describing its features and quality.

Advertisement for Aquatic Cream Separator. Text describes the product's benefits for cream separation.

Advertisement for The Million Dollar Potato. Text promotes the quality and early maturity of the potato variety.

Advertisement for The Best Asparagus. Text describes the 'Columbian White' variety and provides contact information for the nursery.



ST. VALENTINE'S DAY WITH THE CHILDREN



Wise indeed is the mother who earnestly embraces every opportunity to brighten and beautify the lives of her children. Welcome the anniversary of St. Valentine's day, one of the merriest of holidays. As the genial autocrat, Oliver Weudell Holmes, loved to do, "skip back seventy years" to give a child happiness.

Invite to your home the children's young friends. Happiness shared is happiness multiplied. Make these original invitations large, heart-shaped, of gay red paper, and paint in gold letters:

"My heart longs to see
You on St. Valentine's day."

In the lower right-hand corner add the name of the child giving the party, and at the left the hour when you wish to see the guest. Use envelopes of white, unruled paper, in style to match, properly addressed, and delivered by messenger to your own little children and several of their playmates.

Little children rightly trained love to work, "to help." To make the valentines is great sport. Fancy, gay-tinted papers, crape tissue-paper flowers, colored pictures, bright celluloid (covers), water-color paints, with patience, neatness and a little artistic ability, form excellent valentine materials. Forget-me-nots, red roses, lilies, daffodils, tulips, crocus and violets are all appropriate flowers. They may be traced out and then carefully colored. There are many quotations adapted to the festive day.

Valentines are heart-shaped, round, square or oblong, according to the worker's taste and ingenuity. One has Little Red Riding Hood snugly wrapped in her long bright cloak, and these words:

"Little Red Riding Hood, whither away
On this cold wintry day?
But since you are going, pray don't decline
To carry my love to my Valentine."

Other quotations may be as follows:

"Serene be thy days,
And bright, my Valentine."

"The sweetest garland to
The sweetest maid."

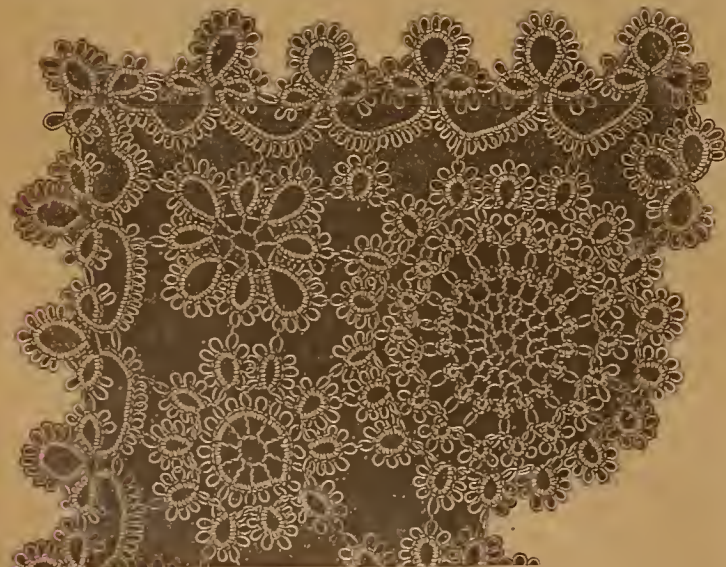
"Blest be St. Valentine's day!"

No little lady or gentleman will send a "comic valentine." Provide at least two valentines for each guest. A large hamper forms a convenient post-office. The guests may choose a postmaster or postmistress, and a mail-carrier or two to deliver the valentines on trays.

As souvenirs are very desirable, sachets, pincushions, blotters, tissue-paper boxes and stick-pins, in heart style and red predominating, may be selected.

Let simplicity reign, and the decorations be gay and typical of the occasion. A charming effect is obtained by having red-paper hearts everywhere in evidence. Strings of Japanese lanterns stretched in various directions give a holiday air to ordinary furnishings. Gay red carnations add much beauty. Vivid red shades for the candles and lamps are also attractive.

Difficult mental games are not usually desirable at children's entertainments. They enjoy "A Trip Around the World," "The



Steeple-chase," "Wild Animals," "The Department Store," "Parlor Blindman," and all the progressive games. "Mating Hearts" will captivate their fancy. Differently colored hearts are cut in two through the center, and by matching them partners are found for the supper or games.

At the St. Valentine's feast serve bouillon in cups, celery and salted peanuts, broiled oysters or creamed chicken, and tiny heart-shaped sandwiches or hot biscuits. As a perfect ending to the supper (according to the children's point of view) serve vanilla or strawberry ice-cream molded in the form of small individual hearts, or rainbow ice-cream which shows strips of chocolate, vanilla, pistachio and strawberry. The correct cakes should be small, have red icing, and be either in heart or horseshoe style. Heart-shaped cookies are popular, too. Serve hot milk, cocoa or red lemonade. Provide bonbons, wholesome in quality and red or pink in color. In variety, motto hearts, snapping bonbons, candy butterflies and chocolate novelties of animals and figures.

"Blest be St. Valentine."
ADELE K. JOHNSON.

THE NECESSITY OF LUXURY

It is not an easy matter to draw the line between the necessities and the luxuries of life. The luxuries do, of course, include the necessities, but it is equally true with many people that the necessities do also include the luxuries.

It is just the difference in the temperament of the home-maker that makes the difference in the home, and it is never quite wise to accuse people of extravagance because they crave, and manage to gather together in their homes beautiful and artistic things which other people in quite as good circumstances feel that they cannot possess.

Every home-maker stamps her own individuality upon her home and home-life, and the very things that some people consider luxuries, and as such far beyond their reach, are positive necessities to others.

We are too utilitarian. It is a gross error to class all the beautiful and artistic things that appeal to the esthetic in one's nature as luxuries, and only the things that minister to our material needs as necessities.

In some natures the material dominates the spiritual. Such as these are wholly satisfied so long as their bodily wants are supplied. But there are others whose spiritual natures do hunger and thirst for the refined, the beautiful and the artistic in life, and to whom these things are positive necessities. And yet many people go through life starving for the artistic and the beautiful in their surroundings simply because they do not recognize the necessity of luxury.

If you long for a beautiful picture to hang upon your wall, or a bit of cut glass or china for your dinner-table; if you crave a luxurious rug or lovely chair, or if you are starving for the mental food of good books, then these things are no more luxuries, but necessities.

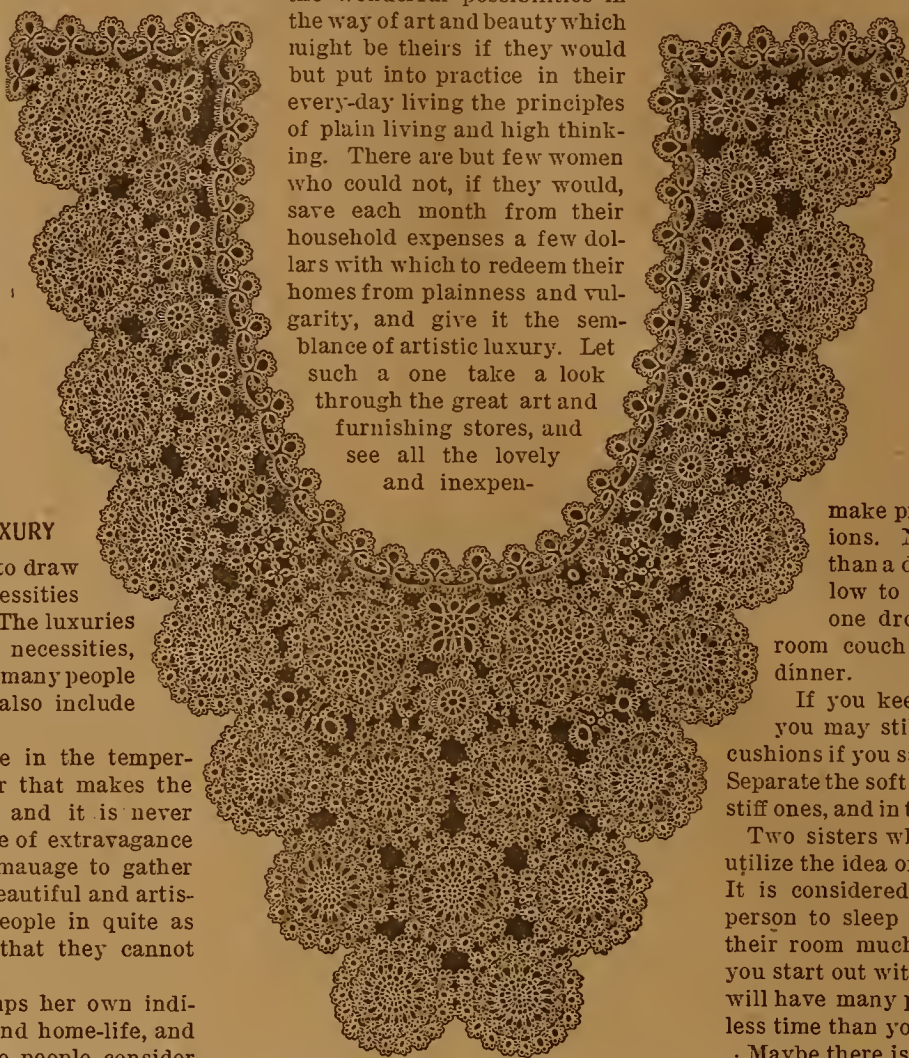
Some one has said that the beautiful is as useful as the useful. Then when we begin to recognize the usefulness of the beautiful and artistic in our homes we shall also recognize the possibility of possession. Costly things are not always beautiful, neither are lovely or artistic things always priceless or even expensive.

This is an artistic age, and artists everywhere, in all crafts and trades, are conceiving and stamping upon their work the eternal symbol of art and beauty. But beautiful and artistic possessions are not to-day the exclusive property of the rich; yet many people go through this life starving their spiritual natures for the beautiful and artistic in their homes.

Then, again, many people who would consider it a sin to buy a thing simply because it was beautiful seem often to forget that beauty and utility may often be com-

bined at a very moderate expense. They will buy and wear and bring into their homes coarse, ugly and inartistic things for no conceivable reason than that they are ugly and cheap. There are many families who would consider it the height of extravagance to gratify their longings for luxurious furnishings in their homes who will spend twice the amount necessary for their physical needs upon the butcher, the baker or the grocer, and never dream that they are extravagant. They look with longing eyes at the lovely and artistic things in the art and furnishing stores, and in the homes of their friends, never dreaming of

the wonderful possibilities in the way of art and beauty which might be theirs if they would but put into practice in their every-day living the principles of plain living and high thinking. There are but few women who could not, if they would, save each month from their household expenses a few dollars with which to redeem their homes from plainness and vulgarity, and give it the semblance of artistic luxury. Let such a one take a look through the great art and furnishing stores, and see all the lovely and inexpen-



sive things that would bring color and brightness into a dull, starved life; and then buy some one thing that has been longed for, and rejoice in it, and enjoy it, and then add to it another, and yet another, until your home is sanctified with the elements of refinement and beauty, and see how your spiritual nature will expand and blossom, and your dull, colorless life will take on new meaning and beauty as reflected from its lovely and artistic surroundings.

LIZZIE CLARKE HARDY.

TATTING COLLAR

The illustrations give the entire collar complete, the working detail of the corner, and also the one at the back of the neck. The work should be begun with the two wheels in the middle of the back, and work up from these. The wheels are composed of two rows of single-thread edging in three sizes, the first being joined together and filled with spider-web work. The edge is composed of feather-edged trefoil and loops made by using two threads. It will be seen by the working details that four different wheels are used in the construction of this collar. The illustrations are so clear that detail is unnecessary.

CUSHIONS

Everybody enjoys cushions, and it is next to an impossibility to have too many of them. Let there be large cushions and middle-sized cushions and small cushions, just the right size to tuck into the hollows which one so often finds at the back of so-called easy-chairs. Have elaborately embroidered cushions in delicate colors if you have plenty of time and enjoy making them; they are pretty to look at. And be sure to have an abundance of those that are not too fine to be used by the husband when he comes in tired, or by the children. Yes, some that are not too fine to participate in a pillow-fight, which boys are apt to consider the chief end for which pillows are made.

Denim makes the most substantial covers for cushions, as it will withstand an almost unlimited amount of hard usage. When denim (which can be bought already stamped in pretty patterns) is embroidered with linen floss it is ornamental as well as useful. The art-denims may be found in beautiful colors, either rich and dark or light and dainty. I

once saw a cushion of dark wine-colored denim. The pattern was outlined with a knotted silk cord of the same color, which was very little work to sew on, and made a very effective pillow. The edge was also finished with this cord.

Girls are very fond of making cushions in college colors—the colors of their own school and also of any of their friends at other colleges. Two of my girl friends who room together at school said they were going to have two cots instead of a bed in their room. These they would stand along two walls, with the heads together in the corner. With a Bagdad cover for each, and all the pillows they could get piled on them, these make a very luxurious-looking couch in the daytime. I heard them planning for their cushions, counting up their friends in various colleges. "We must have a Harvard and a Yale, a Princeton and a Columbia, a Cornell and a University of Virginia," they said. Some of these would be all in one color, and others two colors combined, but all would make a bright and pretty corner.

Cretonne and silkoline, which cost so very little, make pretty and serviceable cushions. Nothing is more comfortable than a downy, silkoline-covered pillow to tuck under the head when one drops down upon the sitting-room couch for "forty winks" after dinner.

If you keep neither geese nor ducks, you may still make fairly comfortable cushions if you save all the chicken-feathers. Separate the soft and fluffy feathers from the stiff ones, and in the latter cut out the midrib.

Two sisters who share the same room can utilize the idea of two cots instead of a bed. It is considered more healthful for each person to sleep alone, and they can make their room much prettier in this way. If you start out with the idea of cushions, you will have many pretty ones accumulated in less time than you think.

Maybe there is a discarded feather-bed in the attic—not many people use them now; if so, no doubt mother will let you make it into cushions. It will make enough for your own room and some for the sitting-room. Now is a good time to do this work, before you commence the spring sewing.

MAIDA McL.

REFLECTIONS

How many of us unconsciously go about with a frown on our face, the brows lowered, wrinkles in the forehead, the corners of the mouth drawn down, and every feature greatly disfigured!

If you are a parent, look into the faces of the little ones; you will see in theirs your own visage reflected. Change the countenance, bring a smile to the disfigured face,



and immediately the face of the child takes on a smile which drives away all traces of the former disfigurements and brings sunshine and dimples to the fresh young face. If you are a teacher, look into the faces of the pupils; if there you see a scowl, then make your own face bright and pleasant, and you will be pleased with the result.

Therefore, parents and teachers, take care that you keep the face free from any unnecessary disfigurements, and your reward is in the pleasant faces, words and actions of those around you.

HELEN BOOMER.

THE CHOOSING

Laura will not be "my lady," in her silks and satins fine,
And the great but wait to wonder, and their dreams of love resign,
Though they offer gold and jewels; all that vainer women crave,
Laura'll be no rich man's darling; Laura'll be the poor man's slave!

"Out, you dreamer!" quoth the mother, old in years, but sorrow-tried;
"Will you walk the world's way weeping when the footman bids you ride?
Will you hide you in a hovel—go a beggar to the grave?
Out upon the poor man's wooing! Who would be the poor man's slave?"

"Heed you, lass, the words of wisdom: let but poverty appear
In the door, and love, affrighted, fieth out the window, dear!

Would you welcome thorus for roses, so to ery when none can save?
Bitter bread the poor man brings you. Out upon the poor man's slave!"

Does she listen? Tear-drops glisten, but she heeds no golden gleam,
In the green heart of the meadows weighs her duty and her dream,
Tramples all their gold and jewels, all that vainer women crave—
Arms around the weeping mother—"Let me be the poor man's slave!"

—Atlanta Constitution.

2

VALENTINES

AN OLD-TIME VALENTINE.—A valentine bearing the date 1770 has been exhibited in Philadelphia, which is claimed to be as old at least as any known to be in existence. It was found in a secretary which the father of Mr. David Masters, of West Philadelphia, had received from his father, and was found by his daughter, Miss Jessie W. Masters, to whom it was given by her grandmother. It was sent to Margaret Masters—that was her great-grandmother's name—though the valentine may have gone to another member of the family.

To begin with, it is a square, measuring thirteen and one half inches, bent into nine squares, and then so ingeniously folded that the center square forms the bottom of the valentine, while the corner ones, a quarter of each of them, form the top. Folded you see it is about four inches each way. It is of parchment-like paper, yellowed with age, and is done in water-colors, hearts being most in evidence, with conventionalized flowers that look like spring-beauties worked in here and there. The sender put so much work on both sides of all these little squares that the changes of his mood had time to materialize. On the bottom of the center square one line around each edge is:

"On the inside, sweet turtle-dove,
I've wrote a motto of my love;
The povers of envy can't pretend
To say I have false stories penned."

Then on top you read:

"My dear, this heart which you behold
Will break when you these lines behold;
E'en so my heart with love-sick pains
So wounded is 'twill break in twain."

And when you begin unfolding the big red heart does break, but into four pieces instead of "twain."

As you go on opening squares the drama thickens. At this first opening two hearts appear, as well as this stanza:

"O charmer, sweet and blest, divine,
I've pictured here your heart and mine;
But Cupid, with his fatal dart,
Hath wounded deep my tender heart."

This continues until you come to the upper side of the center square, around which runs the following:

"If you refuse to be my wife,
You will relieve me of my life;
Pale death at last will stand my friend,
And bring my troubles to an end."

This square shows two blood-red hearts knitted together with two queer Egyptian-like eyes, and an hour-glass between them above, and the skull and cross-bones below. Cupid, the sly rascal (perhaps he prefers being called the immortal go-between), never once shows himself, though his darts are still sticking in some of the hearts. One is at a loss to explain the gilt hearts. Could a gentleman so deep in love descend so far as to suggest that they would not have to live on love alone?

THE VALENTINE OF CHAUCER'S TIME.—Chaucer sang of St. Valentine, but his verses are not down to date, and one loses patience when he calls a mate a make, for all the world as if people who were on the mate were also on the make.

Pepys, in that delightful diary revelation which he set down in shorthand to show us what was the import of the day in 1661, under date of February 22d, entered an account of a visit he and his wife made to Sir W. Batten, said gentleman having the day before sent Mrs. Pepys a half-dozen pairs of gloves and a pair of silk stockings and garters "for her valentines." Reckless, wasn't he? Six years later, "I find that Mrs. Pierce's little girl has drawn me for her valentine." And he's glad, the wretch, because it cases him of greater obligations. Let us hope the most exacting of social affairs of Mr. Pepys will not bear the light.

THE VALENTINE DOWN TO DATE.—The sending of true-lovers' knots then came in; they were particularly irresistible when tied around a wish-bone. The written valentine came in with the latter half of the eighteenth century, and, hateful to relate, the beaux bought them ready written or hired them done by professional writers, too often making the mistake of directing the affair themselves.

The printed valentine is no older than the present century. As for those in the shops this year, there has been a new departure in the way of "comics." A stuffed owl mounted on a card, for instance, proclaims himself too wise to be caught in the matrimonial trap, the said trap being baited with a crimson felt heart. Other cards with either a cigarette or a box of matches tied on (the latter is peculiarly suitable) have a sentiment expressing hope that the affair will not end in smoke. A slipper full of forget-me-nots is pretty, as is a fan edged with the same flowers, with "The girl I love"—a letter on each stick—showing when the fan is opened.

P. W. HUMPHREYS.

2

ECONOMY IN DRESS

One of the great problems of every-day life is how to dress tastefully and with due regard for the prevailing style and yet with reasonable economy. Now I am speaking of the fair sex, not of the lords of creation, for if the average man keeps well brushed and groomed he looks tolerably respectable. But few women have solved this problem satisfactorily, and only after years of painstaking and patient study.

The secret of success lies to a great extent in the choice of materials. Fancy fabrics in new designs and novel arrangements of color attract the majority of young and dressy women, and flimsy stuffs with dressy possibilities are irresistible temptations to them. They buy these fabrics, and pay good prices for having them made up, for only an artist can handle them successfully. The dresses are worn a few times, when they become faded, or draw in the seams, or a few rain-drops make ugly spots, and they become worthless for best dresses. Then there is an imperative demand for something new, and the same ground is gone over again, with the same results.

Of course, this sort of thing is excellent for trade, and pleasing to dressmakers, and all right for wealthy women who can afford to wear such goods and have them replaced every new moon, but the woman who would be economical must put all of these temptations away from her, for economy in dress means the purchase of only excellent fabrics, mostly in plain colors, and these must be made in styles as simple and plain as possible.

Some women are always in exaggeration of the fashion. When trains are worn theirs are at least half a yard longer than those of other people; when high sleeves are in vogue theirs cover their faces. The woman who would be well dressed must remember that there is no greater error than exaggeration in dress, and to push a fashion to the extreme is to suggest the grotesque. We often blame fashion for ridiculous excesses, when it is the exponents of fashion who by their exaggeration bring certain styles into disrepute. Any fashion in excess degenerates into vulgarity, and the wearer of such exaggerations is deficient in refinement and good taste.

A high-grade silk-warp cloth in black, made up stylishly, but in a plain fashion, and finished with a little elegant garniture, is one of the most useful and becoming of garments. It is also inconspicuous, and may be worn repeatedly without exciting comment. A handsome black dress may be worn again and again without exciting unpleasant comment, or it may be changed in appearance by the use of a few trifling variations in the way of neck-dressing trimmings or by the introduction of a bit of color.

Another useful costume would be a black China crepe trimmed with lace or ruffles of

the same material. Provide several sets of ribbons, one set of black and the others of whatever tints or tones are the most becoming and appropriate. In buying ribbons avoid high colors or fancy patterns, and above all get a good quality. Cheap ribbons do not belong in the wardrobe of the economical woman, neither do cheap fabrics of any sort. Everything she buys must be first-class, and all garments must be well made to be profitable.

In outside garments—wraps, cloaks and the like—the economical woman must be to all appearances extravagant. That means that she must buy the best and richest material, goods that do not depend upon show, but intrinsic worth, for their effects. Novelty, or what are usually called stylish patterns, are not her wisest selections. Richness and elegance, not showy styles and materials, must be the economical woman's dependence if she would achieve satisfactory results.

AUGUSTA MILLER.

2

KEEPING MOTHER'S BIRTHDAY

Early one morning a dainty little note read, "Will you come to lunch Wednesday, to celebrate mother's birthday?"

Holding the letter in my hand I said, "Why, yes."

"Mother's birthday!" It has been said that the sweetest words in the English language are mother, home and heaven. Memory fails to carry one back of the realization of a mother's love and watchfulness. She was the first to inspire our hope and win our confidence. Her ripened judgment was ever at our service, and could be relied upon. How she used to weave a brilliant destiny for every one of the household! The name mother is immortal. Although the name of home is the echo of a sacred song to many of us, its cadence is as a cherished memory in our souls. There is no richer legacy bequeathed to us than the lives and guardianship of our mothers. And however fleeting things may seem here, we may look toward an eternal home in heaven with our mothers.

But I still held the letter, and read on, "When you come to the lunch, can't you bring something of your own to read—some prose or a bit of verse?" Mentioning some of the names of the guests, she said, "You will not need to 'hunt' for my mother; for though you will not find her on her native 'heath,' she will be surrounded by 'lord' and lady and friend of royal blood." So I took not my own words alone, but the thought and wish of the whole lunch-party for that dear friend who had lived seventy-two years.

The rose that bloomed upon the face
Of the fair bride of years gone by,
Still blossoms with an added grace,
And joy still lights the love-lit eye.

Though in her heart is a vacant place,
Yet two daughters stand beside her now,
And with tender love and grace
Form a wreath of glory round her brow.

Our song shall say the joys of all the years
Outnumbers far all griefs and pain,
And all life's saddest things and tears
Have brightened into joys again.

And sweet as has life's portion been
Through all the pleasant past,
Still, as at Cana's marriage feast,
The best wine is the last.

My dear, your life has been a shining light
That shineth unto the perfect day;
Few shadows have come with the years in their flight,
May the other years the same trick play.

MARY JOSLYN SMITH.

2

THE POSSIBILITIES OF SHETLAND FLOSS

Friends frequently say, "How do you accomplish so much?" And my reply is, "I rest by change of work." In the few minutes waiting for supper, or the hour after, while the rest were talking or getting ready to go out of an evening, I picked up my knitting and made a Newport scarf in time I would otherwise have wasted. This scarf was sent for a Christmas gift to one who enjoyed it very much. It required one dollar's worth of material, was wound double, and knit on wooden needles the size of the little finger. I cast on seventy-eight stitches, and knit back and forth in plain garter-knitting, and finished the ends with a tied fringe.

Somehow those soft wool things always appealed to me for use both in summer and winter. I had a lovely square of fine flannel with pale blue half-moons worked in it. This I hemmed, and crocheted seven rows of knot edge around it. It was so much admired that I kept on making them until the number had reached seventeen at the last count, and still they are called for.

A small vest to wear under a walking-coat can be knitted in blocks, four stitches one way and four ribbed, until four rows are made, then alternate the stitches. It can be in the shape of a three-cornered handkerchief brought down to a belt.

Make your own children's hoods instead of letting them wear some of the atrocities for sale in the stores. The hoods that are bought have neither warmth nor wear in them.

A pretty boa for a small girl can be made of white Shetland floss knit in tufted stitch, making the loops small to begin with, and tufted toward the middle. Of black the boa would look well for an older person.

Try using the spare moments for trifles, and you will find how trifles count up.

CHRISTIE IRVING.

2

A NICKEL SAVED IS A NICKEL EARNED

Dressed-kid gloves give longer service than suede ones.

When a black-straw hat gets rusty give it a dressing of liquid shoe-blackening.

Be sure to buy hose of ample length, and to rim the heels before they are worn.

Always sew shoe-buttons through the holes in which they were first fastened.

Keep your parasol and umbrella unstrapped and standing on the end of the handle.

If shoes that have been worn through the day are laid on the side at night they will dry out much better than if stood on the sole.

Reinforce all new shoe-laces with silk twist by sewing them lengthwise in running stitches three or four times, stretching the lace to its extreme length with every line of stitching.

Reinforce the knees of children's hose with a round or oval-shaped piece cut from old hose of the same color, and neatly cross-stitch to the wrong side of the hose with cotton thread.

Give added length of days to kid and other leather shoes, as well as keep them black and soft, by rubbing often with a little vaseline on a soft cloth. Always first dust them thoroughly.

Buy linen huckaback by the yard, and make your bedroom towels. A plain hand-made hem is not so decorative as a hem-stitched one, but it wears longer than either that or a fringe finish.

Buy strong seersucker rather than sleazy five-cent gingham for kitchen-work aprons. It costs precisely as much to make the latter, and they will not wear one third as long or look anything like as well.

Buy ribbon and lace for trimming your summer gowns, dress-shields, hose and handkerchiefs, as well as shoe-laces, thread, needles and pins of various sizes and sorts, by the whole piece or the dozen at a wholesale jobbing-house.

KATHERINE B. JOHNSON.

2

EVENING ENTERTAINMENT

With the advent of long winter evenings the young people and some older ones think of parties and make plans to entertain their guests. Each one wants something a little newer and more novel than her neighbor's last one. "If I could only find that piece I read last week," says one; or, "There was such an interesting entertainment described in the magazine not long ago." But of course the paper or magazine is not to be found when wanted.

Here is a new idea. When one finds something practical as well as pleasing, just cut out that article and paste it in a scrap-book prepared for the purpose. Many a bright thing is seen in a newspaper that is not preserved, and if only taken out before the paper is destroyed there will soon be a collection of games or literary sports that will afford entertainment for a number of parties. Recitations are often required. Add any poetry or prose to the scrap-book that will be of value in that line. Sometimes there is found a list of words unusually good for charades. Give those a corner, also. A witty conundrum is always relished, and one can have a nice little stock on hand by giving them a page or two in this book of ideas.

Hallowe'en, birthday or anniversary parties each has some special feature to be carried out to be a success. Save all the bright things in a scrap-book, as one finds them from time to time, and the hostess will have a resource to provide her guests with entertainment, be her parties few or many. Some plans that seem expensive can be made practical by a little change of material or decoration, and still carry out the same idea as suggested at first.

GYPSY.

[HOUSEHOLD CONCLUDED ON PAGE 19]

THE STORY OF AN OVERFLOW

By Pauline Shackelford Colyar

CHAPTER VII.



BUFORD was more given to philosophizing than had been his wont in bygone days, and he freely admitted that where Nellie was concerned he was scarcely amenable to reason. Every succeeding year brought him renewed joy in the possession of such a daughter, and knitted the tendrils of his heart more closely about her. He had grown almost childlike in his dependence upon her, and chafed under even a temporary absence from her.

"What is to become of you, Taylor," his wife would sometimes ask, "when Nellie marries and leaves the home nest?"

"I am going to try to make the home nest so attractive that she will never wish to leave it."

Mrs. Buford made a negative gesture, smiling incredulously, but did not reply. It was with this object still in view that Buford one day purchased Aubrey Hall, the grand old ancestral home of the Wilmots.

It was some half dozen miles nearer Natchez than the little farm, and would bring them in contact with different neighbors. Despite her gratification over the new home, it was not without a wretch that Mrs. Buford said good-by to the little cottage in which so many happy years had been spent; but to Nellie and Aunt Rindy the move meant unalloyed delight. Together they explored every nook and cranny about it, and as they entered one after another of the big, spacious rooms the old woman's unvarying comment, accompanied by an unctuous smile, was:

"Dis heah's what I be'u use ter. Dis heah's like whar I wuz fotch up, 'mongst de sho-nuff quality."

"The plantations about here are more extensive, and in consequence the dwellings are further apart," explained Buford one morning while discussing the new home with his wife and daughter. "But we will try not to be lonesome, for whenever we choose we can bring our friends to us; we certainly have room enough and to spare."

"What place is that over yonder?" queried Nellie, indicating a white house that was faintly discernible through the trees.

"The Oaks. It belongs, I believe, to a young fellow who is finishing his education in Europe. It has been vacant a number of years, and the negroes stand in wholesome awe of it—declare it's haunted."

"Only think of being in such close proximity to a real ghost," exclaimed Nellie, clasping her hands rapturously. "I don't know whether this one is hospitably disposed or not, but I think I will go over soon and explore for myself."

"Better take Aunt Rindy and some of her 'kunjer' charms along with you," laughed the mother.

Nellie was not long in putting her threat to visit the haunted house into execution, and so ideal a spot did she find it that it soon became one of her favorite retreats. In point of architecture it was almost a duplicate of Aubrey Hall, but the silence, unbroken save by a medley of bird-notes, the tangle of vines, the riot of bloom in the neglected old garden, endowed the place with a charm peculiarly its own.

It was after several weeks' undisturbed enjoyment of the place that she came home one day with sparkling eyes, glowing cheeks, and a wonderful adventure to relate.

"Oh, father, mother, you could never in the world guess what has happened!" she cried, seating herself upon the top step, and conjointly addressing her parents, who sat on the front veranda.

"Then it is hardly necessary to try," said her father, looking at her admiringly. Her broad-brimmed straw hat had slipped from her head, and hung by its ribbons; fluffy little curls clustered about her brow, and a roguish dimple played hide and seek in one of her cheeks. She had never looked prettier.

"It was just like a chapter out of a novel," the girl went on, enthusiastically. "I had been wandering about the garden over there (indicating by a gesture The Oaks), but after awhile I sat down on a rustic bench, and was listening to a mocking-bird singing on the top of a crape-myrtle near by, when I heard approaching footsteps, and turning, found a handsome young man at my side. For a moment I could hardly credit the evidence of my own eyes, and my heart almost stood still from sheer astonishment; but his voice was low and soft, and his words most assuring."

"But what right had he there?" demanded the father, far from pleased at this turn of affairs.

"What right had he?" echoed Nellie, in droll mimicry of her parent. "Why, father, he had a thousandfold better right to be there than I, considering that he is the owner of the plantation."

"You don't mean it!" exclaimed Mrs. Buford. "That was indeed a veritable adventure."

"And only listen," continued the daughter. "He has just reached his majority, and has come here to live. Won't it be lovely to have such a neighbor!"

"Don't be too sure of that, little girl," remarked Buford. "An oily tongue and a good-looking face are not the only requisites to a gentleman. How long has he been abroad?"

"He has been in Europe ever since his father's death, about eight years ago. You know he inherited this place from a cousin, and has never lived here before."

"He was communicative, to say the least of it," rejoined Buford.

"But it wasn't his fault," retorted Nellie. "I wanted to know about him, and he was polite enough to answer my questions; that was all."

"Poor child! This comes from her ignorance of the world," said Mrs. Buford, in an aside to her husband. "And who is this Adonis?" she added, aloud.

"Oh, his name is very prosaic and disappointing," sighed Nellie, with a forlorn little shake of her head. "John Fenimore Kirkland."

"What!" cried Buford, springing to his feet. "John Fenimore Kirkland! Undoubtedly this is the grandson of the man who killed my father in a duel when I was but a child. He bears the identical name, and now I come to think of it, his son did inherit a fortune from a cousin on his mother's side. What accursed fate ever brought us so near together? I forbid you ever again to see or speak to him."

CHAPTER VIII.

The proverbial thunderbolt from a clear sky could not more completely have subdued Nellie than did her father's sudden irate words. For a



"I FORBID YOU TO SPEAK TO HIM"

"YOU LOOK LIKE A SYLVAN GODDESS"

moment she sat dumb with astonishment, following with her eyes his retreating figure as he strode past her down the steps and away.

"I never saw him like this before," she cried, turning to her mother with wistful appeal in her glance. "I didn't know father could be so angry."

"I regret more than I can say, dear, that you should have been the innocent cause of this outburst," replied the mother, with gentle sympathy. "I myself did not dream that your father could have been so prejudiced against a stranger because of his relationship to an enemy. But this I do know, the old feud was as much a heritage to him as the plantation over there was to young Kirkland. I really doubt if either one or the other knows the cause of the duel, and it has been so long since I have heard the tragedy alluded to that I hoped the bitterness, at least, had passed away."

"But," rejoined Nellie, thoughtfully, "I am sure Mr. Kirkland does not feel any such enmity to us. I told him my name, and father's, too, and yet he was just as cordial afterward as before. In fact, the name seemed to convey no especial meaning to his mind whatever."

"His long absence from home and his foreign education may in a measure be responsible for that," came the answer. "Besides, the situation is hardly the same, anyway, for whether his grandfather was or was not to blame, he escaped with his life in the duel, and killed his adversary. Taylor's mother, it seemed, fanned the flame of his hatred throughout his boyhood, and it was his most cherished hope, upon reaching man's estate,

to avenge his father's death. Fortunately, the old man died before they ever encountered each other."

Upon the pretext of a headache Nellie kept to her room during the rest of the day, and when she met her father at the breakfast-table the next morning the storm-cloud had passed away, and he was again his natural self. Indeed, if anything, he was even more tender and considerate than was his wont, by way of compensation for his harsh words. But the shock of his anger had been so violent and unexpected that his daughter still stood a little in awe of him.

Her chief anxiety now, however, resolved itself into dread of the expected visit from her new neighbor, for with hospitable intent she had urged him to come to see her, and he had eagerly promised to do so. Under existing circumstances she did not dare mention his name again, even to her mother, and at the sound of every strange voice, every footfall on the veranda, her heart stood still, lest it might be he. She was afraid to conjecture what the consequences of a meeting between her father and the young man would be, but two, three, half a dozen days went by without bringing him, and with a sudden revulsion of feeling she began to believe that her anxiety had been all for naught. Perhaps from the first he had never meant to come, and had given his promise idly, because she showed such gratification at having him do so. This chance meeting of theirs had, of course, been merely an incident in his life, coming as he did from the busy, active world; but it had marked an epoch in hers. He was so different from the other men she had known, and in all he did and all he said there was a charm so exotic, so peculiarly his own. With yet another change of mood she wondered if he had not found the big empty house too lonely, and weakened in his resolution to remain there. Even now he might be far away. But that night when she went up-stairs to her own room she saw a light twinkling, star-like, from a window over at The Oaks.

"Well, den," rejoined the old woman, elevating her voice to make herself heard, "be sho to go down to dat tree 'long by de spring, kaze I heerd yo' pa tell Mose yistiddy to git a long cane an' thrash some off o' it for you."

"Very well," came Nellie's answer, with a parting wave of the hand. "Look for me when you see me, and don't be uneasy if I am not back early."

"Dat chile is lonesome, she is," soliloquized Aunt Rindy, with a shake of her turbaned head. "Bless de po' leetle thing, it's a shame she ain't got no young folks to soshate wid her. 'Pears like Miss Ellen an' Marse Taylor done forgit dey wuz young dey own se'v's once, an' aldough dey does set so much sto' by her dey don't 'vite nobody beah to 'muse her."

For awhile Nellie wandered aimlessly about the grove, picking here a bunch of Michaelmas daisies, there a stock of goldeurod, and clusters of bright-hued leaves from low-hanging branches. Finally, bethinking herself of Aunt Rindy's suggestion, she made her way to the designated chinkapin-tree, and found that Mose had faithfully performed his task, for the ground was abundantly strewn with the polished little nuts. It was but the work of a minute to fill the crown of her hat with them, and seating herself under the shade of the tree, she wove a wreath of the flowers and pinned the leaves at her throat and belt.

"You look like a sylvan goddess," said a well-modulated voice, and glancing up, she saw young Kirkland, hat in hand, standing in front of her. "If I were an artist," he went on, throwing himself upon the grass at her feet, "I should like to paint you just as you look now."

"You have a most astonishing way of materializing without warning," said Nellie, starting at the sudden apparition, yet flushing with pleasure at sight of the handsome young man. "I hope you haven't contracted the habit from the ghost over at The Oaks?"

"I have not yet made his ghostship's acquaintance," laughed Kirkland, "though the darkles do tell gruesome tales of his doings. So you have been gathering chinkapins," he went on, with the easy bonhomie characteristic of him. "How they bring back the days of my childhood! Why didn't you invite me to come over and help you?" He had drawn the hat up to him, and was idly running his fingers through the shining mass. But Nellie's face had grown very grave.

"You cannot, you must not ever come here again!" she faltered, avoiding his eyes as she spoke.

"What is that you are saying?" he demanded, sitting suddenly erect. "What have I done to offend you?"

"Oh, you don't understand!" cried Nellie, with a pathetic little droop to the corners of her mouth. "It isn't that you have done anything wrong, or—that I don't want to see you, but—"

"As long as you want me it shall be my greatest happiness to come," interrupted the young man, his bright, changeable face growing suddenly tender.

"But you didn't come before, and it has been a whole week since you promised me," retorted Nellie, with the petulant air of a spoiled child.

"And is that why I am to be banished perpetually hereafter? Have I sinned past all forgiveness?" he demanded, with a dreamy, half-serious smile on his face, a caressing inflection in his low, soft voice. "I did not forget my promise," he went on, without waiting for a reply. "and have been counting the hours until I might come; but I was called away on business the morning after I saw you, and returned only last night."

Nellie met the steady gaze of his eyes with a sort of rapturous wonder in her own. Her pulses were athrob with a sensation of mingled pleasure and pain.

"Oh, you don't understand," she again repeated, with returning despondency. "It is not what I wish; it is my father's command."

"Your father's command!" exclaimed Kirkland, looking the surprise he felt. "Why, how can that be? He does not know me—has never even seen me."

"But I told him your name," Nellie went on, nerving herself for the painful ordeal, "and the very moment he heard it he grew white with rage. He declared that it was your grandfather who killed his father in a duel, and forbade me ever again to see or speak to you."

"And I am made to bear the brunt of my grandfather's act!" cried Kirkland, a dash of defiance in his tone. "This is monstrous! Why, the old man died before I was born. And granting that he did kill his adversary in a duel, it was all fair and square. These meetings, to right some real or imaginary wrong, these 'affaires d'honneur,' so called, were of every-day occurrence fifty years ago."

"But my father says your grandfather shot first; that he fired before the word was given," urged Nellie, in extenuation of her parent's prejudice.

"That was a mistake," asserted Kirkland, very earnestly. "He may have been hot-tempered; he may have provoked the quarrel; he may even have sent the challenge without sufficient cause, but he never took an underhanded advantage of any man. Believe me, this sin, at least, cannot be laid at a Kirkland's door."

"And I do believe you," answered the girl, with that tender, trustful grace peculiar to her. "I am sure there must have been some misconception."

"Yes," said Kirkland, thoughtfully, "even with the best intentions things are easily perverted. I never heard my father allude to the duel but once, and that was to deplore the death of your grandfather. The Southern vendetta should have died out with the code duela."

"And now we are made to suffer for it," supplemented Nellie, almost tearfully, "we who never even saw these two old men. I was so happy that day when you told me that you were going to live at The Oaks," she went on, with a pathetic little

smile, "and all the way home I was planning how we could ride and walk together, and how often you would come to see me."

The directness of this speech left no room for ambiguity, and the rare artlessness of the speaker was far more fascinating to Kirkland than the most studied coquetry could have been. Her beautiful, dainty face was turned fully toward him while she spoke, and for a second he sat silently studying it, hearing only the insistent beating of his own heart. The sunlight still lingered in the depths of her blue eyes, and touched her bright hair, which surmounted her head like an aureole. She was perilously, irresistibly lovely, and the little blind god who had all the while been lying in ambush suddenly stormed the citadel of Kirkland's heart, leaving him to surrender at discretion.

"Then let me still come," he pleaded. "Your father must in time see the error of his course. He cannot be so unreasonable, so cruel as to condemn me for—"

"He is, coming now! Go, go—quick!" cried Nellie, springing to her feet.

"But I am not afraid to stay," urged Kirkland, quiet resolve in his tone. "Perhaps if he should see me and talk to me I might in a measure overcome his prejudice, for indeed it is so groundless as to be almost absurd."

"Oh, no; you don't understand!" persisted the girl, with tense excitement. "It has grown with his growth; it is a part of his very religion to hate the name which you hear. If not for your own sake, for mine go!"

"But it is not good-by!" avowed Kirkland, seizing her hand and pressing it with fierce, unconscious strength. "I can't leave you like this. I must—I will see you again. When? Where?"

The carriage which had been sent to the station for Mr. and Mrs. Buford was already rounding a curve of the circuitous gravel road which wound through the grove, and at the next turn would come in full view of them.

"I shall be riding, on the road to the creek," replied Nellie, almost desperate at the delay, "day after to-morrow morning, at ten o'clock."

"Then it is 'au revoir,'" said Kirkland, doffing his hat and leisurely taking his departure along the little path which ran almost parallel with the carriage-drive.

"What possessed him to go that way instead of through the woods?" lamented Nellie, as she saw him wearing the vehicle which contained her parents. "They might never have suspected his coming had he taken the least care to evade them, and now he has intentionally gone where they will come face to face with him. I suppose he considered it a lowering of his dignity to try to keep his visit a secret, and I can't make him understand how disastrous father's discovery of it will be."

She saw her father striding up and down the front gallery as she reached the house, and she had hardly ascended the steps ere he demanded, sternly, "Who was the young man we met leaving the grove?"

"It was Mr. Kirkland, from The Oaks," came Nellie's answer.

"I suspected as much when I saw him," Buford burst forth, his face flushed with anger; "but had I been sure I should have ordered him off the premises. I should also like to know why my wishes—my peremptory commands—on this subject have been so flagrantly disobeyed."

"Father," said the girl, meeting his wrathful glance calmly, "I have never seen Mr. Kirkland since the day I first met him, and he came just now without my knowledge or consent. I made known to him, however, that you objected to his being here, and asked him not to repeat his visit."

Mrs. Buford, who had gone to her room to remove her bonnet, reached the front door just as her daughter was crossing the threshold into the hall, and in time to hear her reply.

"Where are you going, dear?" she queried, with anxious concern.

"To my room for awhile," said Nellie, controlling her voice with an effort.

"Taylor," admonished the mother, when she and her husband were alone, "I think you act unwisely with Nellie in this matter. It might have an effect contrary to what you intend, for although she has been a good, dutiful child, she is far more easily governed by affection than fear."

"Ellen," retorted Buford, impatiently, "I have neither asked nor desired your advice, and for this once prefer taking my own course. Moreover, apart from all prejudice, I know nothing whatever about this young jackanapes, and he may be anything but a fit associate for Nellie."

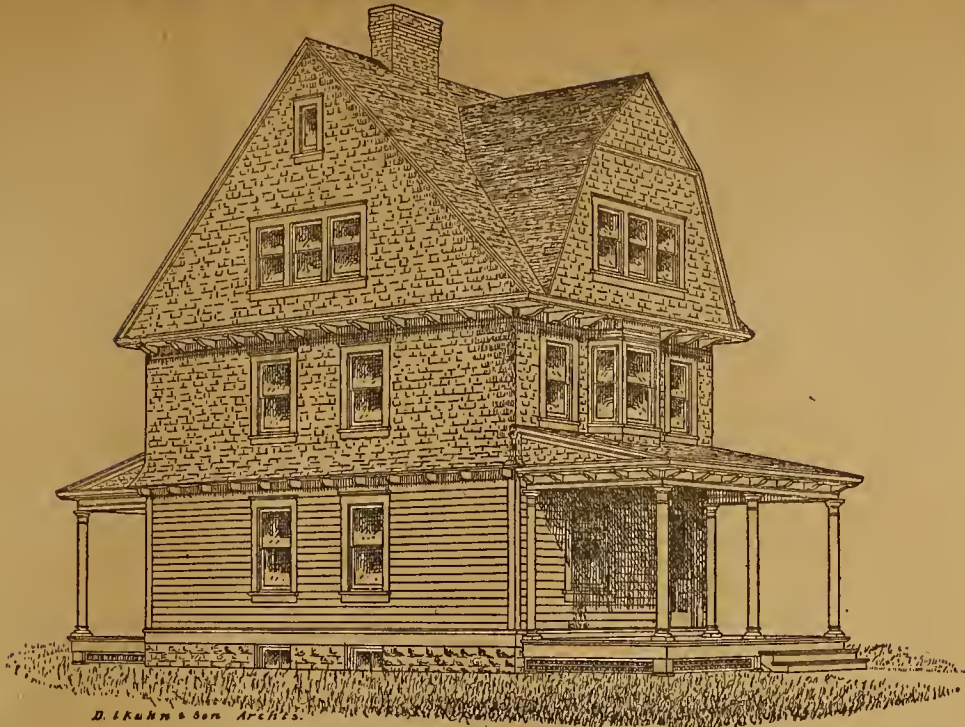
"Just as you please, Taylor," came the quiet rejoinder, "but I warn you that you are not acting wisely."

After this, as though by tacit agreement, Kirkland's name became a tabooed subject at Aubrey Hall. Not even remotely was his proximity alluded to, and a casual observer would have noted nothing unusual in the relations of the little household; but nevertheless a subtle change had been enacted, and there was an air of constraint, of unrest—an indefinable something that made itself felt rather than seen.

[TO BE CONTINUED]

DOCKING HORSES

Docking horses took its rise in the dark days when hull and bear baiting were honored by a place in the category of sport, rightly now relegated by law to the catalogue of outrage. This custom of docking was once generally applied to English roadsters, hunters and harness-horses. The only useful purpose it ever served was in the Peninsular war, when British dragoons could be most easily distinguished from French by their cock-tails. It fell into disuse with the decline of road-coaches, and we owe its unwelcome revival to their partial restoration.—Blackwood.



PERSPECTIVE VIEW OF A CHEAP RESIDENCE,

DESCRIPTION OF A CHEAP RESIDENCE

The plans of the cheap residence illustrated herewith were designed for a narrow lot and to obtain as much interior accommodation as possible for a small outlay of money. This cottage could be built in frame, and finished in very good style in soft wood, stained and varnished, for about fifteen hundred dollars. It would have a seven-foot cellar underneath the whole house, with stone walls; the cellar is provided with a flue for ventilation, or for a furnace. The first story has a very good stair-hall six feet six inches wide, with open rail and baluster stairs running from first floor to attic. The parlor or living-room is fourteen by fourteen feet. The kitchen and dining-room in one is fourteen by fourteen feet, and has a pantry connected with it six feet six inches by nine feet. There is a large cupboard in the pantry, and also one at the side of the chimney in the kitchen. The cellar stairs go down from the pantry underneath the main stairway. The porches, front and rear, are of liberal dimensions. On the second floor are two bedrooms, each fourteen by fourteen feet, one small bedroom six feet six inches by eight feet, a bath-room six feet six inches by nine feet, and an open stair-hall. The front bedroom has an oriel-window built out over the porch roof, making a cozy nook that will give a view up and down the street. The bath-room is large enough to contain a bath-tub, wash-stand and water-closet, or the room could be used for a small bedroom or a wardrobe. Open fire-places are provided in parlor and front bedroom, the back rooms being provided with flues for stoves. The attic is divided into two well-lighted bedrooms, the stairs to same landing in a small hall that gives access to both attic rooms.

This plan could very conveniently have a one-story kitchen added to the rear, with a passage through the pantry to the present kitchen, making it the dining-room. In that case the back porch would be turned the other way, running alongside of the back kitchen. This improvement could be added at any time.

The exterior has the first story clap-boarded, the second story and gables being covered with

shingles. Heavy projections at the height of the second floor and square of the building cast deep shadows, and the modillions or brackets give it an ornamental appearance.

Readers wishing further particulars as to plans or specifications can obtain them of the architect through the editor of this paper.

WHY APPLES DISCOLOR WHEN CUT

Why should apples, pears and, to a less extent, potatoes change color in the air, and only make this change when they are in their raw, uncooked state? What is the true inwardness underlying this external symptom? To simply say it is due to a process of oxidation does not convey much definite knowledge to the inquirer, and, indeed, it is only during the past few years that much progress has been made in understanding better the reason of this change of color. The latest and most thorough explanation is one lately put forward by a chemist named Lindet, and it is an explanation of considerable interest. Within the cells of the tissues which make up the fleshy part of the apple—the part that is eaten—there is produced in their jelly-like contents a certain product to which the name malase or laccase has been variously given (malase will probably be the name finally used, as laccase has already been adopted for another product); and this product belongs to a curious class of substances known as enzymes. Enzymes have only been discussed seriously of late years, and even up to quite lately much doubt has been expressed as to what their properties are, and even indeed if they had any real existence or not; however, that point is now practically settled, and, in fact, they have been isolated and examined.

Now, an enzyme is a production of the activity of the cell which has the unique power of influencing other substances in its neighborhood and yet remaining unaltered in any way itself. It can exert influence without apparently being affected by so doing. Its own constitution is stable, but it possesses power to act, even at a distance, on certain of its surroundings, and produce great

effects on the constitution of other matter, in some way not yet thoroughly comprehended. It will be seen at once that this is a very different thing from ordinary chemical action. In chemical action one substance acts on another by effecting some exchange, or producing some rearrangement of the atoms comprising both substances. In combining with another it must itself be changed according to some definite law, and only through that change can chemical action be effected. Moreover, there is a definite limit to chemical action, and when once the new combination is brought about, and a stable equilibrium ensued, then there is an end to the matter until new substances come into play.

But with enzymes the case is very different. Apparently their power of influencing is illimitable. They do not change themselves, and so they can continue to exert the influence that is peculiar to themselves for an indefinite time. There is no point of stable equilibrium in this relationship. Enzymes stand in a position of great interest nowadays, when the search among the beginnings of life is so intense, and when the effort to prove or disprove spontaneous generation—the origin of life from the non-living is so keenly maintained by chemists and biologists, for in one instance certainly where very careful and exact study has been made of an enzyme it is suggested that the substance stands midway between the organic and the inorganic, that it is the stepping-stone across the gulf which has hitherto divided the living from that which has never known life.

The particular enzyme—malase—which is found in the cells of an apple effects its work by causing some of the oxygen of the air to be transferred from the air to a substance also found within the cells—the tannin—and it is suggested that it serves, in some sort of a way, as a carrier. And the result of its influence on tannin is that the nature of the tannin is altered, and dark-colored substances, compounds of oxygen, are formed which dye the walls first pinkish, then a dull red, and finally a dirty brown. It is obvious that though the malase is probably always present in the cells, it cannot exert its influence to any purpose while the apple is whole and surrounded by a firm, clear skin, for the air cannot obtain permission until the peel is removed or the apple cut through, and hence there is no free oxygen to work with. But when the cells have been exposed the air enters, the malase transfers, in mysterious way, the oxygen, the tannin is changed in nature, and the cells are dyed with the products. It is by no means certain that the malase and the tannin must be side by side in the same cells for this effect to take place.—Selected.

APPLES

Apples were at one time underestimated; they were scarcely considered a fruit rare enough for the consideration of the epicure, unless, indeed, they formed a part of some elaborate dessert, compounded and cooked by a skilled housekeeper. Apple jellies, puddings, pies and cakes might do, but plain raw apples were fit only for school-children, vegetarians or the poor. All this is now changed, and the apple has come to its own again.

But if its flavor has been at various times slightly esteemed or discredited, at least its wholesomeness has been steadily recognized. "Apple sayings" are frequent, both in our country and in England, all of which testify in favor of the fruit. In the "west countree" there are four such:

"An apple a day
Sends the doctor away,"

is the first and briefest. Then follow, in the order of their vigor, three more:

"Apple in the morning,
Doctor's warning."
"Roast apple at night,
Starved the doctor outright."
"Eat an apple going to bed,
Knock the doctor on the head."

A little less aggressive is one of the Midlands:

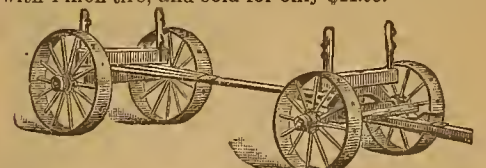
"Three each day, seven days a week—
Ruddy apple, ruddy cheek."

But more interesting than these is an old orchard verse which used to be recited on certain ancient farms on the plucking of the first ripe apples of the crop. Misfortune was supposed to follow its omission, and its utterance was quite a little ceremony, the first apple over which it was spoken being presented to a young girl, who halved and hit it before any further fruit was gathered, or at least tasted. Thus it ran:

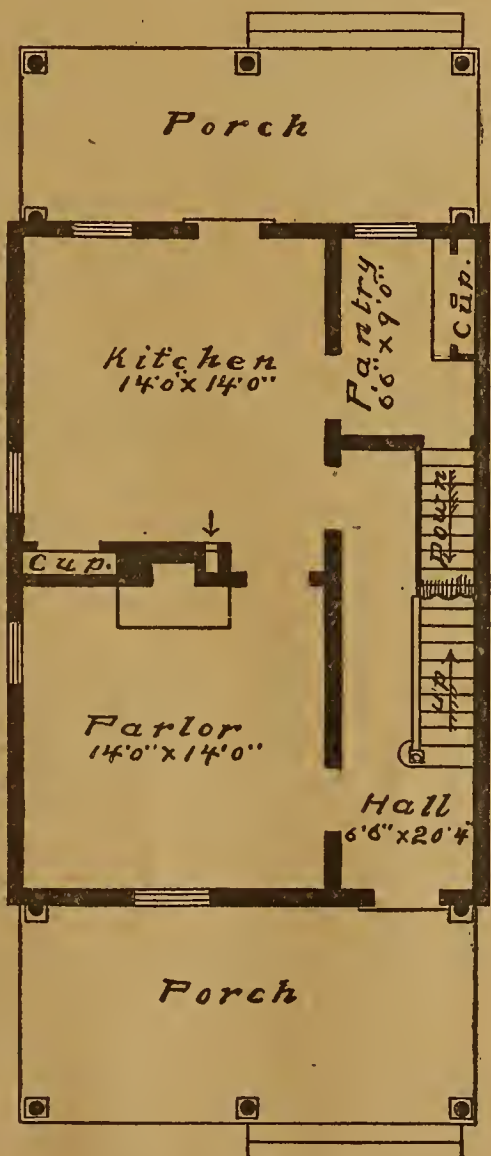
"The fruit of Eve receive and cleave,
And taste the flesh therein;
A wholesome food, for man 'tis good
That once for man was sin.
And since 'tis sweet, why, pluck and eat,
The Lord will have it so;
For that which Eve did grieve, believe
Hath wrought its all of woe—
Eat the apple!"
—The Youth's Companion.

FARM WAGON ONLY \$21.95

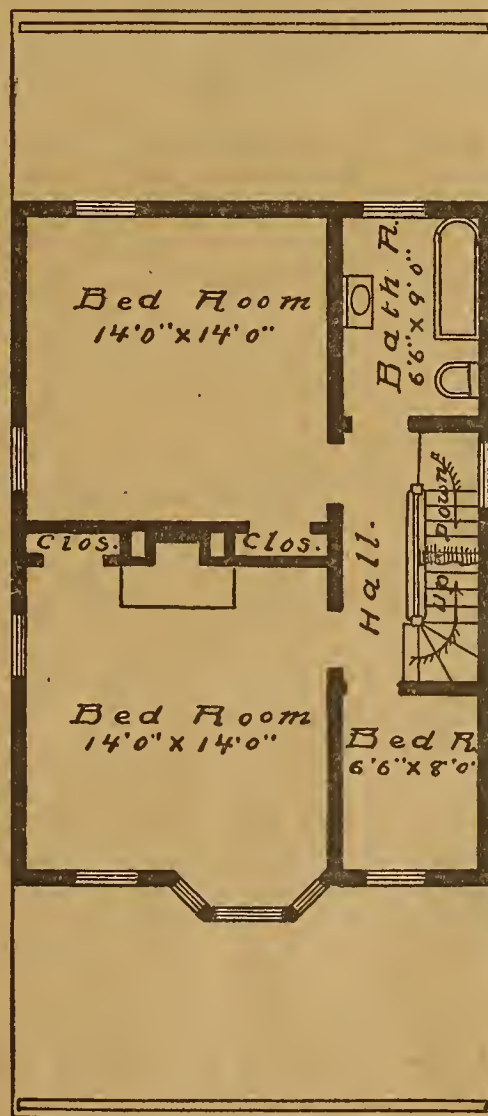
In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon that is only 25 inches high, fitted with 24 and 30 inch wheels with 4-inch tire, and sold for only \$21.95.



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THE TEMPLE OF FAME

"How far away is the Temple of Fame?"
Said a youth at the dawn of day;
And he tolled and dreamed of a deathless name,
But the hours went by and the evening came
That left him feeble, and old, and lame,
To plod on his cheerless way.

For the path to Fame is a weary climb
Up a mountain steep and high.
There are many who start in their youthful prime;
But in the battle with Fate and Time,
For one who reaches those heights sublime
Are thousands who fall and die.

The youth who had failed could never guess
The reason his quest was vain;
But he sought no other to help or bless;
He followed the glittering prize, Success,
Up the narrow pathway of Selfishness,
And this had been his bane.

"How far is the Temple of Good?"
Said a youth at the dawn of day;
And he strove, in a spirit of brotherhood,
To help and succor, as best he could,
The poor and unfortunate multitude
On their hard and dreary way.

He was careless alike of praise or blame;
But after his work was done,
An angel of glory from heaven came
And wrote on high his immortal name,
Proclaiming this truth, that the Temple of Fame
And Temple of Good are one.

For this is the lesson that history
Has taught since the world began;
That those whose memories never die,
Who shine like stars in our human sky,
And brighter grow as the years roll by,
Are men who have lived for man.

—Denver News.

READING CHARACTER BY EYES

Blue eyes are said to be the weakest. Uprturned eyes are typical of devotion. Wide-open eyes are indicative of rashness. Side-glancing eyes are always to be distrusted. Brown eyes are said by oculists to be the strongest. Small eyes are commonly supposed to indicate cunning. The downcast eye has in all ages been typical of modesty. The proper distance between the eyes is the width of one eye. People of melancholy temperament rarely have clear blue eyes. Eyes in rapid and constant motion betoken anxiety, fear or care. Eyes with long, sharp corners indicate great discernment and penetration. The white of the eye showing beneath the iris is indicative of nobility of character. Gray eyes turning green in anger or excitement are indicative of a choleric temperament. When the upper lid covers half or more of the pupil the indication is of cool deliberation. An eye the upper lid of which passes horizontally across the pupil indicates mental ability. Unsteady eyes, rapidly jerking from side to side, are frequently indicative of an unsettled mind. It is said that the prevailing colors of eyes among patients of lunatic asylums are brown or black.

Eyes of any color with weak brows and long, concave lashes are indicative of a weak constitution. Eyes that are wide apart are said by physiognomists to indicate great intelligence and tenacious memory. Eyes of which the whole of the iris is visible belong to erratic persons, often with a tendency toward insanity. Wide-open, staring eyes in weak countenances indicate jealousy, bigotry, intolerance and pertinacity without firmness. Eyes placed close together in the head are said to indicate pettiness of disposition, jealousy and a turn for fault-finding.

When the under arch of the upper eyelid is a perfect semicircle it is indicative of goodness, but also of timidity, sometimes approaching cowardice.

All men of genius are said to have eyes clear, slow-moving and bright. This is the eye which indicates mental ability of some kind, it does not matter what. Blue eyes are said to be effeminate, but this is a mistake, for blue eyes are found only among Caucasian races, and the white races rule the world.

HEATING HOUSES IN KOREA

Every now and then there are opportunities for learning how immeasurably better than we the ancients did some things which are now supposedly done in excellent ways, and even at the present time, in quarters remote from highly developed civilization, results of various kinds are sometimes obtained by ways and means which are admirably suggestive of the fact that it behooves us to be modest in our claims to superior accomplishments.

In a recent United States consular report, for example, made by Mr. Horace N. Allen, of Seoul, in Korea, an account is given of the Korean method of heating dwellings, which, in point of principle at least, is much ahead of any of the heating systems in every-day use all over Europe and America. In building their houses the Koreans lay down a system of flues where the floor is to be. These flues begin at a fireplace, which is usually placed in an outer shed or connecting closed alleyway. From the fireplace the flues extend in a more or less curved direction, like the ribs of a round fan, to a trench at the rear of the room, which in turn opens into a chimney, usually located some distance from the house. Flat flagstones are then placed carefully over these flues, and the whole cemented over, and finally covered with the thick oil-paper for which Korea is noted. This paper keeps smoke from entering the room, and a little straw or brushwood, used in the fireplace for cooking the rice, serves to heat the stone floor, and gives an agreeable warmth, which lasts until the time of the next meal. Two heatings daily serve to give a comfortably warm floor, upon which the inmates sit in the daytime and sleep at night. The fuel burned is a mixture of fine coal-dust and wet red clay made into balls by hand.—Cassier's Magazine.

"Housework is hard work without Gold Dust"

Washing Dish Cloths

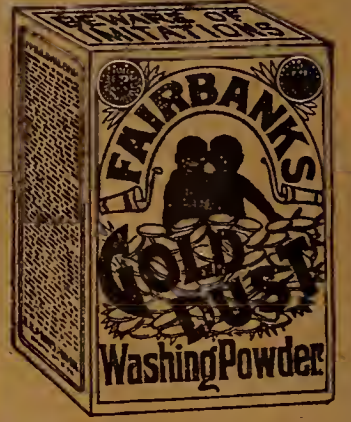
Kitchen cloths must of course be washed daily, otherwise they harbor grease and odors and become unhealthy. They should be made of knit-crochet-cotton, in a square of suitable size. When you wash them, if you will add a table-spoonful of

Gold Dust Washing Powder

to the hot water it will cut the grease and clean them in half the time; dry them out in the sunshine and air.

The above is taken from our free booklet "GOLDEN RULES FOR HOUSEWORK" Sent free on request to

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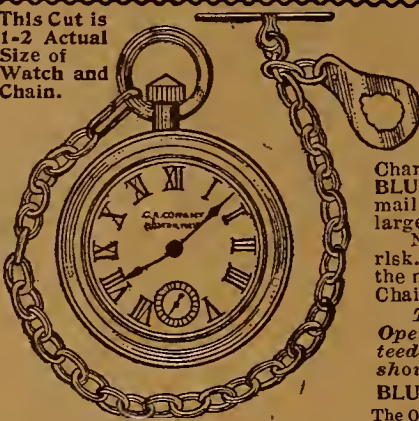
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No money required. We send the Blaine at our own risk. You go among your neighbors and sell it. Send us the money that you get for it and we send you the Watch, Chain and Charm, prepaid.

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The Old Reliable firm who sell honest goods and give Valuable Premiums.

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The season approaches when one's thoughts turn toward a place where the inconveniences of a Northern winter may be escaped. No section of this country offers such ideal spots as the Gulf Coast on the line of the Louisville & Nashville Railroad between Mobile and New Orleans. It possesses a mild climate, pure air, even temperature and facilities for hunting and fishing enjoyed by no other section. Accommodations for visitors are first-class, and can be secured at moderate prices. The Louisville & Nashville Railroad is the only line by which it can be reached in through cars from Northern cities. Through car schedules to all points in Florida by this line are also perfect. Write for folders, etc., to JACKSON SMITH, D. P. A., Cincinnati, Ohio.



The choicest designs ever issued for the effective decoration of any or every room in the house will be found in our free sample book of

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All prices from 6 cents to \$3.00 a roll. Manufacturers stock of 3,500,000 pieces to select from. Save 25 per cent by buying direct from factory. Agents wanted everywhere.

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This is the secret of the wonderful curative power of the Buckeye Folding Bath Cabinet. All the beneficial effects of Turkish, Vapor and Medicated Baths may be had at home at a trifling cost. Properly taken, every pore is opened and the medicated vapors are naturally absorbed, strengthening the entire body. The Buckeye Bath Cabinet is manufactured at our own factory under personal supervision. The Cabinet is supplied with a door and an opening for the arm, convenient for bathers in removing perspiration from the face or otherwise adding to their comfort. It is absolutely germ-proof and needs no care, and is light and simple in construction. We sell on approval to be returned at our expense if not satisfactory. Price \$5.00, including Alcohol Safety Stove and Recipes for all kinds of medicated baths. LADIES should have our Complexion Steamer, used in conjunction with the Cabinet. The only sure method of drawing away all impurities, leaving the skin clear and soft as velvet. Price \$1.00 extra. AGENTS and SALESMEN—We want agents and salesmen to represent us in every section and we offer money-making terms to active men and women. FREE—Descriptive Booklet and testimonials to all who write. Address MOLENKOPP & McCREERY, 987 Dorr Street, Toledo, Ohio.

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We furnish a quality sample of each grade of Carpet for a 2-cent stamp. We make 15 different grades. Price of samples may be deducted from your Carpet order.

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THINGS THAT NEVER DIE

The pure, the bright, the beautiful,
That stirred our hearts in youth,
The impulses to wordless prayer,
The streams of love and truth;
The longings after something lost,
The spirit's yearning cry,
The striving after better hopes—
These things can never die.

The timid hand stretched forth to aid
A brother in his need;
A kindly word in grief's dark hour,
That proves a friend indeed;
The plea of mercy softly breathed,
When justice threatens high,
The sorrow of a contrite heart—
These things shall never die.

The cruel and the bitter word
That wounded as it fell;
The chilling want of sympathy
We feel, but never tell;
The hard repulse that chills the heart
Whose hopes are bounding high,
In an unending record kept—
These things shall never die.

Let nothing pass, for every hand
Must find some work to do;
Lose not a chance to waken love—
Be firm, and just, and true;
So shall a light that cannot fade
Beam on thee from on high,
And angel voices say to thee,
These things shall never die.

—Charles Dickens.

RELIGION AND EDUCATION IN THE TRANSVAAL

IN STUDYING the character of the Boers, more than usual importance must be attached to the religious elements of their life. In a German contemporary we find a clear account of these and of their educational ideas, an account which is all the more valuable because it comes from a German and friendly source. We reproduce the leading particulars of this account:

In matters of education the Boers have not been as progressive as they could have been, nor are their ideas in this respect up to the standards of the times. A common education among them consists in learning to read, to write, and to sing the church hymns. In general they meet educated people with mistrust. According to the law of 1892 it is made the duty of parents to provide for the education of their children. The state confines itself to aiding the schools established by private enterprise, and in general sees to it that the young people receive a Protestant training. In the middle schools such additional subjects are taught as history, geography, geometry and natural science, and by special request of parents one of the living foreign tongues. In 1895 there were fifty-five public schools in the cities and 367 in the villages, with an average attendance of 7,217 pupils, toward the education of which the state contributed about \$18,000.

The state church of the Transvaal is the Dutch Reformed, and to it belong the greater portion of the population, fully 50,000.

Not only the president, but also the members of both legislative branches must belong to the Protestant church. The meetings of the Volksraad, or Parliament, must, according to law, be opened and closed with prayer. With the exception of a few special kinds of labor it is strictly forbidden to do any work on Sunday. In general the Boers are characterized by a pronounced traditional piety of the Reformed type. It is chiefly nourished by the study of the Old Testament, especially of the historical books, and loves to employ and imitate Old-Testament examples and pictures. In a genuine Boer family the Bible lies upon the center-table, and every day is opened and closed with family prayer. A collection of sermons is taken along when on a journey, and public services are attended regularly even if at great sacrifice and trouble. As the farms are large and the people widely scattered, public services can often be held at irregular intervals only, as one pastor often has charge of hundreds of square miles of territory. Great interest is accordingly attached to the regular quarterly meetings, when not a member of the family except the sick fails to appear. On such occasions a vast multitude of wagons surround the church, and the celebration of the Lord's Supper is frequently followed by services that last for several days. At the same time such meetings of the whole neighborhood

are utilized for buying and selling, for the consummation of marriage engagements and weddings, and dancing and other amusements are not lacking. The Boer regards himself as specially honored if the dominie, for whom he has great respect, visits his house. Then the neighbors are called in, and public services are held. The orthodox Boers are divided into two communions, the Afgeschedene or Doppers, who in their services make use of no hymns but the Psalms, and who in general are of a stricter deportment than the second sect, who make use of other hymns. President Kruger belongs to the Doppers, and there can be no doubt of his earnest Christian convictions. He is profoundly convinced of the fact that the people of God in the Old Testament have found their modern successors in his own people, and he speaks to his nation as would an Old-Testament prophet.

In general the Boer shows very little religious depth; his religion is more of external traditional observance, strongly controlled by legalistic features. Especially to be regretted is this superficial religiousness when seen in the treatment which the Boer accords the native blacks. This is no doubt the darkest blot on the history of these people, and explains their lack of sympathy and cooperation in the mission work carried on by other branches of the Christians throughout Southern Africa. In earlier years their maltreatment of the natives was worse than it is now, and was characterized by a deep cruelty. Their prejudice against the blacks is all-powerful. They call them all "Kafirs," and bunch them all together as the race of Ham, whose divinely appointed destiny it is to serve and to die. In support of their position they appeal to the Calvinistic doctrine of predestination. Many of them have maintained, and still maintain, that it is contrary to the decrees of God's election to bring to these the word of salvation.—The Literary Digest.

"HAVING DONE ALL, STICK!"

After once choosing your occupation, however, never look backward; stick to it with all the tenacity you can muster. Let nothing tempt you or swerve you a hair's breadth from your aim, and you will win. Do not let the thorns which appear in every vocation, or temporary despondency or disappointment, shake your purpose. You will never succeed while smarting under the drudgery of your occupation if you are constantly haunted with the idea that you could succeed better in something else. Great tenacity of purpose is the only thing that will carry you over the hard places, which appear in every career, to ultimate triumph. This determination, or fixity of purpose, has a great moral bearing upon our success, for it leads others to feel confidence in us, and this is everything. It gives credit and moral support in a thousand ways. People always believe in a man with a fixed purpose, and will help him twice as quickly as one who is loosely or indifferently attached to his vocation, and liable at any time to make a change, or to fail. Everybody knows that determined men are not likely to fail. They carry in their very pluck, grit and determination the conviction and assurance of success.—Success.

THE VALUE OF REVIEWS

A New York merchant, who has made his mark by winning the fortune that many count as success in business, is ready with advice for young men ambitious to follow in his course. He offers a series of rules brief as proverbs. Some of them are peculiar, but the soundness of most of them no one would question. Few of them contain anything novel. Much of their value is to be found in these two: "When you retire think over what you have been doing during the day;" "Read over the above maxims at least once a week."

The secret of success is not so much in having a magic set of rules as in following what one has. Mistakes and failures are not chiefly for want of knowledge of right principles. The trouble is that the principles are not kept fresh by frequent thought of them. Almost every one has a large capital of experience. It is quickly won, often at a great cost. But some use their capital, some do not. We need to make more use of the lesson.—Selected.

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adjusted, patent regulator, stem wind and stem set, genuine **NATIONAL SPECIAL** movement Ladies' or Gents' size. **WARRANTED 20 YEARS.** 14K Gold plate hunting case, elegantly engraved. Fit for a king. No better watch made. Must be seen to be appreciated. Special Offer for next 60 days, send your full name and address and we will send this watch COD with privilege to examine. If found satisfactory pay agent \$5.85 and express charges. A guarantee and beautiful chain and charm sent free with every watch. Write at once as this may not appear again. **NAT'L MFG. & IMPORTING CO., 334 Dearborn St., B 344, Chicago, Ill.**

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Can buy a **WORLD'S WASHER** on trial and no money paid until it is perfectly satisfactory. Washes easy. Clothes clean, sweet and white as snow. Child can use it. I pay freight. Circulars free. **C. E. ROSS, 10 Clean St., Lincoln, Ill.**

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MUSIC IN THE AIR!

I'd leave my happy home for You: She was happy till she met you; I guess I'll have to telegraph my Baby: Mid the Green Fields of Virginia: The Girl I loved in Sunny Tennessee.
Just as the Sun went Down: Just One Girl: My Honolulu Lady: She was Bred in old Kentucky: My old New Hampshire Home: All I want is my Black Baby Back: Break the News to Mother: I don't like no Cheap Man: The Bowerly's not the Same: On the Banks of the Washash: I want my Lulu: Get Your Money's Worth: Hot Time in the Old Town Tonight: The Honolulu Dance: If they'd only fought with Razors in the War: Our new song books contain all the above songs also; many others. We will send sample song book with one piece sheet music and catalogue of 1600 songs for 10 cents. We will also send you a \$1.00 Due Bill which entitles you to \$1.00 worth of goods Free from our list. Song Supply Co., 869 Dearborn St., Dept F-44 Chicago.

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plated Bracelet sent free to any one for selling 5 sets of our LADIES for 25c. a set (each pin level.) Simply send your name & address & we will send you the money. The chain is the lock opens with a dainty little key. We trust you & will take back all the pins you cannot sell. Write to-day.
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WANTED MAN with horse and buggy, to sell Pasture Stock Food. Salary \$15.00 per week and 10 per cent on all sales. Farmer preferred. Previous experience not essential. **PASTURE STOCK FOOD** is the greatest discovery ever made in practical and scientific feeding, and is sold on an absolute guarantee. Steady, permanent trade easily established. Sample bag, sufficient for two weeks' feeding, free. Send 25 cents in stamps or silver to cover express charges. **PASTURE STOCK FOOD COMPANY, 301 Boyce Building, Chicago.**

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and will gladly tell you all about my work. It's very pleasant and will easily pay \$18 weekly. This is no deception. I want no money and will gladly send full particulars to all sending 2c. stamp. MRS. A. H. WIGGINS, Box 20 Benton Harbor, Mich.

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MOTHER GOOSE UP TO DATE

There was a man in our town
Invested all his health,
With madly avaricious aim,
To win the goal of wealth;
And when the same he had attained,
With all his might and main
He vainly lavished all his wealth
To get his health again.
—Collier's Weekly.

THE NON-PRODUCER

—his world is but a fleeting show;
The kicker, so they say,
Performs no work to make things go,
And doesn't pay his way.
—Washington Star.

PANTOMIME DIFFICULTIES

SOME people can hold a conversation in pantomime, and some cannot. Of the latter class is an army nurse, recently returned from Cuba, who vows that she will never again go to a country whose language she does not understand.

It was before hostilities had come to a definite end that she was startled one day by the unexpected visit of her Cuban laundress. The woman was intensely excited. Anxiety sat on her brow, and sorrow dwelt in her eyes. She gesticulated and she talked.

The nurse knew not a word of what she said, but the pantomime filled her with terror. The Cuban's hands seemed to speak of an attack on the hospital—of wounded men butchered and nurses cut to ribbons. The nurse was frantic. She must know the worst.

In the hospital was an officer very ill with typhoid fever. She knew he understood Spanish. Only in a matter of life or death would she disturb him, but this was obviously a matter of life or death.

She led the Cuban woman to his bedside, and there the story was repeated. The officer listened intently. The nurse held her breath. The Cuban ceased, and the sick man turned his head on the pillow.

"She says," he whispered, feebly, "she says the stripes in your pink shirt-waist have run, and she doesn't know what to do with it."—Exchange.

FIRST SCORE

"Mary," said Mr. Thomas when a silence, fraught with unpleasant meaning, had followed his first altercation with his young wife.

"Yes?" said Mary, interrogatively.
"When a man and his wife have had a difference," said Mr. Thomas, with a judicial air, "and each considers the other at fault, which of the two do you think should make the first advance toward reconciliation?"

"The wiser of the two," said Mrs. Thomas, promptly, "and so, my dear, I'll say at once that I am very sorry."

It occurred to Mr. Thomas that it might have been as well for him to have made the first advance, after all, but he thoughtfully refrained from saying so.

NOT TO BE CAUGHT NAPPING

"I'm sorry about this war in South Africa."
"It doesn't affect you personally."
"Yes, it does. Half a dozen girls have told me it was going to make diamonds more expensive. Maybe it was my egotistic imagination, but every one of them seemed to have a 'now-is-the-time-to-buy-engagement-rings' look in her eye.—Stray Stories.

THE RETORT GALLANT

"Why did you place such a tough fowl before me?" asked the indignant lady patron of a waiter in a down-town restaurant.
"Age before beauty always, you know, madam," was the gallant reply.
And then she paid her bill without a murmur.

ANTI-EXPANSIONIST

"Mildred," said her father, "I am willing that the young lieutenant who comes here should make a coaling-station of my house this winter, but if ever he hints at annexation, you can tell him that I am unalterably opposed to it."

SHE KNEW

Mrs. Cumso—"Your husband dresses very quietly."
Mrs. Cawker—"Does he? You ought to hear him when he breaks a shoe-string or steps on a safety-pin."

OUR LANGUAGE

Tommy—"Pop, a playwright is a man who writes plays, isn't he?"
Tommy's father—"Yes, my son."
Tommy—"Then is a wheelwright a man who writes bicycle news?"—Philadelphia Record.

AN ENGLISH HIRED MAN

Here is an advertisement from an old copy of an English provincial journal:

"Wanted, for a sober family, a man of light weight, who fears the Lord and can drive a pair of horses. He must occasionally wait at table, join the household prayer, look after the horses, and read a chapter of the Bible. He must, God willing, arise at seven o'clock in the morning, and obey his master and mistress in all lawful commands; if he can dress hair, sing psalms, and play at cribbage, the more agreeable. Wages fifteen guineas a year."

HER POSITION

When she had finished her remarks relative to something he had done that did not meet her approval, he spoke.
"I don't see why you should want woman suffrage," he said; "you already hold office."
"What office?" she demanded.
"Speaker of the house," he replied.—Chicago Post.

A GENTLE HINT

"I love to pop corn," he said, as he sat before the open grate and did it.
"It seems to me, Mr. Slowleigh," she replied, "that you confine your popping ability to an unnecessarily narrow field."
And then he tumbled.—Baltimore News.

CHRISTMAS MORNING, 1999

Willie—"Just see my new hobby—automobile."
Jack—"That's nothing! Look at this bladeless knife and triggerless rifle."
Alice—"But you should see my pointless story-book. What have you got, papa?"
Papa—"A penniless purse."—Life.

HORSE FARE

Hewitt—"I had a nightmare the last time I was at this hotel."
Jewett—"What of it?"
Hewitt—"I foolishly mentioned it to the clerk the next morning, and he charged me for the use of one horse."

HINTS TO LITERARY ASPIRANTS

Never write on more than one side of the paper; it saves ink.
It is not always necessary to inclose stamps for the return of your manuscript. If you read it carefully you will see this.—Judge.

ONE THING NEEDFUL

He—"Man has a perfect organ of speech."
She—"Well, so has woman."
He—"Oh, no, she hasn't. Hers is made without stops."—Chicago News.

HER GRIEVANCE

A Texas mother with five grown daughters defines a bachelor as a "miserable coward who has lost the opportunity of a lifetime."

A DISTINCTION

Jones—"Does your daughter play the piano?"
Sharpe—"She says she does, but it sounds more to me as if she were working it."

THINGS WISE AND OTHERWISE

Dreams go by contraries. The young woman who seems to be a dream of loveliness oftentimes proves no exception to the rule.
The race is not always to the swift, although the man who leads a fast life is likely to reach the end of his course far ahead of his staid and methodical competitor.
You can't make a silk purse out of a sow's ear; but then silk purses are no longer the vogue, and persons possessed of a pair of porcine auricular appendages have no difficulty in finding other and more serviceable uses for them.

There is many a true word spoken in jest. This is the only way the truth ever proceeds from some persons' mouths. So they must not be blamed for doing what is contrary to their nature and instincts.—Boston Transcript.

The longest way around is the safest way home. For this reason, doubtless, there are many persons who never indulge in a direct path to the truth. By choosing a roundabout course they probably expect to arrive at it eventually in perfect safety.

Brag is a good dog, but Holdfast a better. This depends upon the point of view. Most persons would rather have a dog brag—that is to say, bark—than to hold fast to what he has seized upon, if they happen to be the instrument upon which he sharpens his teeth.

TWO FINE SPECIMENS Of Physical Manhood

No form of athletic exercise demands such perfect physical condition as prize-fighting. Every muscle in the body must be fully developed and supple, and the heart, lungs and stomach must act to perfection.

Whether we endorse prize-fighting or not, it is nevertheless interesting to know the manner by which men arrive at such physical perfection.

James Jefferies, the present champion heavy weight of the world, and his gallant opponent, Tom Sharkey, in the greatest pugilistic encounter that has ever taken place, both pursued much the same course of training, and the first and most important part of this training was to get the stomach in condition, and keep the digestion absolutely perfect, so that every muscle and nerve would be at its highest capabilities.

This was not done by a secret patent medicine, but both of these great pugilists used a well-known natural digestive tablet sold by druggists under name of Stuart's Dyspepsia Tablets and composed of the digestive ferments which every stomach requires for healthy digestion.

Champion Jefferies says: "Stuart's Dyspepsia Tablets prevent acidity, strengthen the stomach and insure perfect digestion. They keep a man in fine physical condition." Signed, James J. Jefferies, champion of the world.

The gallant fighter, Sharkey, says: "Stuart's Dyspepsia Tablets remove all discomfort after eating. They rest the stomach and restore it to a healthful condition. I heartily recommend them." Signed, Thos. J. Sharkey.

The advantage of the daily use of Stuart's Dyspepsia Tablets is that they keep the people well and ward off sickness and are equally valuable to well persons as to the dyspeptics. Another advantage is that these tablets contain no cathartics, or poisons of any character, but simply digestive ferments which are found in every healthy stomach, and when digestion is imperfect it is because the stomach lacks some of these elements, and Stuart's Dyspepsia Tablets supply it.

They are no cheap cathartic, but a perfectly safe and efficient digestive, and the demand for them is greater than the sale of all other so-called dyspepsia cures combined. No remedy could possibly reach such a place in public esteem except as the result of positive merit.

Full-sized packages are sold by all druggists at 50 cents, and the best habit you can possibly form is to take a Stuart's Tablet after each meal. They make weak stomachs strong and keep strong stomachs vigorous.

Are You a Cog?
If you are a workman or a clerk, and feel that you are like a cog in a wheel, going always but making no progress, write and learn how to prepare yourself for a really desirable position.
Change Your Occupation
We give complete courses by mail in Electrical, Mechanical or Steam Engineering, Architectural or Mechanical Drawing, Surveying, Civil Engineering, etc. We will advise you free. The International Correspondence Schools, Box 859, Scranton, Pa.

\$25.00 IN GOLD GIVEN AWAY.
Change Your Occupation
Magnificent Solid Silver plate Bracelet, beautiful Solid Gold filled ring set with 2 Regent Diamonds and handsome Emerald, American Watch, Antoharp, or a Sewing Machine Free to any one selling 18 packages of our **Bouquet Flower Seed Collections**. (25 different kinds in each collection) a Whole Flower Garden all for 10 cents. "Sell like hot cakes" and you can earn one of these beautiful presents in one day. Order quick. No money required in advance. Send for Seeds, sell the 18 Packages sent you, and return us \$1.50. Then we will mail you the **Beautiful Present** promptly. Address **U.S. SEED CO., Box 1540, Boston, Mass.** Mention Farm and Fireside.

EARN A BICYCLE
High Grade Bicycles
BY SELLING BAKER'S TEAS, ETC., among your friends. A total of \$20.00 to \$100.00 worth for a Bicycle. Watches, Furniture, Crockery, Cameras for smaller sales. Express prepaid. Write for catalogue, order-sheet, etc. **W. G. BAKER (Department 87), Springfield, Mass.**

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gingham, 3/8c; seamless socks, 3/8c; blueing, 1c; soap, 1c; store-polish, 2c; gold rug, 1c; jeans, yard, 9/16c; spectacles, 3c; men's jeans pants, 49c; boy's pants, 14c; men's \$2.25 shoes, 99c; men's shirts, 16c; dippers, 2c; knives, 3c; shoe-blacking, 1c; men's wool socks, 9/16c; box tacks, 1c; men's fine suits, \$3.99; rice, per pound, 2c; oatmeal, 3/8c; smoking-tobacco, 3/8c. Send for price-list. **C. A. WILLARD CO., Chicago, Illinois.**

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Cascarets Candy Cathartic Did It, and Record a Phenomenal Victory—Five Million Boxes Sold Last Year

From every part of America comes the news that sufferers from constipation have found relief in Cascarets Candy Cathartic, the wonderful modern scientific laxative and intestinal tonic.

"I have been using Cascarets for headache and constipation, and have received great benefit from them." Mrs. M. Gabler, 512 Larrabee Street, Chicago.

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"I am using Cascarets, and have never found anything so satisfactory." Mrs. C. W. Durrant, 57 Emerson Street, Buffalo, N. Y.

"I have taken Cascarets, and cheerfully recommend them to all my friends." Mrs. G. J. Gradwell, Frugality, Pa.

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"I have used Cascarets; there is nothing better for constipation." Benj. Passage, Knightstown, Ind.

"Cascarets are all right. They have cured me of constipation, and I never expected anything would." Charles H. Nye, Lock Box 205, Cincinnati, Ohio.

"I am so thankful for your Cascarets. They are better than any medicine I ever used." Mrs. M. Rew, Lacelle, Iowa.

"I do not hesitate to say that Cascarets is the very best medicine ever placed before the people." Andrew Woodruff, Daysville, N. Y.

"Cascarets are the best cathartic I ever used." Tom Holt, Wellwood, Manitoba.

"I have tried your Cascarets, and I want to tell you they are just splendid." John Wiegink, Box 961, Allegan, Mich.

We could fill the whole paper with expressions like the above. Thousands of similar recognitions of the merits of Cascarets have been volunteered and prove that this delightful laxative, so pleasant of taste, so mild and yet effective, has secured a firmly established place in the hearts of the people.

Go buy and try Cascarets yourself to-day. All druggists, 10c., 25c., 50c. Booklet and sample free. Address Sterling Remedy Company, Chicago and New York.

This is the CASCARET tablet. Every tablet of the only genuine Cascarets bears the magic letters "CCC." Look at the tablet before you buy, and beware of frauds, imitations and substitutes.

Vapo-Cresolene advertisement featuring an illustration of a person and text describing its uses for coughs, croup, and asthma.

MACBETH'S "pearl top" and "pearl glass" lamp-chimneys are carefully made of clear tough glass; they fit, and get the utmost light from the lamp, and they last until some accident breaks them.

Our "Index" describes all lamps and their proper chimneys. With it you can always order the right size and shape of chimney for any lamp. We mail it FREE to any one who writes for it.

Address MACBETH, Pittsburgh, Pa.

AGENTS Our goods sell on sight. Particulars free. Write to-day. POMEROY & SMITH, 22 W. Randolph, Chicago.

HOUSEHOLD

[CONTINUED FROM PAGE 13]

THE RED SCARF

Its color was matched by the cheeks that bore Defiance to frost and cold; The cheeks of the lad who lithely wore The comforting fold on fold. Twice did it circle the neck about, And then passed down to wind Around the waist, so the ends streamed out On the winter breeze, behind.

The old red tippet—'twas always seen In front in the snowball-fight; Wherever the boyish sport was keen Its challenge was flaming bright. No plume of a knight in tourney flung More gay on the air, and free; No hodge by the lips of minstrels sung Is half so endeared to me.

O scarf that a mother's fingers tied When her boy went forth to play! No wonder for naught the blizzard tried Through your mesh to find a way. Twice round the neck, and over the breast To circle the waist below— But the kiss at the last was the scheme the best To baffle the cold and snow.

—Edwin L. Sabin, in Farm Journal.

FOUR GOOD RECEIPTS

APPLE SNOWBALLS.—Boil some rice for ten minutes, drain, and let cool. Pare and core some large apples without dividing them; spread the rice in as many portions as there are apples, on some pudding or dumpling cloth, tie the apples (surrounded by the rice) separately in these, and boil the balls three quarters of an hour. Turn them out carefully on a dish, and sprinkle fine sugar over them. Serve with sweetened cream or sweet sauce.

PRUNE TARTS.—To one cupful of prune-pulp previously boiled and rubbed through a sieve add one cupful of sugar, one half cupful of milk and the yolks of two well-beaten eggs. Line a pie-tin with rich paste, fill it with this mixture, and bake until the crust is done. Beat the whites of two eggs, adding one fourth of a cupful of sugar, spread over the top of the tart or pie, and brown slightly.

PRUNE PUFFS.—Put one pound of prunes in cold water, and boil gently until tender, then stone and rub through a sieve; add one cupful of sugar and the well-beaten whites of three eggs, bake fifteen minutes, and serve with whipped cream. If cream cannot be obtained, a good substitute for whipped cream is the following: Beat the white of one egg to a stiff froth, add one cupful of milk (a spoonful at a time), sweeten to taste, and flavor with vanilla.

POTATOES A LA NEIGE.—Boil seven or eight potatoes, and mash them in a hot crock the moment they are done, with one half cupful of cream, a piece of butter the size of an egg, and some salt and pepper. When well mashed press through a colander into the dish in which they are to be served. The potatoes then resemble rice or vermicelli, and are nice and light. They make a pretty dish, and should be served very hot. They are a good accompaniment to venison, and are nice served around a rolled rib of beef. Mrs. J. R. MACKINTOSH.

HOUSE-PLANTS

How are the plants progressing? Heliotropes are partial to water applied any way.

Do you give the callas a drink of scalding-hot water, poured into the saucers, every day? Do you remember to drench with water the plants that are troubled with red-spiders?

Ferns like moist earth. But do not keep water standing under them until the earth becomes sour.

A begonia likes a moist atmosphere, but does not like wet feet; so keep a jarful of water on the stove instead of under the plant-crock.

Have you scattered tobacco-stems around the roots of the plants, to drive the green-aphis away? The stems can be obtained at nearly every tobacco-store for five cents a pound.

If a plant becomes infested with scale-bugs it might as well be thrown away, unless very valuable, as it is almost impossible to destroy them except by picking off with the point of a pin or brushing with a tooth-brush.

Palms can stand dry roots better than a dry atmosphere. Above all things try to keep the foliage of the plants clean and free from dust, for the sake of looks as well as for the health of the plants. They breathe through their leaves. GYPSY.

A Godsend to All Humanity

All our readers who want to have perfect health, a clear skin, beautiful complexion, prevent Colds, Fevers, La Grippe and Disease, and enjoy all the marvellous, cleansing, beautifying and curative elements of the famous Turkish, Russian, Sulphur Vapor Baths, perfumed or medicated if desired, at home, in your own room, for 3 cents each, should have one of the remarkable 1902 Style Square Quaker Turkish Bath Cabinets.

Water Baths simply wash the surface. The Cabinet Bath, perfectly safe both summer and winter, opens the 5,000,000 pores of the skin, sweats out all the poisons and effete matter which cause disease, cleanses you



inwardly and outwardly, purifies your blood, makes your eyes bright, your skin clear, your nerves strong, sleep sound, appetite good. One week's use will make a new being of you.

This is a genuine Cabinet with a real door; handsomely made; best materials; rubber-lined; heavy steel frame; top curtains; in fact, all the latest improvements; will last 20 years; not a cheap, flimsy affair, but strong, substantial, ready for use when received.

Over 27,000 Physicians and 1,000,000 happy users recommend this Cabinet for bathing purposes.

Dr. A. B. Stockham, Chicago, editor Tokology, recommends it highly, as also does Hon. B. F. Shipley, Moroa, Ill.; Rev. H. Gardner, well-known Evangelist; M. C. Groppner, M.D., 375 Centre St., Boston; Congressman John J. Leutz, and thousands of others.

Mrs. S. H. Tripler, 36 Park Row, New York City, had Rheumatism and other troubles 20 years, was cured in one week, says this Cabinet is a Godsend to every woman, worth \$1,000.

G. M. Lafferty, Covington, Ky., was compelled to quit business, walked on crutches, drugs and doctors failed, was relieved by the first bath, entirely cured in 14 days.

J. W. Van Tassel cured himself of Lumbago, and his friends of Blood and Skin diseases, Kidney Affections, Nervousness, Piles, etc., and made \$1,500 selling this Cabinet in 5 months. No one afflicted can afford to be without this Cabinet for a single day.

The makers guarantee results and assert positively, as do thousands of users, that this Cabinet will cure Nervousness, Weakness, Aches, Pains, Colds and Rheumatism (they offer \$50.00 reward for a case not relieved). Purifies the Blood, cures Sleeplessness, La Grippe, Neuralgia, Headaches, Indigestion, Piles, Dropsy, all Blood, Skin, Liver, Kidney and Urinary troubles. Has wonderful power to prevent and cure Woman's complaints.

A Face and Head Steamer is furnished if desired, which cleanses the skin, beautifies complexion, removes pimples, blackheads, eruptions, and is a sure cure for all skin diseases, Eczema, Catarrh, Asthma, Bronchitis and Throat troubles.

All our Readers should write to-day to The World Manufacturing Company, 1133 World Building, Cincinnati, Ohio, for valuable book and testimonials; or, better still, order a Cabinet at once.

The price is wonderfully low. It is a regular \$12.00 Cabinet for only \$5.00, complete with stove, formulas for baths and various ailments, and plain directions. Face Steamer \$1.00 extra.

This firm is perfectly reliable; capital \$100,000, and ship same day your remittance is received, and refund your money after 30 days' use if the Cabinet is not just as represented. Send for Booklet, anyway.

This Cabinet is a wonderful seller for agents, and the firm offers special inducements to both men and women upon request, and to our knowledge many are making from \$100 to \$150 every month and expenses.

TWO GOSTLY PRESENTS; YOU GET BOTH. WE TRUST AGENTS with 12 new style, Stone Set, Enamel Scarf and Stick Pins, different patterns. Everybody wears them. Sell to your friends for 10 cents each, and we give you Free a Fine Gold or Silver Inlaid Bracelet (with lock and key), also this magnificent Solid Gold Inlaid Band Ring, handsomely engraved, a perfect beauty, wears a lifetime. Send name; no money required until pins are sold; we take all not sold. Address PEARL PIN CO., Providence, R. I.

LOTS OF MAIL FREE. THIS IS A BIG OFFER READ IT. Put your name and address in our guaranteed Agents Directory which goes whirling all over America to firms, who will send you free samples of papers, magazines, pictures, cards, medicines, etc., etc. You will receive lots of mail. We must have 50,000 new names at once for our Directory, no matter how great the cost will be to us; we must have the names, and in order to obtain them quickly, we will send you by return mail, Free of Cost, all of the following named goods: One (one) Map of the U. S., 36 New Songs, Pictures of all the Presidents, 25 Pictures of Actresses, 12 Comic Pictures, One Coin Value Guide, One Stamp Value Guide, 6 Best Agents' Articles, (worth \$1.50) One large Catalogue, (source goods) and a One Dollar Due Bill, which entitles you to \$1.00 worth of goods, absolutely free from our list. HOW CAN WE DO IT? This Grand Offer is made to introduce our goods. We want you to trade with us regularly, and recommend us to your friends. We know you will surely do it when you get these goods. Send your name and address today and enclose 10 cents (coin or stamps) to pay postage, packing, etc. Just as soon as we receive your letter we will send all of the above mentioned goods to you. This is a tremendous offer. Don't wait, write today. Address your letter to AGENTS' DIRECTORY CO., 373 Dearborn Street, Dept. F-44, CHICAGO, ILL.

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\$1,000 SALARY PER YEAR Ladies or Gentlemen. We have shared the general prosperity of the country, and we now need one or two permanent representatives in each state to look after our interests, manage our agents and attend to collections. This position involves no canvassing and is a bona fide weekly salaried position, with all expenses paid, to the right party. It is mainly office work conducted at your own home, with an occasional trip out among the agents. No investment required. Also three salaried vacancies in the travelling department. Enclose references and self-addressed stamped envelope to PROVIDENCE CO., 1 Caxton Building, CHICAGO.

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NO DIRT LEFT in clothes washed with the "BUSY BEE WASHER" 100 pieces in one hour and no hard work done. That is the record. AGENTS WANTED. Exclusive sale. Write for terms, Lake Erie Mfg. Co., 116 E. 13 St., Erie, Pa.

TEN WEEKS FOR 10 CENTS—That big family paper, The Illustrated Weekly, of Denver, Colo. (founded 1890), will be sent ten weeks on trial for 10c.; clubs of 6, 50c.; 12 for \$1. Special offer solely to introduce it. Latest mining news and illustrations of scenery, true stories of love and adventure. Address as above, and mention the Farm and Fireside; stamps taken.

256 that tells all about Magic Lanterns and Stereopticons—how to operate them—how much they cost—how men with small capital can make money with them. Sent free. McALLISTER Mfg. Optician, 49 Nassau St., N. Y.

EXPERIENCE But not absolutely necessary. Agents of either sex, in town or country, write me for particulars of positively the best paying agency of the season. E. HANNAFORD, Springfield, Ohio.

BIG COMMISSIONS TO LADY AGENTS Lady agents for McCabe corsets and fine underclothes get generous commissions and make big money because the goods sell on sight—varying styles for different figures—prices within reach of all. Write for particulars. ST. LOUIS CORSET COMPANY, ST. LOUIS, MO.

FAMILY RECORD A beautiful picture; rich colors; background solid gold. Tremendous seller. Agents delighted. Sample free for 12 cents to pay postage and advertising, nine for \$1, post-paid. HOME ART PICTURE CO., Chicago, Ill.

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ONE YEAR FOR 10 CENTS We send our large 16 page, 64-col. monthly paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents, if you also send names and addresses of six lady friends. WOMAN'S FAIR JOURNAL, 4306 Easton Ave., Saint Louis, Mo.

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TERRIFF'S PERFECT WASHER SENT ON TRIAL at wholesale price. If not satisfactory money will be refunded. SOLD under a POSITIVE GUARANTEE to wash as clean as can be done on the washboard, even to the wrist- and neckbands of the most soiled shirt, and with far greater ease. Does not wear out the clothes. Economizes soap, labor and time. AGENTS WANTED. Exclusive territory given. Big money made. For terms and prices Address, Portland Mfg. Co., Box 27, Portland, Mich.

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Men and Women AGENTS wanted to sell the "FAMOUS MARYLAND" Carpets, Rugs, Art Squares, Draperies and Bed Sets in every section of the country. We pay freight, sew carpets free, and furnish wadded lining without charge. Some agents have made as high as \$300 in one week. For particulars address JULIUS HINES & SON, Baltimore, Md., Dept. 312.

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This need never be asked if you plant Peter Henderson & Co.'s seeds, as they are the acknowledged standard of excellence in both hemispheres. Our 1900 Catalogue of

Everything for the Garden is a 190-page book, 9x11 inches, containing over 700 engravings and 6 superb colored plates of Seeds and Plants—a perfect mine of information on garden topics.

To trace advertising, and give our Catalogue the largest possible distribution, we make the following unusually liberal offer:

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To every one who will state where this advertisement was seen, and who encloses us 10 cents (in stamps), we will mail the Catalogue, and also send, free of charge, our famous 50-cent "Harvest" Collection of seeds, containing one packet each of New Large-flowering Sweet Peas, New Giant Pansy, New Giant Comet Asters, White Plume Celery, French Breakfast Radish and New Freedom Tomato, in a red envelope, which when emptied and returned will be accepted as a 25-cent cash payment on any order of goods selected from Catalogue to the amount of \$1.00 and upward.

PETER HENDERSON & Co.
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HARTMAN STEEL ROD PICKET FENCE



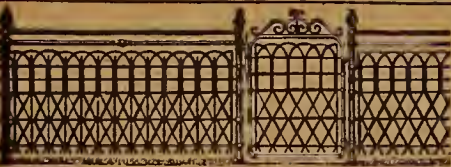
Fills completely all fence requisites as to beauty, utility and durability. Specially designed for lawns, parks, cemeteries, school grounds, etc. Looks best and is best when built with our steel posts. Illustrated catalog free. HARTMAN MFG CO., BOX 26 ELLWOOD CITY, PA. Or 77 BROADWAY, NEW YORK CITY.

M.M.S. POULTRY FENCE
SAVES 50

ASK FOR IT... **M.M.S.** Largest Line

Hog Fences and Fences

DEKALB FENCE CO.
No. 38 HIGH ST. DE KALB, ILL.



ORNAMENTAL FENCE!
25 different designs, they are all steel and cheaper than wood fence. Special prices to Churches and Cemeteries. Write us for catalogue.

KOKOMO FENCE MCH. CO., 427 NORTH ST. KOKOMO, IND., U. S. A.

DON'T ROB YOUR NEIGHBOR

By buying a poor fence that will let your stock fatten on his crops. The **KITSELMAN FENCE** is a satisfactory one. It insures good sleep and makes good neighbors. Free Catalogue telling how to make 100 Styles at the actual cost of the wire. Write to-day.

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DID YOU EVER NOTICE?
Our Stock Fence stands USE and ABUSE. Try it. **PAGE WOVEN WIRE FENCE CO.,** Adrian, Mich.

SEE AND WONDER
AUTOMATIC CREAM SEPARATOR

Simple; easy to operate; durable; saves half the labor. Butter-making simplified. More and better butter. Farmers' and Agents' Gold-mine. Price \$2.50; worth \$100. Send stamp for particulars. Agents wanted. Automatic Cream Separator Co., Quincy, Ill.

CYCLONE SEED SOWER SAVES GRASS AND CLOVER SEED

Increase of crop pays for sower first 10 acres. Tried and true. 25 years the Standard. Sent on trial. Special offer and circulars free. Address Champion Seeder Co., Urbana, Indiana.

Fence Machine That weaves 60 to 100 rods per day out of barb, cable, crimped, coiled or smooth wire. Machines Guaranteed. Catalogue Free. Hoosier Boy Fence Co., Indianapolis, Ind. Dept. 23.

FENCE! STRONGEST MADE. Bull-tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalogue Free. **COILED SPRING FENCE CO.** Box 15. Winchester, Indiana, U. S. A.

M. M. S. POULTRY FENCE
Half cost of Netting. Requires few posts, no rails. Best Hog, Farm, Yard, Cemetery Fences. Freight paid. **KANSAS STEEL & WIRE WORKS** KANSAS CITY, MO.

FARM SELECTIONS

THE REFINEMENTS OF SHEEP HUSBANDRY

THE hog will eat corn in filth knee-deep, and cattle gather living from muddy stalk-fields, but the sheep ask for clean troughs, standing in clean yards. No farm-animal has such strong likes and dislikes, and we must cater to their taste if we expect them to do their best for us.

The sheep will not touch hay that other stock have nosed over. They must eat at the first table or not at all. We throw the refuse from the sheep-racks to the cattle, but it would be useless to throw the stubs left in the cattle-mangers to the sheep. So with corn and oats; they like them none the better if the rats have played or the sparrows roosted above the feed-bins.

Sheep dislike to have their hay-racks used for hen-roosts. In these days of pure-food laws one of the children should be appointed a special deputy to see that such transgressors are promptly put in the chicken-house. Mud is another of the sheeps' dislikes. Had they their choice they would take lady-like care of their golden slippers. A flock has been seen to stand half an hour studying whether or not to cross a muddy road.

Sheep like pure water, several degrees warmer than they find it in the brook. These are the reasons that they hunt the springs and close up to where it bubbles out, or cross the run to drink in the barn, where pure water is provided and warmed several degrees by passing through the underground pipes. These may be considered the niceties of sheep husbandry. You cannot say to the sheep, "Eat what is set before you; ask no questions." They want clean service, pure food and pure drink, with blossoms for desert. It pays to give them what they want. —F. H. Sweet, in Farm Journal.

SANITATION ON THE FARM

One of the topics arranged for discussion by an Ohio farmers' club is sanitation on the farm, including the water supply, heating the dwelling, drains and cellars, importance of sunlight and pure air, and the care and location of barn-yards and feed-lots. A discussion of such subjects might well be considered by most farmers' institutes. Much of our sanitary instruction is given solely from the standpoint of the town sanitarian, who can discuss improved plumbing, the arrangements and trapping of waste-pipes, and the proper fixtures of the bathroom, but who would find himself entirely at a loss in advising the sanitary disposal of farm wastes. Rural sanitation is a science of itself, and one to which farm organizations are now giving needed attention. Many of the winter epidemics, which bring suffering and death to country communities, are preventable, and will be prevented when sanitary laws are more fully understood.—Rural New-Yorker.

RECENT PUBLICATIONS

CATALOGUES RECEIVED

Schmidt & Botley, Springfield, Ohio. Illustrated floral catalogue.
F. E. Myers & Bro., Ashland, Ohio. Calendar hanger of pump and hay tools.
Iowa Seed Co., Des Moines, Iowa. Handsomely illustrated catalogue of farm, garden and flower seeds.
Bateman Mfg. Co., Grenloch, N. J. Illustrated catalogue of the "Iron Age," farm and garden implements.
Peter Henderson & Co., 35 and 37 Cortlandt St., New York. Manual of "Everything for the Garden," beautifully illustrated in colors. Special novelty—the Admiral Dewey rose.

SPRAYING FRUIT-TREES

The question of spraying fruit-trees to prevent the depredations of insect pests and fungus diseases is no longer an experiment but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.



Buy Direct

No. 3034—Buggy. Price, \$33.30 with leather quarter top.

No. 3094—Buggy, made with Surrey seat. Price, \$47.05 with leather quarter top.

If you need a vehicle—carriage or buggy, surrey or phaeton, or want handsome, thoroughly well made harness, buy direct from the makers. Our plan of selling insures you both saving and satisfaction. Your money back if you are not satisfied with your purchase. Backed by a large plant and many years' experience, we are in a position to economize at every point in the making of carriages and harness, and to reduce the cost of production to the lowest notch. The buyer gets the benefit of this, besides

Saving the Dealer's Profit

Robes, blankets, and all horse equipments; an immense assortment at wonderfully attractive prices. Write for finely illustrated catalogue, which describes and gives the prices of our entire line, explains our plan of selling direct, and contains a copy of the guarantee which goes with everything we sell. Mailed free.

No. 2082—Runabout. Price, \$44.60.

No. 604—Team Harness. Price, \$22.55.



The Columbus Carriage and Harness Co., Columbus, Ohio.



IT HOLDS UP YOUR HAT

Don't you remember how your father used to test his grass and grain in this way? When it held up the hat it was always regarded as being a satisfactory and profitable "stand."

...THIS... BROME GRASS

Surpasses Timothy in nutrition. Outyields Alfalfa. Yields four to five tons per acre. One sowing lasts 12 years. Grows well in light soil, or wet swampy land. Has no equal for arid regions. Drouth will not kill it. Animals enjoy it green or dry. Gives as much food in one month as Alfalfa does in three. Greatest moon ever offered as it thrives in any climate, under any conditions and makes productive what would otherwise be waste land. It is doubtful if the supply of seed this year will meet the demand, so great is the call already from States where hay is the essential crop. Price: Grade A—1 lb., 30c; 3 lbs., 85c, prepaid. 18 lbs. (enough for one acre) \$3.60; 100 lbs., \$18.00. Send for mammoth descriptive catalogue with treatise on cultivation and comparative food values of Brome Grass and Timothy. Address, **L. L. MAY & CO.,** Seed Growers, ST. PAUL, MINN.

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bicycles, sewing machines, house furnishings, ladies' or gentlemen's watches, cameras, mandolins, guitars, violins, silverware, dinner sets, guns, and your choice of a hundred other articles, all guaranteed. Simply sell a few boxes of our unexcelled toilet soaps and any of them are yours. Send no money. We trust you. Girls and boys do as well as older people. Write at once for full information. We mail handsome illustrated catalogue free. Address **Great Northern Soap Works,** 92 Lake St., Oak Park, Ill.

THE LOSS OF AN EYE—terrible calamity. The tip of a horn often does it in tying up cattle. Cut off the horns quickly and humanely with the **Keystone Dehorning Knife**. Cuts on four sides, no crushing or tearing. Highest Award World's Fair. FULLY GUARANTEED. Write at once for descriptive circulars, prices, etc. **A. C. BROSIUS, COCHRANVILLE, PENN.**

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Dean Swift, in "Gulliver's Travels" said that—

"Whoever could make two ears of corn, or two blades of grass, to grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country than the whole race of politicians put together."

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Grinds as fine or coarse as desired. Will run by any power, one to five horse, sweep tread, steam or wind. Will not choke down the smallest power. Sold at a low price to advertise the fact that we are the largest manufacturers in the world of labor saving farm machinery. Send for special offer on this mill and large illustrated catalogue of "Hero" and "American" Grinding Mills, 26 sizes and styles, Feed Cutters, Peck's Corn Threshers, Tread Powers, Sweep Powers, Goodhue Galvanized Steel and Wood Wind Mills for power and pumping, Wood Saws, Corn Shellers, etc.

APPLETON MFG. CO., 9 Fargo St., BATAVIA, ILL.

THE YANKEE FIRE-KINDLER Length 15 inches. Weighs 36 pound. Builds 100 fires with 3c worth of oil. No kindling. File the fuel over the blaine kindler and the fire is built. Saves hours of time and gallons of oil. Warranted 3 years. Greatest seller for agents ever invented. Customers everywhere. An average county yields agent \$100 profit. Act quick if interested. Sample prepaid with terms 25 cents. Yankee Kindler Co., Block 19 Quincy, Illinois.

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Send 10c. and addresses of seed-buyers and we will send 1 qt. each Advance Tomato, Bread-tone Turnip, Black Diamond Watermelon, Jap. Imp. Morning-Glory, Allegheny Hollyhock and Choicest Sweet-Pea. Without names 25 cents; 5 for \$1. For 50c. and 7 names we send prepaid 1 qt. size with each 10 choicest varieties. Grapes covering entire season, and 2 Miller Red Raspberry plants. **CATALOGUE FREE.**

FORD SEED CO., Department E, Ravenna, Ohio.

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Do not Fail to Write at Once and thus Beautify Your Home Free of Cost.



The publisher of the Western World, the best, brightest and most popular monthly now published, more interesting, more profitable to read and more up-to-date, will give away absolutely free to each subscriber a package of seeds, containing over 300 varieties of beautiful flowers. The object of this free seed distribution is to interest ladies and gentlemen in a magazine that has absolutely no peer. There are departments of absorbing interest such as How to get rich, How to become famous, How to be beautiful. Instruction whereby anyone can easily earn from \$2.00 to \$20.00 a day at their own home. A history of the Mormon Church and Polygamy. Departments for the Farmer, Mechanic and Housewife, all conducted by famous writers and editors. The Western World is in its 16th year, is now reaching more than one hundred thousand of our best homes and is positively the most fascinating magazine ever published. Printed on fine coated paper, beautifully illustrated; every page is worth the year's subscription. Send 25 cents to the publisher of the Western World, 155 La Salle St., Chicago, and he will send you by prepaid mail the package of 300 varieties of the most popular flower seeds, including a full year's subscription, 12 numbers of the greatest of all family journals, the Western World. Do not fail to write at once.

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WARRANTED to do the family washing, 100 PIECES in 1 HOUR. No need for washboard; no wear on clothing. Write for special prices and description. ROCKER WASHER CO. 200000 in Use Clifton St., Ft. Wayne, Ind. Liberal inducements to live agents.

No Scorched Foliage

if you use the unexcelled EMPIRE KING BARREL SPRAYER because it has a brush on the agitator which keeps the solution strainer free from the thick, raw poison. Brass valves, without leather or rubber. We want good agents. Send for our free book on spraying. FIELD FORCE PUMP COMPANY, 6 Market St., Lockport, N. Y.

FARMERS

Send for a large Catalogue of the celebrated "DeLoach" VARIABLE FRICTION FEEDSaw-Mills, Shingle-Mills, Planers, Hay-Presses, Grinding-Mills, Water-Wheels, etc. Our Saw-Mill is warranted to cut over 2,000 feet of board lumber in ten hours with 4-horse power. Prices low, and we pay the freight. DeLoach Mill Manufacturing Co., 300 Highland Avenue, Atlanta, Georgia.

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ANGELS WHISPER Beautiful Large Picture; colored. Sells quick at 25c. Sample 15c.; 9 for \$1. J. LEE, Omaha Bldg., Chicago.

MISCELLANY

GLASS filling for teeth is used in Berlin.

POTATOES in Greenland never grow larger than a marble.

THE friction of water in pipes is as the square of the velocity.

ONE fifth of the entire African continent is a trackless desert.

OVER sixty thousand elephants are annually slaughtered in Africa to secure ivory.

EACH nominal horse-power of boiler requires one and one half cubic feet of water an hour.

A GALLON of water contains 231 cubic inches, and weighs eight and one third pounds, United States standard.

GERMANY publishes about 20,000 books a year; France, 11,000; Italy, 9,000; England, 6,000, and the United States, 5,000.

A CUBIC inch of water, under ordinary atmospheric pressure, is converted into one cubic foot of steam approximately.

A PROPERLY designed boiler, with skilful firing, will evaporate from seven to ten pounds of water a pound first-class coal.

A CUBIC foot of water contains seven and one half gallons, or 1,728 cubic inches, and weighs sixty-two and one half pounds.

THE capacity of pipes is as the square of their diameters; thus, doubling the diameter of a pipe increases its capacity four times.

THE specific gravity of steam (at atmospheric pressure) is .411; that of air, 34 degrees Fahrenheit, and .0006 that of water at the same temperature.

TO FIND out whether a shell is burned or crystallized, take a thin, sharp chisel and cut a thin chip for an inch or so; if the chip turns up the iron is good.

TWENTY-SEVEN thousand two hundred and twenty-two cubic feet of steam weigh one pound; thirteen thousand eight hundred and seventeen cubic feet of air one pound.

THE height of a column of fresh water equal to a pressure of one pound a square inch is 2.31 feet. (In usual computation this is taken at two feet, thus allowing for ordinary friction.)

WHERE rubber packing is used it will last many times longer and not blow out if a piece of common wire screen (same as used in window-screens) is put on each side of the rubber. It embeds itself in the rubber and holds it together, so that when hot and soft it cannot blow out.

MUSHROOMS grow in immense quantities in Russian forests, the inhabitants in some places existing entirely by selling them. Kargopol, in Olonetz, sends yearly five thousand pounds of mushrooms to St. Petersburg. The varieties are many. With one form, the mukhomor, the native tribes of Siberia intoxicate themselves; an infusion from it has a stupefying effect, like that of opium or hasheesh.

A SOAPLESS COUNTRY

In spite of British rule India is still virtually a soapless country. Throughout the villages of Hindustan soap is indeed regarded as a natural curiosity, and it is rarely, if ever, kept in stock by the native shopkeeper. In the towns it is now sold to a certain extent, but how small this is may be gathered from the fact that the total yearly consumption of soap in India is about 100,000 hundredweight; that is to say, every 2,500 persons use on an average only 112 pounds of soap among them, or, in other words, considerably less than an ounce is the average consumption for each person.

NEW COLLEGE PRESIDENTS

Within the last few months the number of accessions of new college presidents have been extraordinary. We have Hadley at Yale, Harris at Amherst, Faunce at Brown, Wheeler at California, Miss Hazard at Wellesley, Barrows at Oberlin, McLane at Iowa State, Merrill at Colgate, Thompson at Ohio State, Super at Ohio, Tappan at Miami, Freshwater at Baldwin, Kane at Wabash, Ayres and Holden at Wooster.

SCOTLAND'S STRANGE BIRDS

From the small island of St. Kilda, off Scotland, twenty thousand young gannets and an immense number of eggs are annually collected, and although this bird lays only one egg per annum, and is four years in obtaining its maturity, its numbers do not diminish. Obviously such birds must reach a great age or they would long ago have been exterminated.

SOLID TRAINS TO NORTHERN MICHIGAN

The Chicago, Milwaukee & St. Paul Railway is now running solid trains of palace sleeping-cars, dining-cars (serving meals a la carte) and first-class day-coaches through from Chicago to Calumet, Houghton, Hancock and other points in the Copper Country without change of cars, with direct connection for Marquette, Negaunee, Ishpeming, etc., and passengers from the East, South and Southwest will find this a most desirable route.

All coupon ticket agents sell tickets via the Chicago, Milwaukee & St. Paul Railway.

Asthma Can Be Cured

Statement of a Noted Physician

The astonishing statement that Asthma can be cured, coming from so well known an authority as Dr. Randolph Schiffmann, will be of interest to sufferers from Asthma, Phthisis and Hay Fever. The Doctor's offer, coming as it does from a recognized authority, who during a practice of over thirty years has treated and cured more cases of Asthma and its kindred than any living doctor, is certainly a generous one and an innovation in this age of countless fraudulent nostrums. Believing that the honest way to sell a remedy is to let those who would buy convince themselves of its merits before purchasing, Dr. Schiffmann has authorized this paper to say that he will send a free trial package of his remedy, "Schiffmann's Asthma Cure," to any sufferer who sends his name on a postal-card before March 1st. This remedy has cured thousands of cases that were considered incurable. Being used by inhalation it reaches the seat of the disease direct, stops the spasm instantly and insures sweet and refreshing sleep. A free trial package will convince the most skeptical. Those desiring to try a free sample should address Dr. R. Schiffmann, 268 Jackson Street, St. Paul, Minn.

FREE BIRD & CAGE ANGORA CAT

We will give away 6080 Animals, Canary Birds, Mocking Birds, Bullfinches, Parrots, etc., Dogs, Angora Cats, Aquariums, Gold Fish, Shetland Ponies, Rabbits, Pigeons, Guinea Pigs, Monkeys, Squirrels, etc., together with fancy cages. We mean exactly what we say. We will send you a pair of beautiful Angora Cats now all the rage, birds with cage or any other animal you may want. We have been breeding for years, and have a fine stock of animals that we are going to give away in the next few weeks.

We Start You In Business Invest. We want animals raised for us as the demand is greater than the supply and with difficulty we have reserved 6080 animals for breeding purposes, to be distributed free to those who answer this advertisement, and we start you in a paying business and put you in the way of making money without your investing one cent. Genuine Angora Cats are worth from \$25.00 to \$100.00 each and these animals are easy to raise. No money to send, simply act at once, write us to day and be one of the 6080 to get a fine Song Bird or Parrot with cage, a beautiful pair of Genuine Angora Cats, a complete Aquarium with fish, shells and plants. When you write send the names of ten people who own either a horse, or a dog, or a cat, or a bird, or chickens or some other animal. Give the name of your nearest express office and say what animal or aquarium you want and it will be sent exactly according to our offer. You will have nothing whatever to pay. We pay express charges. This advertisement means exactly what it says and is simply an enterprising plan to increase our business capacity. Address DEPT. V, ANIMAL WORLD, 127 E. 23d ST., NEW YORK.

THE ANCHOR ELECTRIC BELT AGENTS WANTED, BOTH SEX.

Goods sent to reliable persons to be paid for after selling. W. H. Palmer, Glasgow, Conn., has sold 1,000 belts, and as high as \$9 in one day. The electricity from the batteries will turn a needle through your table or hand. No one but what can wear them. Cures Rheumatism, Liver and Kidney Disease, Weak and Lame Back and other diseases. Prevents Cold Feet and taking Cold. Gives a comfortable glow of warmth all over the body, which shows it is acting on the circulation. For advertising purposes we will give one Belt Free of any cost to one person in each locality. Address E. J. SMEAD & CO., Dept. 332, VINELAND, N. J.

OPIUM GOLDMETER

In pocket case for hunting Minerals, Gold and Silver, also Rods and Needles. Circular 2 cents. B. G. STAUFFER, Dept. E. F., Harrisburg, Pa.

LADIES Kitchen novelties. List for stamp.

O. WYLLIE BROS., Bridgeport, Conn.

POTASH gives color, flavor and firmness to all fruits.

No good fruit can be raised without Potash.

Fertilizers containing at least 8 to 10% of Potash will give best results on all fruits. Write for our pamphlets, which ought to be in every farmer's library. They are sent free.

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Personally Conducted California Excursions

Via the Santa Fe Route. Three times a week from Chicago and Kansas City. Twice a week from St. Paul and Minneapolis. Once a week from St. Louis and Boston. In improved wide-vestibuled Pullman tourist sleeping-cars. Better than ever before, at lowest possible rates. Experienced excursion conductors. Also daily service between Chicago and California. Correspondence solicited.

T. A. GRADY, Manager California Tourist Service, The Atchison, Topeka & Santa Fe Railway, 109 Adams Street, CHICAGO.

Ladies' or Gents' size FREE

WATCHES, RINGS, WATCH-CHAINS AND CHARMS, &c. As a grand premium, any one can earn this Beautiful Gold Plated Hunting Case Stem Winder Watch, Charm and Chain, a perfect time-keeper, by selling our ELECTRIC LAMP WICKS. They can be sold in a few hours. They are practically indestructible. No trimming; no smoke; no smell. OUR SPECIAL 90-DAY OFFER, which is apart from the above: Send us your name and address (no money); we will send you 20 wicks, postpaid; we sell them at 5c. each and remit us \$1. and we will mail to your address, free, a Beautiful Gold Plated WATCH-CHAIN AND CHARM, also a Handsome Gold Finished Ring. ELECTRICAL WICK CO., Dept. T, Orange, N. J.

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Self-Taught, without Notes, by Figure Music. Big Illustrated Catalogue of Self-Instructors and Instruments sent FREE. We ship the first instrument in each locality at a big discount, simply to advertise our goods and establish a trade. Address E. C. HOWE, 459 Bay State Bldg., CHICAGO

HEALTH BELT

Dr. Owen's Electric Health Belt cures all persons of either sex afflicted with Nervous Complaints, Rheumatism, Neuralgia, Kidney, Liver and Exhausting Nervous Diseases.

Dr. Owen's large, splendidly illustrated catalogue mailed free on receiving your address—50 pages, worth 50 dollars to you or any sick person. Catalogues in English, Swedish, Norwegian and German. You should read the numerous glad testimonials from former sufferers who are now enjoying life to the fullest extent, aided by the Health Belt.

The Health Belt is especially powerful in cases of Lost Vitality, restoring the organs with wonderful quickness. Call, or write at once to

The Owen Electric Belt and Appliance Co., 201 to 211 State Street, CHICAGO.

FREE SIX EXQUISITE AND COSTLY FINGER RINGS.

WE TRUST AGENTS with 20 Mineral Lamp Wicks. Best wick in the World, Light Equal to Gas. No Smoke, No Smell, No Trimming, No Broken Chimneys. Can be sold in an hour or two at 5 cents each. When sold send us the money, \$1.00, and we give you free any two of these Solid Gold laid rings. The Stone Set Rings are equal in appearance to costly Diamonds. The Band Rings are elegant in design and all are warranted to wear well and give satisfaction. We take back unsold goods. No cash wanted. Monthly wicks are sold. Write to MINERAL WICK CO. PROVIDENCE, R. I.



SELECTIONS
MAKING WALL-PAPER

THE manufacture of wall-paper is singularly interesting. First, a web of blank paper is set in a reel behind a blotching-machine; two cylinders bring the free end of the paper into the machine, where a roller working in a color-pan puts a large quantity of color upon the paper in blotches. Then a set of flat brushes, called jiggers, brush quickly back and forth, thus spreading the coloring matter evenly over the surface of the paper. As the paper comes from the blotching-machine a workman takes one end of it, wraps it around a stick, and places the stick across two parallel endless chains, and the paper is thus carried up an incline. When eighteen feet of it has run out, the chains take up another stick that lies across them, and carry it up as they did the first stick; a third stick soon follows the second, and thus the work continues until the entire web of paper has been run out of the blotching-machine. The chains, in their working, hang the paper in loops over a system of steam-pipes, and it is thus thoroughly dried before it reaches the end of the chain work, where it is again wound into web form. Wall-paper designs are first sketched on paper, and then transferred to rollers of the size required. It is necessary to prepare as many rollers as there are colors in the design; thus, if the design requires printing in eight colors, eight rollers must be prepared. When all of the rollers are ready the artist directs the rollers and each one is given a color. A workman, to whom that color has been given, takes a roller to his bench, sets it firmly in the grasp of a vise, and with hammers, files, brass ribbons and brass rods, goes to work. Every bit of the design that is to be in green is traced out for him, and he carefully reproduces it in relief on the roller. When his work is finished, the roller bears on its face, in raised brass, green stems, leaves, etc., and at the proper time and place will put the green coloring and shading just where the designer intended it should be. In like manner the other rollers are made ready for use, and they are then taken to a press that has a large cylinder of the width of ordinary wall-paper. There are grooves around the sides and bottom of this cylinder, into which are fitted the rods on the ends of the rollers, and when in position the faces of the rollers just touch the cylinder. An endless cloth band comes to each of the rollers from below, each band working in a color-pan, which contains, in liquid form, the coloring matter to be carried on the roller to which the band belongs. Each roller is placed in such a position that the part of the design upon it will strike exactly in the spot necessitated by the relative position of the other rollers. When all is ready, the paper that has passed through the blotching-machine is placed between the cylinder and the first roller, the cylinder and the rollers revolve rapidly, and soon the paper is beautifully printed. At each of the endless cloth bands there is a steel scraper called a doctor, and it is the doctor's duty to prevent too much liquid from the other pans from getting on the rollers. The wall-paper press throws off ten rolls of paper a minute, and each roll contains sixteen yards. It is said that stamped paper for walls was first manufactured in Hollaud about the year 1555. Some of the very costly wall-paper in use nowadays is beautifully embossed and hand-painted.—Philadelphia Times.

ARMED STRENGTH OF THE WORLD

According to the latest computation there are in the whole world 5,250,000 men constantly under arms, and in the case of a universal war their number would increase to 44,250,000. If all these armed soldiers were to be ordered to massacre the rest of the population every soldier would have to kill but thirty-two civilians. Placed in single file this army would encircle the equator. To review all these soldiers its commander would require an express train which, passing two thousand soldiers in a minute, would travel over fifteen days without interruption. An Englishman has calculated that to write the names of all the soldiers a quantity of paper would be required equal to that used up by the London "Times" in three and one half years. In Europe there are 4,250,000 men under arms, and in the event of a universal conflict 16,410,000 more would be ready to march, with 34,000,000 in reserve. All in all, there is one soldier for every ten human beings or every five males.

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OUR GLORIOUS COUNTRY

The Land of the Free and the Home of the Brave

Have You Watched Its Marvelous Growth? If Not, The Weekly Enquirer Wants You to Study the Strides It Has Made.

Wants, Also, That You Should Become a Participant in Its Profits.

The Census of 1900 will be taken in June next. Under the law of Congress the returns from cities of over 8,000 must be taken and completed within two weeks from the first day of June, 1900. All other returns are to be made by the first of July, 1900. The returns will then be sent to the Director of the Census in Washington, D. C., to be counted. The count of the population will then begin, and will be rushed to a completion as fast as more than a thousand clerks, using electric adding-machines, can do the work. In order to fix the public mind on the growth of our glorious land THE WEEKLY ENQUIRER offers inducement to subscribers to participate in a problem of mathematics.

The first census of the United States was taken in 1810. Since then it has been taken every succeeding ten years. The result of the population of each census has been as follows:

| Year. | Population. | Year. | Population. | Year. | Population. |
|-----------|-------------|-----------|-------------|-----------|-------------|
| 1810..... | 7,239,881 | 1840..... | 17,069,453 | 1870..... | 38,558,371 |
| 1820..... | 9,633,822 | 1850..... | 23,191,876 | 1880..... | 50,155,783 |
| 1830..... | 12,866,020 | 1860..... | 31,443,321 | 1890..... | 62,622,250 |

Here you have the figures of a basis of calculation. The problem now is: What will be the population of the United States, excluding recent acquisitions, but the total of the following States and Territories and the District of Columbia, viz.:

- ALABAMA, KANSAS, NEVADA, TENNESSEE,
- ARKANSAS, KENTUCKY, NEW HAMPSHIRE, TEXAS,
- CALIFORNIA, LOUISIANA, NEW JERSEY, UTAH,
- COLORADO, MAINE, NEW YORK, VERMONT,
- CONNECTICUT, MARYLAND, NORTH CAROLINA, VIRGINIA,
- DELAWARE, MASSACHUSETTS, NORTH DAKOTA, WASHINGTON,
- FLORIDA, MICHIGAN, OHIO, WEST VIRGINIA,
- GEORGIA, MINNESOTA, OREGON, WISCONSIN,
- IDAHO, MISSISSIPPI, PENNSYLVANIA, WYOMING,
- ILLINOIS, MISSOURI, RHODE ISLAND, ARIZONA TER., NEW MEXICO TER.,
- INDIANA, MONTANA, SOUTH CAROLINA, OKLAHOMA TER. and
- IOWA, NEBRASKA, SOUTH DAKOTA, DISTRICT OF COLUMBIA,

According to the census of 1900? We want you to get out your pencils and slates and solve the problem. Of course, it is not the expectation that any of THE WEEKLY ENQUIRER subscribers can accurately determine what the United States census report will show. But it is not the most difficult matter, with a careful study of the figures of all previous census tables before you, to closely reach an approximate.

THE WEEKLY ENQUIRER is anxious to engage all the subscribers in a study of their own country. To this end it has placed in the safe of The Cincinnati Enquirer Company cash amounting to \$25,000. It will, for solutions received of the population of the United States, to be verified by the Director of the United States Census, give as follows:

| | |
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| To the First Nearest Correct Guess Received..... | \$3,000.00 |
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| To the Fifth | 250.00 |
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| To the next 10, each \$100, amounting to..... | 1,000.00 |
| To the next 50, each \$50, amounting to..... | 2,500.00 |
| To the next 100, each \$25, amounting to..... | 2,500.00 |
| To the next 500, each \$10, amounting to..... | 5,000.00 |
| To the next 1,530, each \$5, amounting to..... | 7,650.00 |

Total number of prizes, 2,197, amounting to.....\$25,000.00

In case of a tie the prizes are to be equally divided.

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This contest will close a month before the result of the census of the population of the States and Territories hereinbefore named will be known and officially certified by the Director of the United States Census at Washington, D. C. THE ENQUIRER will give a month's advance notice of the date when all guesses will be stopped.

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Orisk Mountain Herbs for restoring Gray Hair to its Natural Color, Beauty and Softness. Prevents the Hair from falling out, cures and prevents Dandruff. Will not stain the scalp. Is superior to the many advertised preparations. Package mailed one post. Price 25 cents, by mail. Address K. DUBY DRUG CO., ROLLA, MISSOURI.

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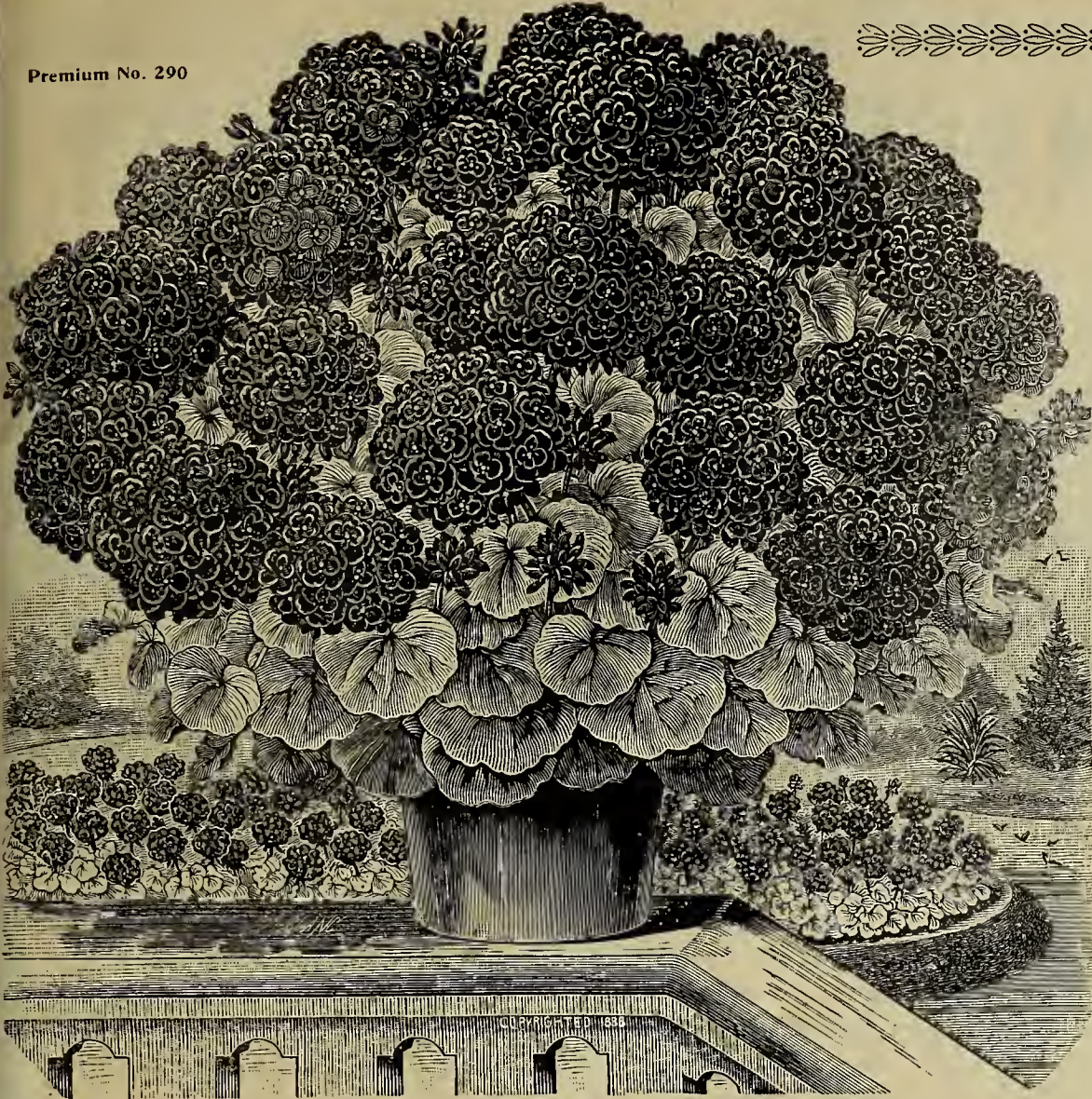
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4 Magnificent Geraniums

DOUBLE AND SINGLE FLOWERING



THE Geranium is the most popular plant for bedding and house culture. It blooms profusely the year round and always has luxuriant, green foliage. The Geranium is perfectly at home in every part of this country. It withstands hot sun and droughts like a weed. It is so easy to cultivate that every one can grow it, yet in foliage and flower it is splendid. It grows very rapidly and yields a mass of bloom in a short time. (When wanted for winter blooming keep it in a pot and pick off the young buds during the summer.)

The Geranium has been wonderfully improved during the past few years. New colors, new styles and profusely blooming sorts have been developed. The collection here offered includes the latest and best varieties of this popular flower. They are unusually fine year-old plants.

4 DIFFERENT COLORS, AS FOLLOWS:

One pure snow-white, one splendid crimson-scarlet, one rich salmon, and one beautiful pink; all of them are free bloomers.

ORDER NOW. Do not wait until you are ready to plant. If you do not want your plants until some later date, we will have them reserved and shipped when desired. When you order state the time you wish the plants sent.

Premium No. 470

Grand Bargain in Superb Plants

By ordering many months ahead and having 25,000 of each of these Geranium and Rose collections grown especially for our use we were enabled to get them at what is practically the cost of production. We now offer these live plants as premiums in connection with the FARM AND FIRESIDE at just what they cost us. We make no profit whatever on the plants, but offer them to induce subscriptions and clubs. This explains how we can afford to offer such extraordinarily good bargains in the very best Geranium and Rose plants grown anywhere in America—all of the choicest and most expensive varieties. Only the most popular, best-growing and finest-blooming varieties are included in the collections. *All of the plants will be large, healthy and well rooted, and will bloom the coming season.* We guarantee them to be exactly as described, to arrive in perfect condition, and to give entire satisfaction or money cheerfully refunded. *Send your order at once.*

HOW TO GROW

Full instructions how to plant and care for them will be sent with each box of plants.

5 of the Choicest Ever-blooming Roses

The Rose, as it has been perfected by scientific culture during the past few years, is a marvel of beauty and fragrance. Those who grow Roses at all should have only the latest and best kinds, such as are offered below, especially when they can be had so very cheaply. No finer plants or varieties are grown than these; will grow in pots or in the garden, and are perfectly hardy. **All double-flowering.**

THERE ARE 5 DIFFERENT COLORS AND VARIETIES

Wonderful New Climbing Rose.. Empress of China This is a new Climbing Rose of the greatest excellence. It commences to bloom in May, and is loaded with its elegant blooms until December. There is no other Rose like it that will bloom for so long a time. This has been the great objection to climbing Roses, that they bloom once and then are done. But here we have a Rose that blooms continually for over seven months of the year. It is simply wonderful. When it first opens the flower is a beautiful red, but soon turns to a lovely light pink, and it blooms so profusely as to almost hide the plant. It is perfectly hardy, and is a decidedly vigorous grower.

THE COLLECTION OF 5 ROSES INCLUDES ALL OF THE FOLLOWING COLORS:

One Empress of China as described above, one clear bright rosy red, one bright pink, one pure white, and one rich flesh-colored. All will bloom freely during the coming season.

It is almost certain that we will receive orders for more plants than the florists have agreed to furnish us. **Order at once** and your plants will be marked with your name and kept growing. They will be mailed to you on any date you may specify. When the supply of plants becomes exhausted money will be refunded.

We will send EITHER the Collection of 4 Geraniums or 5 Roses, and the Farm and Fireside one year, for **50 Cents**

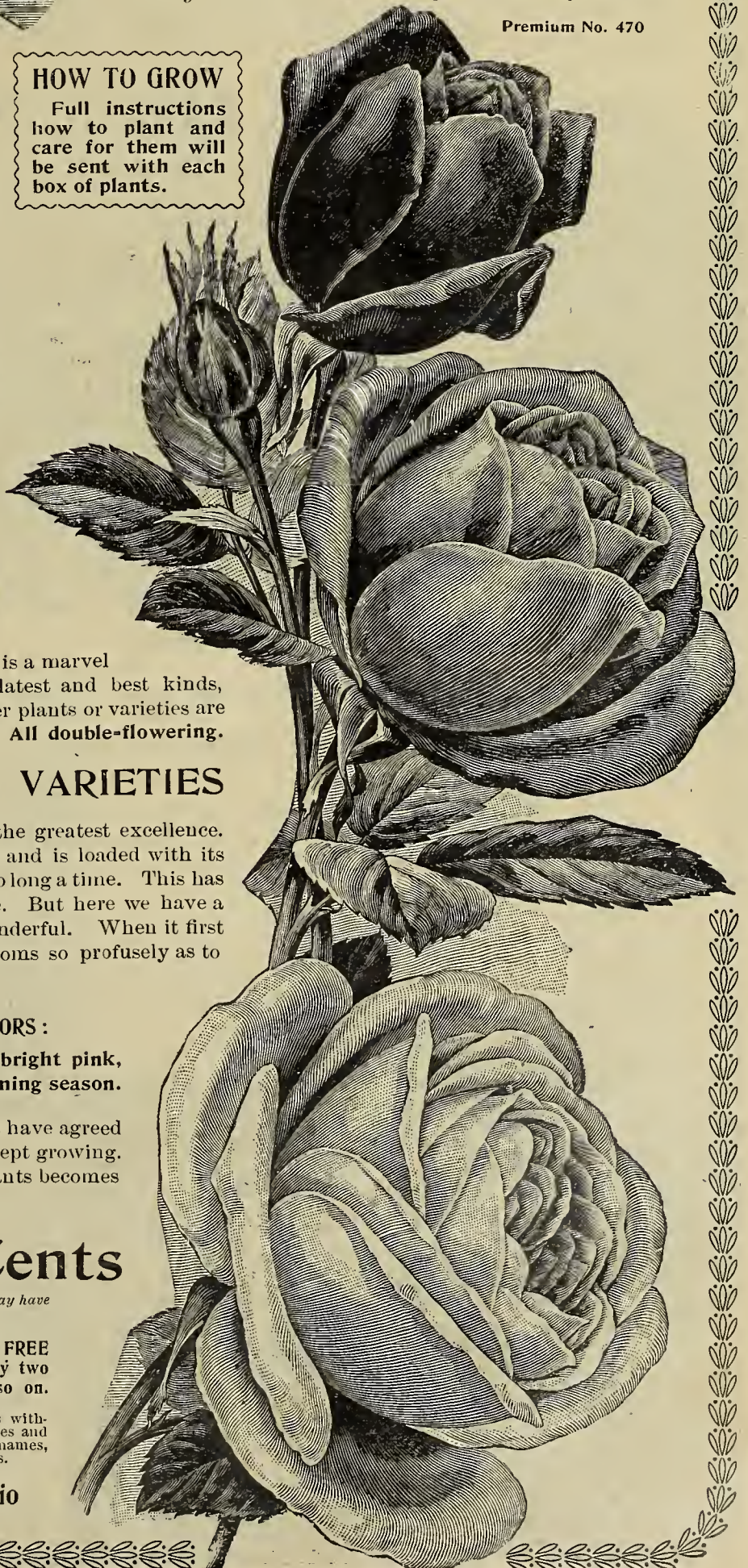
(No more than one collection with one yearly subscription. When the above offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

Free We will send either the collection of 4 Geraniums or the collection of 5 Roses FREE for a club of TWO yearly subscriptions to the Farm and Fireside; or any two collections for a club of FOUR; or any three collections for a club of SIX, and so on.

NOTE.—Thirty-five cents is the clubbing price for yearly subscriptions to the FARM AND FIRESIDE without a premium to the subscriber. And members of clubs may accept any of our offers at the advertised prices and their names may be counted in clubs (unless otherwise stated in the advertisement). RENEWALS and new names, including a club-raiser's own subscription, can be counted in clubs. No reduction allowed in the clubbing prices.

Postage on the plants paid by us in each case

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This book contains over 300 views which are a marvel of scenic beauty, fascinating entertainment and valuable instruction. The pictures are so enticing and so easy to comprehend that school-children will pore over the book for hours in deepest interest, while parents and teachers will find it a feast for the eye and a mine of timely information. The book gives a clear understanding of the places which are of special interest to every American citizen. Each page is 8 inches wide by 11 1/4 inches long, and many of the illustrations are full-page size.

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Are fully illustrated and described, so that by means of this book a clear idea of these island possessions of the United States is easily to be had. THE ARMY AND NAVY are represented by many unique scenes of camp and ship life.

The photographic camera tells no stories. It does not exaggerate, neither does it leave out anything. It is true to nature. The photograph gives a scene to you as it looks if viewed through your own eyes. The result, history told in pictures. This book of photographic views contains

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Over 300 Engravings

Similar to the ones on this page, which are exact reproductions of photographs. They are true to life and tell their own story; all are characteristic and depict scenes of special interest.

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We Will Send This Grand Book, and the Farm and Fireside One Year, for

50 Cents

(When this offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

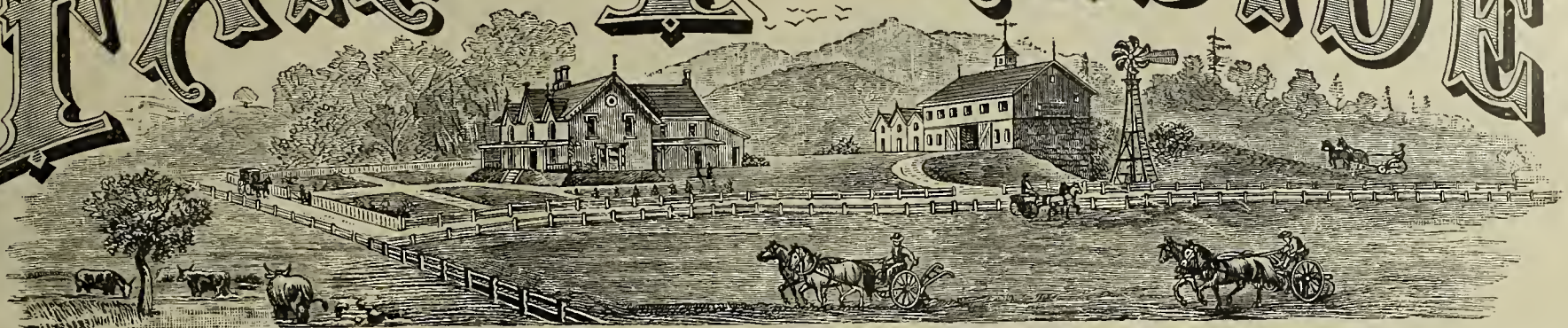
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VOL. XXIII. NO. 10

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FEBRUARY 15, 1900

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FARM SELECTIONS

THE NEW ENGLAND FARMER

AT THE recent Connecticut State Board meeting Professor Wm. H. Brewer, of Yale college, spoke upon evolution in farming. While one of the most stable of industries, farming continually changes. It must, however, continuously go on, for people must eat, even though times are hard. Modern business methods, while bearing on agriculture, cannot govern it. The limit to the productiveness of soils is a bar. Mixed farming is in most cases safest with New England farmers. There may be a leading selling product, but it is safer to have more than one thing to sell. The fluctuation is no greater in farm values than in other property, and the farmers in New England have suffered less by depreciation in the last twenty-five years than those of almost any other part of the world. The building of railroads has worked great changes in agriculture. Half a century ago the food of a city must be grown near by, but now the freight on a barrel of flour from Minneapolis to New Haven is no more than the cartage from the railroad-station to the consumer, and the freight from Minneapolis to London is no more than the cost of distributing the flour in the form of bread. Speaking of trusts, Professor Brewer said that he doubted the power of the law to stamp them out. If farmers may lawfully fix on a price for milk in any town or city, the same law governs other productions. He deprecated any attempt by separate education or otherwise to make farmers a class. We have, and should have, nothing akin to the classes of older countries. The sidewalk peanut-vender may differ from the head of a great department store to-day, but time may bring changes.—R. H. H., in Rural New-Yorker.

FARM SEEDS

A man who left a place paying seventy-five dollars a month to try farming attributes a fair share of his success to the selection of the best varieties of grains and vegetables and of the best seed of those varieties. For years I have been impressed by the loss we incur because we do not have that variety of wheat, corn, potatoes, etc., absolutely adapted to our soils. I know now that I lost heavily by holding onto the Champion Rose potato after Carmen No. 3 was introduced. Of course, I did not know that the change should be made, but that does not affect the loss. This is mentioned merely as an illustration of the losses experienced by growers of grains, fruits, etc. Soils and local conditions vary so much that we can learn only by experience what is the very best for us, and this is a slow process. Good seed chock-full of vitality, of the best varieties, is half the battle in production, and it is gotten by a painstaking care that few are willing to give. Thus we lose.—Alva Agee, in National Stockman and Farmer.

RECENT PUBLICATIONS

CATALOGUES RECEIVED

- J. M. Philips' Sons, Mercersburg, Pa. Catalogue of garden, farm and flower seeds.
A. L. King Rose Co., Ontario, Cal. Handsome catalogue of roses, palms and grape-vines.
R. H. Shumway, Rockford, Ill. Shumway's Garden Guide for 1900, profusely illustrated.
The Joseph Harris Co., Coldwater, N. J. Rural annual for 1900, "Seeds From the Grower to the Sower."
Ford Seed Co., Ravenna, Ohio. Catalogue of farm, garden and flower seeds, plants, fruit-trees, etc.
W. Atlee Burpee & Co., Philadelphia, Pa. Farm annual for 1900, listing choice seeds tested at Fordhook Farm.
Henry Lewis, Florence, Colorado. Booklet of facts by Hunter Woodson about the "Oil City of the Centennial State."
C. E. Whitten's Nursery, Bridgman, Mich. Catalogue of small-fruit-plants. Specialty, "Strawberry-plants that grow."
Sure Hatch Incubator Co., Clay Center, Neb. Catalogue of Sure Hatch Incubators and Common Sense Folding Brooders.
Chas. Gammerding, Columbus, Ohio. Illustrated and descriptive catalogue of pure-bred poultry of many varieties.
Johnson Harvester Co., Batavia, N. Y. Handsome catalogue of reapers, mowers, binders, headers and corn-harvesters.
The Storrs & Harrison Co., Painesville, Ohio. Handsome nursery and seed catalogue. Plants, trees, vines and seeds by mail a specialty.
S. G. Harris & Sons, Berlin, Ind. Nursery catalogue. Specialties, peach, apple and plum trees, choice strawberry-plants and asparagus-roots.
J. B. Armstrong, Shenandoah, Iowa. Hints on corn-growing. Catalogue of the Pleasant Valley seed-corn farm. Special varieties, Early Yellow Rose and Snow-Flake White.
S. L. Allen & Co., Philadelphia, Pa. Catalogue of the world-famed "Planet Jr." farm and garden tools, with a unique picture-gallery showing them at work in many different countries.



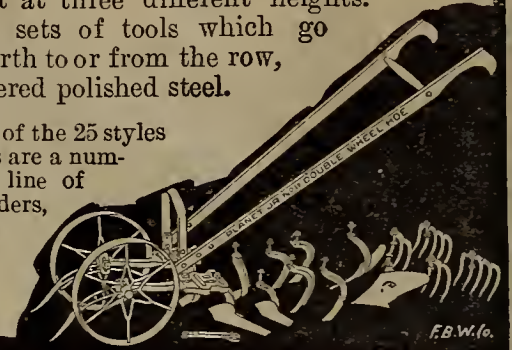
"PLANET JRS."

Putting in a Ton and a Half of Onion Seed.

After sowing—which is best done by the "PLANET JR." Seeders—there is nothing the equal of the PLANET JR. No. 11 Double Wheel Hoe for cultivation. Works corn, peas, beans, salad, onions, sugar beets, chickory or any other garden or market garden crop. Look at the large number of attachments. All these can be changed and adjusted to suit the crop. The Wheels can be set at four distances apart to fit different widths of row. Can also be set at three different heights. Handles adjustable to any height to fit the man. The seven sets of tools which go with each No. 11 Wheel Hoe will work the middles, level or throw earth to or from the row, cultivate deep or shallow, plow, hoe and rake. All blades are of tempered polished steel.

Each of the 350,000 catalogues we have issued for 1900 gives full description of the 25 styles of Seed Drills and Wheel Hoes we make. Among the 16 full page half tone cuts are a number showing their use in the field in various countries. Describes also our full line of tools embracing Horse Hoes, Cultivators, Harrows, Two-Horse Cultivators, Seeders, Four Row and Single Row Sugar Beet Cultivators, &c. We mail a copy of this catalogue free.

S. L. ALLEN & CO., Box 1107-F, PHILADELPHIA, PA.



Advertisement for various farming tools with prices and descriptions: \$18.50 for harness, \$8.90 for lever harrow, \$20.55 for 8-ft. steel mill, \$11.90 for 2-horse cultivator, \$1.00 for bow seeder, 75c for corn planter, \$8.65 for one-horse planter.



Before Buying Seeds, you should write a postal for Burpee's Farm Annual for 1900 "The Leading American Seed Catalogue." A handsome new book of 140 pages—tells all about the BEST SEEDS that Grow

Burpee's Seeds Grow. Our business grows also. We fill more orders every Spring than do any other Seedsmen in the world. Will you join our army of customers? If so, write TO-DAY. W. ATLEE BURPEE & CO., Philadelphia, Pa.

Advertisement for The Kemp Manure Spreader. EVERY DAY IN THE YEAR. MOST MEN will pay \$125 for a twine binder or a corn binder, machines that can only be used a few days in the entire year, and think nothing of it. The Kemp Manure Spreader costs much less than that, and can be used successfully every day in the year. It will earn the interest on the money every day it is used. Spreads all kinds of fine and coarse manure, wood ashes, lime, salt, etc. Kemp & Burpee Mfg. Co., Box 17, Syracuse, N. Y.

Advertisement for Elkhart Carriage & Harness Mfg. Co. YOUR MONEY'S WORTH. You have a right to expect that, because you are entitled to it. To meet this condition is our aim and has been for all the 27 years we have been in this business. Elkhart Carriage & Harness Mfg. Co., Elkhart, Indiana.

Advertisement for DREER'S GARDEN CALENDAR for 1900. FREE. The best of both are offered and fully illustrated in DREER'S GARDEN CALENDAR for 1900. HENRY A. DREER, 714 Chestnut St., Philadelphia, Pa.

Advertisement for YOU CAN EASILY EARN. bicycles, sewing machines, house furnishings, ladies' or gentlemen's watches, cameras, mandolins, guitars, violins, silverware, dinner sets, guns, and your choice of a hundred other articles, all guaranteed.

Advertisement for I SELL FARMS. No matter where your farm is located, send me description and price and I will send you my successful plan for selling. W. M. OSTRANDER, 1215 Filbert Street, Philadelphia, Pa.

Advertisement for THE ABC of BEE CULTURE. The only cyclopaedia on bees, 466 pages and 406 illustrations. THE A. I. ROOT COMPANY, Medina, O.

Advertisement for TYPEWRITER HEADQUARTERS. 102 Fulton St., New York, sell all makes under half price. Coe's Eczema Cure \$1 at druggists.

Advertisement for 15 Good Bulbs and 12 Pkts. Flower Seeds for 25 cts., post-paid. All Blooming Bulbs All Rare Seeds. Double Begonias, Carnations, etc.

Advertisement for MONEY IN MELONS BUCKBEE'S NEW STRAWBERRY MELON. which created such favorable comment last season was hybridized with the strawberry, the result being the most delicious strawberry flavor. H.W. BUCKBEE, ROCKFORD, ILL. BOX 888

Advertisement for FOR 14 CENTS. We wish to gain this year 200,000 new customers. 1 Pkg. City Garden Beet, 10c. 1 Pkg. Earl's Emerald Cucumber, 15c. 1 " La Crosse Market Lettuce, 15c. 1 " Strawberry Melon, 15c. 1 " 13-Day Radish, 10c. 1 " Early Ripe Cabbage, 10c. 1 " Early Dinner Onion, 10c. 3 " Brilliant Flower Seeds, 15c. Worth \$1.00, for 14 cents.

Advertisement for 50 BULBS 25 CENTS. Will grow in the house or out of doors Hyacinths, Tulips, Crocus, Fuchsias, Oxalis, Jonquils, Daffodils, Dewey Lily, Tuberoses, Gladioli, Chinese Lily, Begonia, Gloxinia, Lilies of the Valley. FREE a giant collection of flower seeds—over 200 varieties. Address Hillside Nursery, Somerville, Mass.

Advertisement for EVERGREENS. Best Quality, \$1 to \$10 per 100. Also Full Nursery Stock. FIFTY Big Spring Bargains, Agents Wanted. Catalogue FREE. D. HILL, Evergreen Specialist, DUNDEE, ILLINOIS.

THE FARM AND FIRESIDE

MEXICAN RURAL SCENES

THE illustrations on this page are reproductions of photos made and sent to us by Mr. Winfield Scott. They give some interesting views of Mexican rural life. One illustration shows the making of tortillas, or corn-cakes. After the grain has been softened by parboiling it is mashed into a paste on a flat stone with a kind of rolling-pin. The paste, or dough, is then kneaded with the hands, spread thinly, pancake fashion, on a flat, smooth stone, baked to a turn before the fire, first one side, then the other, and served hot. The principal food of the Mexicans is tortillas and frijoles—beans. Mexican corn and beans are wholesome, nourishing foods. Probably taste and appetite are the only guides toward combining them in correct proportions to give the proper nutritive ratio.

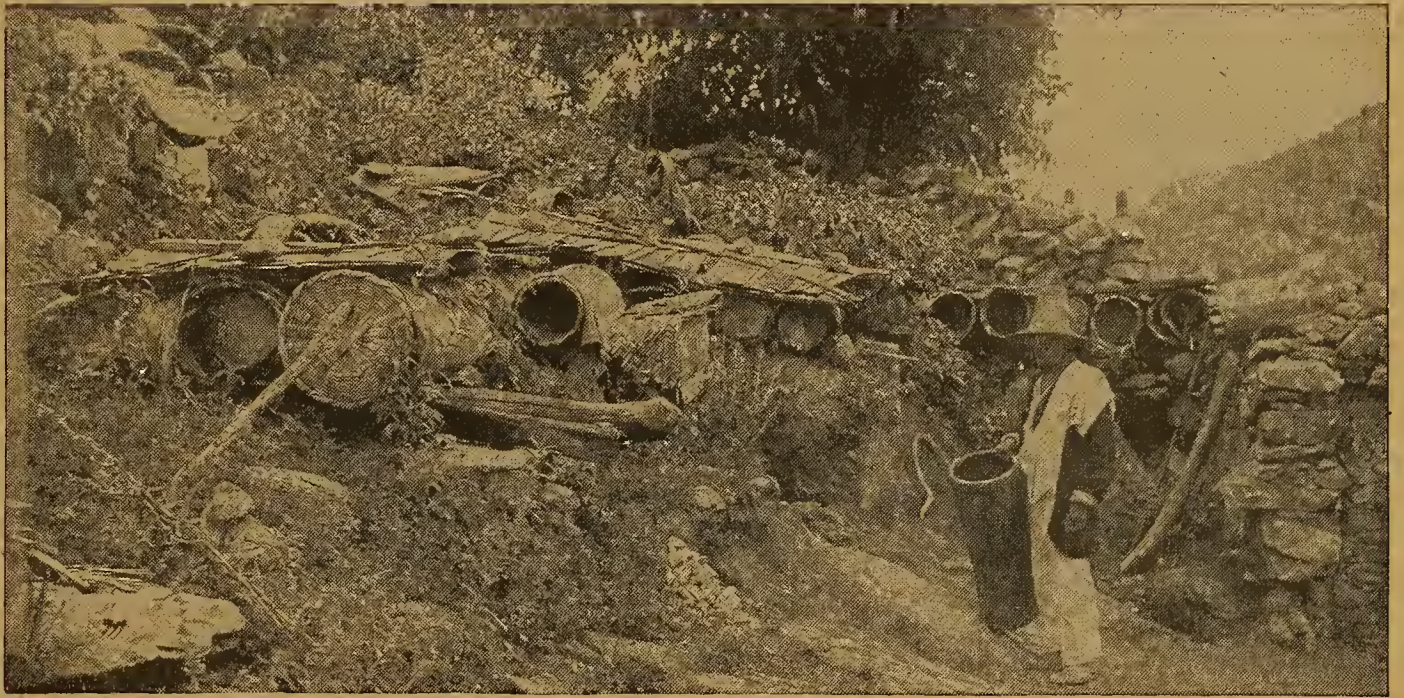
Indian corn is the leading grain crop of Mexico; the entire product, however, is about half that of Iowa. The cost of transportation is so great that in many districts no more is produced than can be consumed. The production of wheat is about one tenth that of corn, but the bean crop is two thirds that of the wheat. Melons and a great variety of fruits are produced in abundance.



The illustration of a Mexican apiary is a study for the American bee-keeper. The hives are cylindrical baskets of woven cane, about fourteen inches in diameter and three feet long, with round covers for each end. Evidently the Mexicans were familiar with the "long idea" hive before it was invented in this country, and have more use for it than our bee-keepers do. The practice of shading the hives seems to be in use, but there is no evidence visible of other modern methods, excepting the variety in the arrangement of the hives, so that each bee can distinguish its own.

"Bees make honey here the year round," writes Mr. Scott. "No honey is sold in the comb—that's a thing not known in Mexico." Therefore, the Mexican bee-keeper need not bother with one-pound section-boxes, tiering-up cases, comb-foundation, division-boards, queen-excluders, drone-traps, smokers and such other "fixin's" as our bee-keepers use.

Wheresoe'er they move, before them
Swarms the stinging-fly, the Ahmo,
Swarms the bee, the honey-maker;
Wheresoe'er they tread, beneath them
Springs a flower unknown among us,
Springs the white man's foot in blossom.
—Indian warrior in the "Song of Hiawatha."



The subject of the third illustration is the Mexican plow. "It is made of the mesquit-tree—a good, hard wood," writes Mr. Scott. "By the wedges it can be raised or lowered to plow deep or shallow. The point is of iron, tipped with steel. It is a good plow for cultivating corn, but for preparing the soil it has its drawbacks."

This rude implement is drawn by oxen, the beam being lashed to their horns by means of rawhide thongs.

The Mexican plow is similar to the ones used in Egypt, Chaldea and China many thousands of years ago. As the plow is the most important implement of tillage, the kind used in any country typifies its state of progress or backwardness in agriculture, and, indeed, its degree of civilization. Agriculture in Mexico is in the first stage of development, and the most primitive methods are followed by the people generally. But a change is taking place. In some parts of the country the American plow has been introduced, and some of the more progressive owners of large landed estates are using modern agricultural machinery. In fact, all industries are improving under the strong government of President Diaz.



The fourth illustration is a view of Tampico, a seaport on the Panuco, near the Gulf of Mexico, which has important commerce with the United States and Europe.

The general surface of Mexico is an immense table-land traversed by high mountains. This formation gives a wide range of climate and a great variety of products. In the rough high or cold lands—"tierras fridas"—are mountain peaks covered with perpetual snow. The lowest terraces and coast lands—"tierras calientes"—have a torrid climate, fertile soils and luxuriant tropical products. In the plateau region, between—"tierras templadas"—the climate is almost that of perpetual spring and very healthful, the products are those of the temperate zone, and two crops a year are grown. The atmosphere is very dry, and agriculture is dependent on irrigation, but therefore a certainty. This region is one of great agricultural and pastoral resources.



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AFTER an investigation of the agricultural conditions and possibilities of Puerto Rico Mr. O. F. Cook, a special agent of the Department of Agriculture, says:

"In the first place, I do not see how the development of Puerto Rico, agriculturally and otherwise, can be anything but a benefit rather than a harm, not only to farmers, but to all other inhabitants of the United States. Puerto Rico is not big enough, and cannot do enough under any circumstances, to affect us materially one way or the other, but as I observed the crops and conditions of the island, there will be little room for competition between them and those of the United States. On the other hand, the people of the island import largely of their necessities, and naturally we will get all this trade. They import in large quantities rice, beans, flour, potatoes, beets, codfish, cabbage, etc. In traveling over the island, at least nine tenths of the eatables offered for sale are imported. About the only crop that I can see in which they will compete with the American farmer is sugar, but their total capacity for this crop appears to be about \$10,000,000, while we now import from foreign countries nine or ten times this amount of sugar. Puerto Rican tobacco will, of course, enter into American smoking, but it is not of a class to compete with the American-grown product. As the people of the island prosper they will use much more largely of American products. At present, as a result of the Spanish rule of centuries, the majority of the population have little or nothing."

Commenting on the provision in the Senate Puerto Rican bill for a reciprocal tariff of twenty-five per cent of the Dingley law rates between the island and the mainland the Chicago "Times-Herald" says:

"Puerto Rico contains but 3,668 square miles. The imports, which have exceeded the exports, include coal, iron, meat and vegetable produce and manufactured tobacco. The exports, according to the latest complete returns at hand (1895), were coffee, \$8,789,788; tobacco, \$646,556; sugar, \$3,748,891; honey, \$517,746.

"Coffee, which is not produced in the States, has no effect on the tariff question, and honey was not represented in the lobby, so that we shall confine the comparison to tobacco and sugar alone. The year that Puerto Rico's tobacco exports amounted to \$646,556 our crop of that article was valued at \$35,574,220. The same year, when Puerto Rico's sugar output was 54,861 tons, the cane-sugar grown in our Southern states was about five times as much in quantity. At that time the production of beet-sugar here was small, but it is increasing rapidly. In 1896 it amounted to nearly half the Puerto Rico output of cane-sugar in 1895.

"What, then, is the reason for the excessive fear of the small island? Manifestly the free import of its tobacco and sugar would hardly affect our producers, and having our other new possessions in mind, there is little danger of the establishment of a precedent, unless it is proposed to knock out the Hawaiian territorial bill as it now stands. Though the Philippines produce nearly as much sugar as our cane-sugar states, they export comparatively little of it to this country, and their total tobacco crop in 1894 was valued at only \$1,750,000. Moreover, a large part of the crop is always consumed on the islands."

ACCORDING to the figures recently published by the Treasury Bureau of Statistics, the foreign commerce of the United States in the fiscal year of 1899 amounted to more than two thousand million dollars. Of this enormous amount more than three fifths were exports, and less than two fifths imports, the excess of exports over imports being nearly \$476,000,000, which has been surpassed in only one preceding year, 1898. Manufactures formed a larger proportion of the exports than ever before, being 30 per cent of the total against 26 per cent in 1897, 23 per cent in 1895, 20 per cent in 1885, 16 per cent in 1879, and 12 per cent in 1860. Agricultural products formed 63 per cent of the exports against 70 per cent in 1898, 72 per cent in 1894, 74 per cent in 1884, and 83 per cent in 1880.

"A study of the imports and exports of 1899, compared with those of earlier years, present some interesting facts. From 1869 to 1899 imports doubled, while exports quadrupled. The imports in 1869 were \$438,453,894 and the exports \$337,375,988, making an excess of imports over exports amounting to \$101,079,906, while the excess of exports in 1899 is \$475,652,051. Relatively the proportion of free and dutiable goods in the list of imports differs greatly in the figures of 1899 from those of 1869, only \$21,775,643 of the total of \$438,453,894 imported in 1869 being admitted free of duty, while in 1899 \$331,814,004 of the \$799,834,620 imported came in free of duty."

LETTERS from readers referring to recent articles by one of our regular contributors on planting forest-trees indicate considerable interest in the subject. The Division of Forestry, of the United States Department of Agriculture, is prepared to assist in the good work, as explained by the following from a recent bulletin by Mr. Gifford Pinchot, forester:

"The offer to give advice and furnish working plans to persons desiring to plant forest-trees, made last August by the Division of Forestry, has received immediate response from farmers in every part of the country. Although but a few months have elapsed since the offer became generally known, one hundred and eighteen applications have been received, and plans for thirty-eight of these will be completed before the time for spring planting to begin. A still larger number have asked for written advice, which does not require field inspection by the forest officials. The treeless states have been quickest to avail themselves of assistance, the number of applications being as follows: Kansas, 38; Oklahoma, 19; Nebraska, 12; North Dakota, 9; Iowa, 6; Indiana, 5; Texas, 5; Minnesota, 4; Colorado, 3; Washington, 3; South Dakota, 2; California, 2; Illinois, 2; New York, 2; Ohio, 1; Missouri, 1; Delaware, 1.

"The majority of plans are for tracts of five to ten acres, intended by prairie farmers to afford wind-breaks and fuel supplies. A few plantings of 1,000 and 2,000 acres are being made as experiments in raising forest crops for market in regions where such material is scarce. After considering these applications in order, the Division of Forestry has sent experts to study the conditions of as many as possible of localities

which offered the best opportunities for object-lessons to the public. Plans will be sent without delay to each owner, instructing him in detail how to plant, and recommending the species best adapted to his tract."

SENATOR PETTIGREW recently precipitated a very warm debate in the Senate by his persistent efforts to obtain recognition for Aguinaldo and the Tagal insurgents. He presented a resolution containing Aguinaldo's statement concerning the insurrection of the Filipinos against the Spaniards and his notorious version of a conference between himself and Admiral Dewey.

"The reason I protest," said Senator Lodge, "is that the document contains a number of statements that are absolutely false. Statements are attributed to Admiral Dewey which are utterly without foundation. The Anti-imperialistic League and its one organ can print such matter as this without restriction. But that the United States government should lend its aid to the circulation of branded falsehoods concerning the admiral of the navy is preposterous."

Senator Lodge then read the following letter:

"Dear Senator Lodge:—The statement of Emilio Aguinaldo, as recently published in the "Springfield Republican," so far as it relates to me, is a tissue of falsehoods. I never promised directly or indirectly independence for the Filipinos. I never treated him as an ally, except to make use of him and the soldiers to assist me in my operations against the Spaniards. He never alluded to the word 'independence' in any conversation with me or my officers.

"The statement that I received him with military honors or saluted the so-called Filipino flag is absolutely false.

"Sincerely yours,

"GEORGE DEWEY."

The admiral's concise statement is a complete refutation of the tissue of falsehoods so persistently used by pettifogging demagogues in their tirades on the Philippine question. As between the word of Admiral Dewey and that of Aguinaldo and his traitorous supporters there can be no question which the American people will accept.

THE war in South Africa has turned a search-light on the political and social conditions prevailing in the Transvaal, and revealed something to commend and much to condemn. The great military ability displayed by the Boers in their struggle with the British for supremacy in South Africa commands admiration, and finds historical parallels in the defense of Plevna by the Turks against the Russians, and in the memorable defense of Richmond by Lee against Grant.

The sagacity and secrecy with which the Boers, for many years, have been preparing for the struggle; the political craftiness which applied a system of fiscal and commercial taxation that made the Uitlanders pay for the vast modern armament accumulated; the finesse of the preliminary negotiations; the boldness of the ultimatum when ready for the conflict, and the swiftness of their invasion and annexation of the enemy's territory, have seldom been surpassed.

Although they have failed so far in their bold, aggressive plans to overrun Natal and Cape Colony, cause a general uprising of the Dutch population, and "sweep the British off Table Rock into the sea," they have demonstrated defensive strength of the highest order.

The war is for supremacy in South Africa, and its immediate occasion the contention of the Uitlanders in the Transvaal against "taxation without representation" by a corrupt and oppressive oligarchy; but the original quarrel began years ago because the British tried to prevent the Boers from continuing the practice of slavery and massacring natives. The "great trek" of 1835 was made, not to gain liberty, but to hold slavery. To this day civil, political and religious liberty does not exist in the Transvaal—not even for the white man, while the native is absolutely outside the pale of human rights. Across the boundary-line there is liberty for all. Black, Boer and Briton live under a government of equal laws, equal opportunities and equal rights. The civilizations of the seventeenth and nineteenth centuries are now in conflict, and that boundary-line

dividing them must be obliterated before permanent peace can be established in South Africa, and Briton and Boer amalgamated into Afrikaners.

Some weeks ago Mr. Thomas G. Shearman published a statement drawn from American sources of information on the treatment of the Uitlanders. His indictment, which has not been successfully controverted, reads as follows:

"The Transvaal Republic is admitted by its latest advocate, in the current number of 'The North American Review,' to be an oligarchy of a few dozen Boers. Its parliament consists of two houses, one of which has no power, and the other is absolutely controlled by the oligarchy. Its courts of justice are entirely at the mercy of the president, who not long since removed the highest judges because they would not decide according to his pleasure. When the independence of the Transvaal was conceded, in 1851, it expressly covenanted to put all foreigners entering the Transvaal upon an equal footing with the Boers themselves in every respect except the right of suffrage. So far from doing this the Boers have purposely arranged taxation so that nine tenths of it shall be paid by foreigners; they have taxed foreigners heavily to support schools in which the Dutch language is exclusively used; they have insisted that even private schools, maintained by foreigners at their own expense, should teach Dutch on an equal footing with English; they have maintained a government so corrupt that, according to the statement of an American newspaper friendly to the Boers, President Kruger has amassed \$25,000,000 within the last ten years, although doing no business; they have maintained a monopoly in dynamite, an indispensable instrument in mining, in the profits of which President Kruger has largely shared; they have kept towns, built exclusively by foreigners, under exclusive Boer control, and have refused to permit decent sanitation, thereby doubling the death-rate; they have prohibited Americans and Englishmen from holding public meetings; they have denied to them even the right of petition; they have removed their own supreme court from office, simply because its decisions rendered some small justice to foreigners; and they have prohibited any Englishman or American from carrying arms of any kind, while furnishing to every Boer boy of sixteen years of age a rifle and a revolver, and surrounding Johannesburg with Krupp guns, the entire cost of which has been taken out of the pockets of Englishmen and Americans.

"Repeated appeals to the Boer government to remedy these and many other similar acts of oppression have proved entirely futile. At one time the Boers forcibly seized Englishmen and compelled them to serve with their troops in war against native Africans. Against this Great Britain energetically remonstrated; and nothing but the fear of war sufficed to induce the Boers to liberate the Englishmen thus forcibly pressed into service. When the independence of the Transvaal was conceded, in their laws it was provided that foreigners might be naturalized after five years' residence; but as soon as any considerable number of foreigners entered the country the naturalization laws were entirely repealed. And when at a somewhat later period they were in part restored, they only permitted naturalization at the end of fourteen years, with the consent of two thirds of the Boers residing in the district, and also of a military officer, which consent might be refused without any reason. As a condition of naturalization every Englishman was required to renounce all claim upon England, and every American to renounce all claim upon the United States, for protection against any outrage which might be committed upon him during the next fourteen years, so that an American desiring to vote at the end of fourteen years would be during that whole period neither an American nor a Boer, nor a citizen of any country whatever; while at the end of the fourteen years naturalization could be denied to him in the uncontrolled discretion of the military officer commanding his district. And after he had passed through all this ordeal he would only receive the right to vote for the second chamber of the Boer legislature, while all the power of government was exclusively conferred upon the president and the upper chamber. The consequence of this state of things has been that Americans who settled in the Transvaal have always been the most earnest opponents of Boer rule; and in 1895 the very first man arrested for alleged treason and cast into a Boer prison was a distinguished American citizen, John Hays Hammond."



ABOUT RURAL AFFAIRS

Organizing to Maintain Prices

It is often much easier to give instructions than to follow them; much easier to preach than to practise. This is surely true of the advice given to farmers to organize for the purpose of cutting down the visible supply of food products to the level of the regular demand. Everybody will readily admit the folly of showing to our customers an oversupply. The "New York Farmer" gives the following examples: "Remember that five tons of hay rushed in to supply a demand for four tons must be sold for about the value of the four tons. If you wish to hire four men, and only four men appear, you will have to pay them their price, for the supply just balances your demand. If the fifth man appears, your demand is oversupplied, and the fifth man enables you to fix your terms for salaries. If but three appear, the undersupply will enable them to make terms for you. This principle holds true in all your relations to the market. Your eleventh cabbage or celery or bushel of wheat, corn, potatoes or other produce appearing where the full demand is only for ten will break the price of the entire eleven articles." It is true that in our anxiety to dispose of our products we have often made our customers believe in the existence of an oversupply when there was hardly enough to fill the legitimate demand. Just because we do not know what the other fellows are doing we crowd a lot of stuff on the market one day or one week, while another day or another week there may be a shortage. The farmers of one vicinity or around one market should get together; pool their issues, as it were. They could easily make an estimate of the food products available for sale, then agree on systematic marketing and a scale of prices. I say they should do it. But it is easier to preach than to practise. I am afraid it will be a good while before farmers adopt such line of action generally.

Raising Calves

The one thing that I have wished to find out in raising calves is what to feed them in place of milk, when one has only a small supply of it or wants to bring up two calves on milk enough for only one. I know that I have to be very careful in feeding grain feeds to young calves. I have always started in with meals on a teaspoon ration, and increased this little by little up to the amount that I thought the animal could stand. Even then I must watch the calf closely, and reduce or withhold the ration as soon as it seems to bring ill results. From the New York Experiment Station at Geneva I have the following letter in answer to my inquiry: "We have fed calves successfully, using sweet skim-milk supplemented by a little gruel made from old-process linseed-meal. The gruel was made by using seven parts of hot water to one of meal. Ground oats and wheat middlings were afterward added by degrees. Ten pounds of skim-milk to about three pounds of gruel took the place of ten pounds of whole milk. Ground flaxseed has been generally preferred where it could be cheaply obtained. Hay tea is said to be sometimes used where milk cannot be had, a little flaxseed or some linseed-meal and wheat middlings being added. At the Iowa station it has been found that corn-meal or ground oats gave with skim-milk better results than linseed-meal. With corn-meal about one tenth as much linseed-meal was used. The Kansas station recommends feeding the meal to calves separate from the skim-milk, and dry. In feeding calves, especially on unusual rations, overfeeding should be carefully avoided." This is good enough as far as it goes. I know, however, that some people bring up calves successfully on grains and hay alone, without any milk after the first few weeks. If any reader follows the practice, I ask him to tell us some of the details about the business. Years ago some of my people used to feed hay tea when milk was in rather short supply. I could never see much use in bothering with hay in this way. Calves learn to eat hay when very young, anyway. They should be given a regular supply of best clover hay. But so far as the hay soup is concerned, there cannot be much substance in it, and it will be found much simpler to supply nourishment by a little meal (may this be flaxseed, linseed, or a mixture of ground grains, either

dry or in water) than to try to boil a little nutriment out of a handful of hay. Dry feeding of meals will probably be safest in most cases, since the animal will not be so apt to eat more of the dry mess than its digestive apparatus can take care of. Calves soon learn to eat dry whole oats, too, and I believe this to be one of the safest feeds.

Fertilizers for the Garden

A series of experiments made recently (since 1892) by the experiment station of Massachusetts, and summarized in a farmer's bulletin (issued by the department at Washington), throws a good deal of light on many things in connection with the use of chemical fertilizers on garden crops which have sometimes been a puzzle to me. I quote as follows: "Nitrate of soda in almost every instance proved the most valuable source of nitrogen, whether used with muriate or sulphate of potash. Sulphate of ammonia and muriate of potash when used together gave the poorest yield in every instance. The result was apparently due to a chemical reaction between these two substances in the soil, resulting in the formation of ammonium chlorid, a substance which is injurious to plant growth. . . . Spinach gave by far the best results with nitrate of soda. On sulphate of ammonia plats it was almost an absolute failure, many plants dying soon after germination, and most of the others becoming yellow and sickly. Sulphate of potash gave somewhat better returns than did the muriate. Very similar results were obtained with beets. Most of the plants on the sulphate of ammonia plats became weak and sickly, and many died; but the few that survived until about July gradually recovered their vigor and grew very rapidly." The effect of nitrate of soda on spinach and beets is no new discovery. A year or two before the Massachusetts station began these experiments I sketched and published in "How to Make the Garden Pay" some rows of spinach as I had grown it in my garden in New Jersey, showing the wonderful thrift of the rows treated with nitrate of soda compared with untreated rows. I have seen the decided pushing effect of that chemical on beets and cabbages almost every year, and for that reason sodium nitrate has held a high place in my estimation. On the other hand, I have not until now been able to account for the singular behavior of a patch of beets. The land seemed well suited for the crop, a rich, warm loam that had received a heavy dressing of Buffalo stock-yard manure the year before. Just before planting I applied a top-dressing, broadcast, of sulphate of ammonia, of which I had a supply that I wanted to get rid of. The seed was good, and yet but few of the plants came up, and those that did come lacked thrift. It was only late in the season that they began to make satisfactory growth. The sulphate of ammonia apparently cut my crop down several hundred bushels. It is all plain to me now. Let me quote another portion of the bulletin:

"The results with tomatoes were also in part similar. Sulphate of potash gave somewhat better returns than the muriate, and nitrate of soda gave the best yield of all the sources of nitrogen; but the differences were far less pronounced than in the cases of spinach and beets. Contrary to the results in these cases, however, the sulphate of ammonia did not appear to have injuriously affected the crop. . . . Lettuce yielded better on barn-yard manure alone than on the plats to which fertilizers were also applied. This result is exactly in line with the results obtained at the New York state station, where it was found that after the soil had received a heavy application of stable manure any further addition of chemical fertilizers is only thrown away. Here, as before, sulphate of ammonia was found to be highly injurious, especially when used with muriate of potash. Cabbage seemed to be somewhat benefited by the addition of fertilizers to barn-yard manure. The difference in the effect of the different fertilizers was not very marked. Nitrate of soda appeared to be the best source of nitrogen." These are very interesting details. They show us that we must proceed with caution and understandingly when we undertake to save money by using home mixtures or

simple chemical plant-foods in place of ready-made fertilizers from the fertilizer-works. We have no guarantee, either, that the commercial-fertilizer mixer understands all these points, for they are as yet new. It is just possible that some of the negative or ill results from the use of factory-mixed, complete fertilizers were only due to faulty combinations. I was glad, however, to have a confirmation of what I long have believed to be true; namely, that nitrate of soda is a safe and also the cheapest and best source of nitrogen, and that muriate of potash, this usually cheapest source of commercial potash, is also safe to apply in any case, and seldom with less favorable results than any other form of that element of plant-food. We can get along very well without sulphate of ammonia, and thus avoid the risks of its use. Altogether, we have lessons here worth remembering.

T. GREINER.

SALIENT FARM NOTES

Fear of Increased Taxation A few days ago I received a call from a young farmer who said he had come to get a little information respecting a matter of considerable importance to him. Some of his neighbors, he said, were desirous of having the mail delivered in that locality, and they had asked him to join them in a petition to the post-office department. He had not signed it because he wished to investigate a little. "What I want to know," said he, "is how much this mail delivery will increase our taxes. They are about as high as I can stand now, and I'm not going into anything that will increase them!"

He is a fairly intelligent young man, and takes his county paper and one agricultural journal, but he says he is too busy most of the time to read much.

I felt sorry for the boy, and explained rural free delivery of mail at length. But I found it quite difficult to satisfy him that such delivery would not in some way increase his taxes. It was hard to persuade him that the government expected to be reimbursed by the natural increase in postal revenues. I asked him if he would write to relatives and friends oftener if he could have their replies promptly delivered at his gate. He said he surely would. He often postponed the writing of a letter until he expected to go to town, and then he would be too busy to attend to it. "I could write a letter almost any evening," said he, "and would write lots more than I do if I was sure it would go the following day." I pointed out how that would increase the postal revenues and pay the cost of free delivery. He was satisfied, and went home and signed the petition.

When I took the census of this township ten years ago many farmers strongly objected to stating the number of the various kinds of stock they possessed from fear that in some way their taxes would be increased. I have found that fear of increased taxation is at the root of the intense "conservatism" of the farmers in every section of the country I have been in. They even fear measures that are designed to benefit them. Said one prosperous farmer: "Every dollar's worth of property I have is in sight, and when the assessor comes around he assesses me for every cent I'm worth, and, naturally, my taxes are very high compared with those of some others who are generally rated as being worth two or three times as much as I am. Let it be understood that I am not opposed to substantial public improvements, provided the burden of paying for them falls on all property alike and all property is assessed at the same rate as mine." In every instance that proposed public improvements were submitted to a vote of the people this man's vote went on the negative side. He said this was because he feared to start such balls rolling "because they have such a peculiar way of increasing in diameter at every revolution."

Forestry Before me lies a long letter from an Ohio farmer urging me to call the attention of farmers to the rapid disappearance of the natural forests of this country, and to do all possible to induce them to begin planting for their own use.

I have already done so. In fact, I have been urging farmers to plant forest-trees in groves and belts for nearly twenty years. And especially to plant rough land and steep hillsides. Too much cannot be said on this subject, and it will ere long take a prominent place in the discussions at farmers' institutes. Some sort of woven wire will be the farm fence hereafter, but we will need

posts to fasten it to, and the sooner every farmer begins growing his own supply the better off will he be. At a banquet of the Hardwood and Lumber Manufacturers' Exchange, held in St. Louis, Missouri, recently the retiring president stated that the time would soon come when this country would awaken to a realization of the fact that something must be done to protect its forests. He said that there was much useless and senseless destruction of woods in our country, and that some action by the government was necessary to stop it. He said, further, that Austria had become aroused in the matter and had recently enacted laws prohibiting the cutting down of the forests, and that all the lumber which that country now uses is imported from other lands.

This government should have taken action in the matter long ago. It will be very difficult to enact any effective measures now that nearly all of the natural forest area has passed into private hands. I am satisfied that no efficient laws for the protection of our remaining forests will be enacted until too late to be of any real service. This being the case, there is nothing to be done but plant for our own use on our own land. In a few years the farm with a grove of trees growing on it will have the call in market. It will be valued at a much higher rate than a bare farm, because wood will be needed as long as man exists, and it will be needed on the farm as much, if not more, than elsewhere.

I feel that no one can too strongly urge the planting of useful forest-trees now. Many years are required to grow even the most rapid to a useful size, and the work cannot be commenced too soon. In last issue I stated that Catalpa speciosa and white ash are two of the best rapid growers to plant, and two that make valuable wood. I would not limit plants to these two varieties, but I think they should form a liberal proportion of those planted. Some years ago the soft maple was very highly recommended for planting on the prairies for wind-breaks, etc., and being an easy tree to grow, millions of them were set out. If the planters had set the two kinds mentioned above instead of the soft maple they would now have some first-class wood for use or market instead of a lot of stuff that is neither lumber nor fuel. If you have a corner or rough spots on the farm plant a few forest-trees there. If you are setting out shade-trees plant such as will make valuable wood. On our prairie soils the sugar-maple grows quite rapidly, and no shade-tree is more effective or beautiful. Above all things, avoid the useless, soft-wooded trees like the soft maple and poplar. I do not advocate Catalpa speciosa for shade or a single row. To make good, straight trees and valuable timber it should be planted in groves. Let me urge all landowners to begin the coming spring and plant at least a few forest-trees. It will pay!

Best Apples and Pears A young farmer living in Missouri writes: "I am a farmer, and I expect to make my living by farming. I have eighty acres of land, and it keeps me rather busy to manage it. What I want is this: Will you name a few apples and pears that will supply me with fruit? I mean kinds that will be reasonably sure to grow, and bear fruit when they are grown. I am fond of apples and pears, but it is plain to me that the time I can give them will be limited, so I do not want more than I can manage in my spare moments, say about a dozen trees in all."

For apples I would plant two Duchess of Oldenburg, two Grimes' Golden, two Ben Davis, two Jonathan and one Maiden's Blush. Then two Keiffer pears and one Bartlett. If you plant the above list and take good care of them, which you can do without interfering with your regular farm-work, you will have apples if anybody in the locality has, and when the trees come into full bearing you will have some to sell. If you will gather the Keiffer pears when they are ready for gathering, and ripen them in a coldish, dark room, you will have the finest canning-pears that grow. A great deal of stuff has been said and written against the Ben Davis apple and Keiffer pear, but the fact remains that when properly ripened the former is one of the best cooking-apples grown, and the latter is about as good a canning-pear as any, while both are good, safe, healthy, rapid growers, and they bear fruit as often, and as much of it, as any varieties in existence.

FRED GRUNDY.

OUR FARM

FARM THEORY AND PRACTICE

FARM FENCING.—"What is the best material for farm fencing, everything considered?" is a question that I often hear discussed. Fencing is a heavy tax on most farmers. I am sure that we have entirely too many miles of fences in nearly every community. There is a disposition to pasture tilled fields that should never have any live stock upon them. It is safe to say that most farms have some such fields. When they are intended chiefly for the plow and for meadow there is loss from tramping the ground when wet and from letting stock rob the soil of all growth that is so badly needed for turning under. We have, too, so many cross-fences that make rows short for tillage. As to roadside fences, it is largely a local matter, but there are hundreds of thousands of miles of useless roadside fences furnishing a harbor for weeds, insects and fungous diseases, and causing waste of money and land. But we must have much fencing, and the question is in regard to its material and construction.

MANY KINDS OF FENCES.—The "Virginia rail fence" is being displaced rapidly, as the old supply of rails is being exhausted. Many of these old fences are renewed by wiring the rails to posts set in a straight line. The device by which the rails are swung to two riders is a patented one, and I do not like it. Such a fence does not usually last as well as the post-and-rail fence.

The board fence is too costly and heavy. It is a good, strong fence, but the cost is prohibitive, and when the posts begin to weaken the boards present too much surface to the wind.

The hedge is all right under some circumstances, but can never be a very popular fence. It must be well set and then kept under control. In a dry season it robs the soil of needed moisture. But a good hedge kept neat and strictly under control is a cheap fence for horses and cattle.

WIRE FENCING.—The fencing material of the future, however, must be wire. The question with most farmers is simply what form of wire to use. The common barbed wire is always dangerous in a greater or less degree. The barbs are severe. But there doubtless is a greater mileage of such material in use than of all other forms of wire combined. For ordinary farm use I do not like it. The plain wire, of single strand, braced at close intervals, makes a safe fence that will restrain most kinds of stock, but such wire cannot resist the contraction of cold with as little danger as the twisted or looped wire. Devices for regulating the tension have no value for four farmers out of five because they will not be used. Wire properly woven makes a splendid fence, although rather costly if the wire is good and heavy. The woven-wire fence seems to be the coming fence. But poor wire not resistant to rust and without proper means of relieving tension in cold weather makes a dear fence in the North. Just now wire is excessively high. Present prices cannot be maintained for any long term of years. For the present they restrict buying.

FLY IN WHEAT.—In several of the winter-wheat states there is much complaint of serious injury by the Hessian fly. I believe that we must learn to seed later in the fall. The objection is that the plants do not get

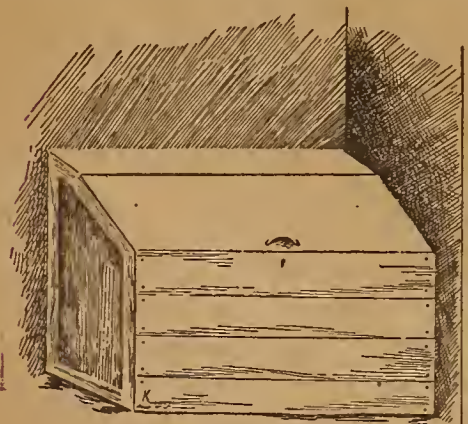


FIG. 2—FEED-BOX

well rooted for winter; but better preparation of the seed-bed would do much good in this respect. It is true that the late-seeded fields are sometimes badly infested with fly in the spring, but our best authorities say this can hardly occur if no fields in the neigh-

borhood are seeded early enough in the fall to give the fall brood of fly a breeding-ground. When fields get the fly in the fall they carry over the larvae, and the spring brood seek the tender plants in other fields, oftentimes, for deposition of their eggs. The one effective way of combating this wheat pest is later seeding by all in the neighborhood. If this course be adopted the ravages of the fly would amount to little. As it is the damage amounts to millions of dollars. Wait until danger of fly is past, but have the seed-bed fine, and push the growth with home or commercial fertilizers if necessary.

QUALITY OF WHEAT.—The price of wheat remains low. The producer of winter wheat receives several cents a bushel less for his crop than he would receive if the quality was equal to the best spring wheat. The best flour cannot be made from our soft winter wheats, and in many farming sections it is the custom to sell all the wheat and buy spring-wheat flour. The baker in a big institution recently told me that he used the home flour for pastry, and a mixture of the spring and winter wheat for bread. If we do not grow a good milling wheat the price must be cut. It does seem that a productive variety for the winter-wheat belt, that would equal in quality the best spring-wheat variety, should be secured in some way, but it is not now in existence. We grow the lowest-priced varieties because they are the most productive. But we need both quantity and quality. If the milling quality of our winter wheat was the best the world's demand for it would add materially to the present market price.

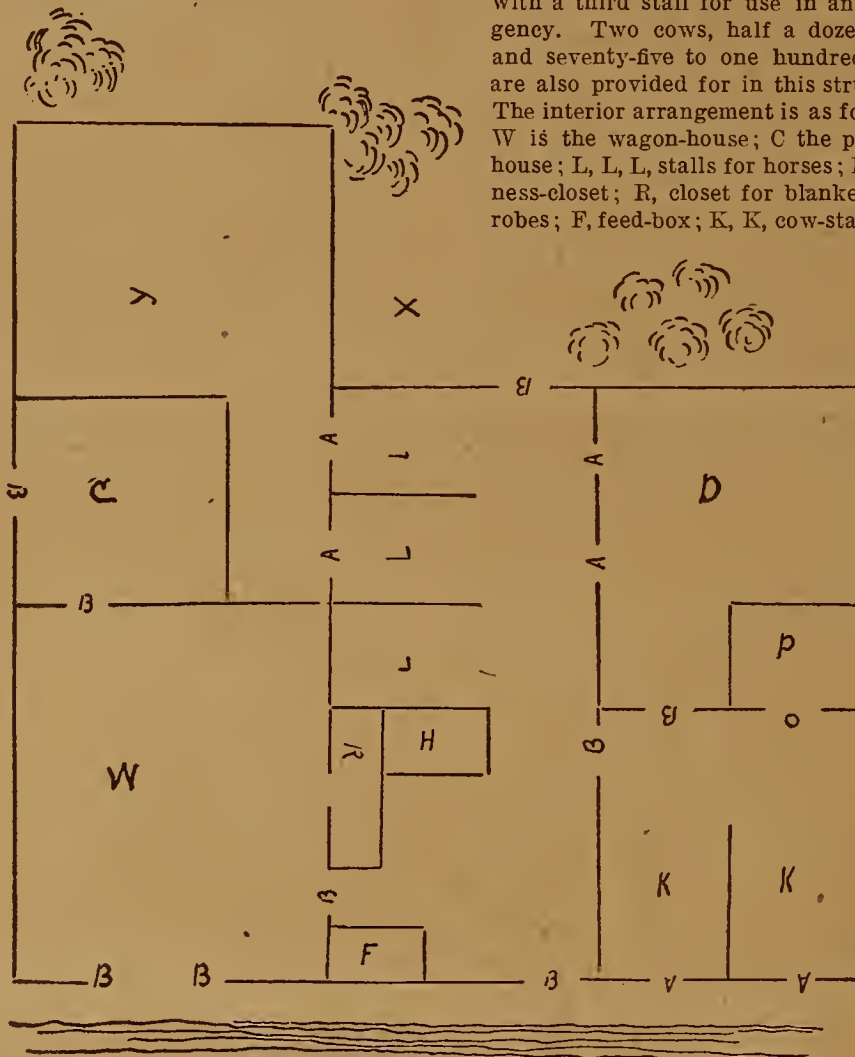


FIG. 1—GROUND-PLAN OF A BARN

EARLY SEEDING OF OATS.—South of the fortieth parallel of latitude in the central states oats are not a sure crop. There is too much heat, and a few days of high temperature in the first week of July may convert a fine prospect into a poor half crop. If oats must be seeded in this district the work should be pushed as early in the spring as possible. I like winter plowing of heavy corn-stubble land, and then the use of a spring-tooth or disk harrow in the spring; but in loose soils no breaking with the plow is necessary. The ground can be harrowed, dragged and then seeded without delay. The best results probably are secured by broadcasting half the seed and then drilling in the other half. Some prefer to drill in half the seed and then cross-drill. In this the danger of interruption by rain must be considered. The first method secures better distribution of the seed than by drilling the full amount, and the hoes cover the seed that has been broadcasted.

DAVID.

THE OIL-STONE

Whether the farmer has only half a dozen tools or a shopful the oil-stone is an indispensable article on the farm. Generally it is not properly taken care of, the oil becoming gummy and the uncovered stone collecting dust and dirt until it is almost useless

until half an hour is used up in cleaning it. I avoid this trouble by using a box made to fit the stone and by applying glycerin instead of oil. Glycerin never dries up, since it has the power to collect moisture from the air, and it never gives trouble in cleaning, since a little water will wash away all the dirt. Try this way. If your oil-stone is dirty now you may clean it with benzine quicker than with anything else, and you may afterward use glycerin upon it.

M. G. KAINS.

A COMPLETE BARN WITH CONVENIENCES

The accompanying ground-plan of a barn is designed to show what is possible without any great expenditure of money, such as is demanded by the modern barns. The plan is drawn from a structure in daily use, one built many years ago, yet more valuable to-day than when originally built, in that increased stock seems only to make it more homelike. This barn was designed to meet the requirements of the small farmer, and was built with an eye to economy of material and space, while its convenience was kept in mind at all times. The exterior appearance is pleasing, though not perhaps so much so as more modern structures; but what is lost in this respect is more than made good by the advantages coming from being able to handle all of the stock practically under one roof. Only those whose stock is divided among half a dozen buildings can fully appreciate the advantages named in the structure shown. Its dimensions may be according to one's needs, and a building of this sort is easily planned by a local carpenter under the farmer's direction.

The horse-stable is designed for two horses, with a third stall for use in an emergency. Two cows, half a dozen pigs and seventy-five to one hundred hens are also provided for in this structure. The interior arrangement is as follows: W is the wagon-house; C the poultry-house; L, L, L, stalls for horses; H, harness-closet; R, closet for blankets and robes; F, feed-box; K, K, cow-stalls; P,

especially favored in its location, there being plenty of sheltered corners for winter use, while in the summer additional shade is quickly and cheaply provided by planting a row of sunflowers along the edge on the outside of the yard fence. A close-board fence is built on the west side of the barn-yard, and in the winter corn-stalks may be stacked

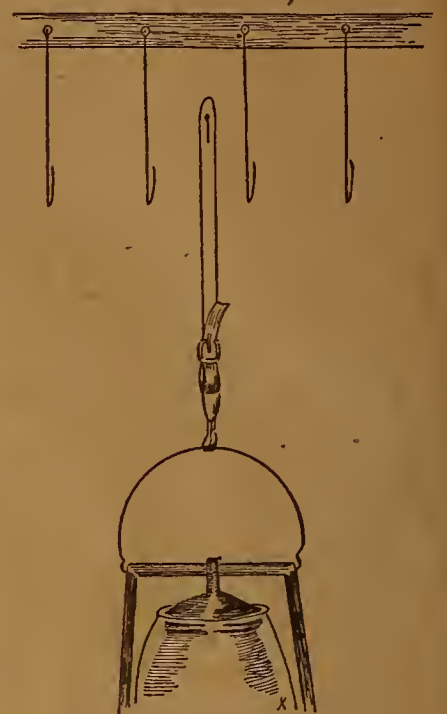


FIG. 3—HANGING THE LANTERN

against it on the outside to keep out the sharp west wind. This protects the yard so that the cows can occupy it with comfort on all but very stormy days.

At X a good well is dug, and a water-tub placed in a protected corner of the barn-yard may be readily filled from the well.

The harness-closet (H) may be inclosed or not, as desired, but the blanket and robe closet should be tightly built, so as to exclude dust, and be fitted with shelves. This closet opens from the wagon-room as shown. A few shelves at the left of the front door of the stable beside the feed-box (F) will be found very convenient.

THE FEED-BOX.—Fig. 2 shows the feed-box in this, to me, model barn. It is simply constructed, will hold several bushels of grain, and cannot be opened by any of the stock, should they get near it. Inch boards that have been planed are used, and are screwed to the framework, and strong hinges fasten the perfect-fitting cover to the part of the top that is stationary. A metal handle is screwed on the cover near the front edge, as shown, by which the cover of the box is easily raised. The particular box shown in Fig. 2 was a remodeled upright-piano box which was bought for less than it would have been possible to buy the lumber, and so the work of refashioning it was slight. A feed-box of some sort is an absolute necessity, and when one can be built as easily and cheaply as the one described there is no excuse for any farmer going without such a convenience.

LIGHTING THE BARN.—For several months of the year a light is necessary in the barn for many hours at a time, and to effectually guard against accidents by fire the device shown in Fig. 3 is well worth copying. As seen in the illustration, long hooks of heavy wire are formed so that the hook at the end of each is bent at least three inches, the other end being fastened firmly to beams back of the cows, the horses, and at other points in the building that may be convenient. The lantern bale or handle is slipped over this hook, and should the lantern be accidentally knocked it would be almost impossible to throw it off the hooked wire. When the lantern must be carried about more or less, and it is not practicable to have the hooked wires as described, obtain a broad strap, cut a hole in one end of it, fasten the other end by a buckle to the bale of the lantern, and when the lantern is to be hung up slip the buttonhole in the strap over large nails, that may be driven in the walls at convenient points throughout the barn. A more convenient strap would be one with a spring-snap fastened to one end, which could be quickly attached to the lantern handle.

While the barn and its conveniences here shown and described may seem homely and on too small a scale to many readers, they are "just the thing" for the small farmer who, working alone, must practise economy in his steps quite as much as in anything else, and many who have adopted these plans can testify as to their value.

GEO. R. KNAPP.

NOTES FROM GARDEN AND FIELD

CATALOGUE SUGGESTIONS.—In the last issue I have already alluded to Burpee's "Farm Annual," as the firm calls its well-gotten-up annual catalogue. As usual, it is inclosed in a tastily designed and very attractive cover. It is complete in its contents and comprehensive in its arrangement, and always interesting and instructive; in fact, one of the dozen seed-catalogues that no garden lover can afford to miss. Mr. Burpee is also the most persistent publisher of horticultural books and pamphlets, and as persistent a hunter for horticultural novelties. Among the newer vegetables which the firm catalogues this year I notice the Sheffield sugar-corn, claimed to be as hardy as the Adams and as early as First of All. On my soil last year the plants grew seven or more feet high, with plenty of leafage, but the ears were not as early as I expected. I will try it again, but also plant some Cory and Adams, etc., to make sure of at least a show of very early sweet-corn. A few weeks ago I had in mind to write to Mr. Burpee to ask him about the "Wonderful" lettuce. I thought I could recognize in it one of my earlier acquaintances. The new catalogue now tells me that the so-called New Wonderful is simply a strain of the older New York, a variety which I have not grown for several years. Among newer tomatoes the catalogue offers an "Ennobled" strain of Sutton's "Best of All," and the "Quarter-Century." The "Australian Brown" onion of last season has now found a companion in the "Australian Yellow." I wonder, however, about the small amount of advertising that Mr. Burpee gives to so valuable a vegetable as the Gibraltar onion. I can do more with it than with any other onion. It suits the purposes of my local trade (Niagara Falls market) perfectly. My onion crop is all sold during late summer and early fall, while the demand is good for a very large, mild onion, and before the regular season of dry onions. Yet I had to look this catalogue over several times before I found the Gibraltar mentioned, which is done in a very few lines and without the help of an illustration. I also have wondered that I thus far have been unable to see this to me so valuable onion quoted in any catalogue except Burpee's. Finally I have to mention the Ozaka winter radish, which is said to be of Japanese origin, and a fine, mild and very tender radish. I now find them on my table quite frequently, having stored a lot in a box of sand in the cellar. They are as mild in their way as the Gibraltar or Pritzaker onions, free from pungency, and as brittle and tender as an apple.

Like Mr. Burpee's, the catalogue of William Henry Maule, of Philadelphia, is gay and attractive, and chock-full of pictures. The first thing I noticed in it is a new tomato, Maule's "1900," for which he is anxious to find a good name. I had a few dozen plants in my garden last season, and can say that I do not remember having ever harvested a more uniform lot of fruit from any tomato. The specimens all seem to be as near alike as one egg is like another. It will be a first-class tomato for general uses. The originator of this tomato is Mr. M. M. Miesse, who has also given us the "Enormous." The picture given of him in the catalogue shows him to be contented, well-nourished and happy, as a grower and eater of tomatoes ought to be. White's Excelsior tomato is also found in this catalogue. I had the seed from Mr. White himself last year, and found it to be a very good sort. Mr. Maule fittingly describes it as follows: "It is a purple tomato of large size. The vines are strong, with rich, dark-green foliage. The bearing season begins early and lasts until frost. The tomatoes are large, heavy and solid, coloring evenly around the stem, with no hard core and with but few seeds. The quality is superior, and on account of its firmness it is a first-rate shipper." On the whole, Mr. Maule thinks it is very near like New Imperial, perhaps a little later and a little larger, a good tomato for the home garden or for marketing. I was much pleased with it. But we have now so many good tomatoes that it is hard to make a selection and cut the number down to reasonable limits. Among the potatoes offered in this catalogue I will mention especially the Commercial and Early Thoroughbred. Of late I have somewhat lost sight of the Freeman, which Mr. Maule introduced some years ago. We have never had a potato of better quality that I know of, and I am going to get a new

supply of seed, never to lose it again until we have another better sort of equally high quality.

The two catalogues spoken of are the only ones thus far received from Philadelphia. From New York I have that of Peter Henderson & Co. It is probably the largest and one of the most complete of all seed-catalogues issued in America, containing, as it claims, "everything for the garden." Its whole make-up is elaborate and pleasing. Like the other two from Philadelphia, I cannot afford to miss it. It offers among other novelties the Crimson Globe beet, Early Champion and Metropolitan sweet-corns, Henderson cucumber, Early Leviathan pole Lima-bean, Heart o' Gold squash, several new melons, etc. Of the Ponderosa tomato it says that "it is now better than ever." I will have to try it again. The Prosperity pea is undoubtedly the earliest of the wrinkled class. The pods are very large, about as large as Telephone, and they are reasonably well filled with peas of largest size. I have never been able to secure a large yield of pods, however, and for that reason depend more on other sorts, especially the Alaska and First Early for earliest crop.

From Francis Brill, of Hempstead, L. I., the specialist in cabbage and cauliflower seeds, comes a modest circular or price-list of a few selected varieties of garden vegetables. What interests me most in it is the "Extra Early Eureka" cabbage. This I have grown for two seasons, and find it all that the originator claimed for it, so that I have been wondering why other seedsmen do not list it. It is surely worthy of general cultivation. Mr. Brill gives the following description of it: "Originated by me, a cross of Early Wakefield and Succession, type of the latter, as early as the former, and as hard as the Holland or Danish Ball Head." I found the solidity of the Eureka at that early season truly remarkable. They were as hard as a stone, every one of them, and they took well in market.

Only a few more seed-catalogues have come to my table thus far; namely, one from J. M. Thorburn & Co., as plain, as dignified and as complete as ever; then "Harris' Rural Annual," issued by the Joseph Harris Company, of the famous Moreton Farm at Coldwater, N. Y., a plain, common-sense book; the catalogue of the Iowa Seed Company, of Des Moines, Iowa, one of the gayest of the gay, but reasonable and fair; one from John A. Salzer Seed Company, another gay one of a firm which understands how to blow their own horn pretty well; one from T. W. Wood & Sons, of Richmond, Va., rather more modest, and reliable, too; finally, those of J. M. Philips' Sons, of Mercersburg, Pa., and of the Wernich Seed Company, Milwaukee, Wis. I may have more to say about seed-catalogues later on. T. GREINER.

INQUIRIES ANSWERED

BY T. GREINER

Best Family Cabbage.—A subscriber of Lewisville, Wash., writes: "What do you consider the best winter cabbage for family use? Quantity or size is no object. I want a small, solid, fine head that will keep well."

REPLY:—Possibly the early Winningstadt may suit you as well as any cabbage that I know of. It is one of the most reliable sorts for the amateur. It can be sown a little late for winter use. Naturally it is a second early sort, solid, medium size, a good keeper and of fine quality.

Growing Onion Sets—Dent Corn.—A. S., Frazee, Minn., writes: "Please give some instructions about raising bottom sets. I sowed Red Wethersfield last June very thickly in drills for sets, and have enough small onions to plant about one quarter of an acre, but am told that they will go to seed.—Can you recommend a good dent corn for northern Minnesota?"

REPLY:—For red-onion sets the variety usually grown is Early Red. If your Wethersfield sets are of cherry or marble size or smaller you may safely plant them in spring for bunching onions. If they are larger they are liable to go to seed rather than make good bulbs. At any rate, the plants should be pulled and used just as soon as they produce a seed-stalk. To grow the sets, sow the seed thickly in drills, as you have done, selecting a soil of rather sandy character and only medium fertility. Pull the sets when ripe, and cure. That is about all that is necessary to say at this time.—The Leaming is a good dent corn, and will probably succeed with you as well as any other dent variety.

Bunching Asparagus.—G. M., Chesly, Ont., Can., writes: "Please tell me what should be the weight of a five-cent bunch of asparagus, and how long the stalks should be."

REPLY:—The bunches as placed on the market or into the hands of retail customers and sold for five cents each vary greatly in weight. While the vegetable is yet scarce, as, for instance, very early in the season, I would make the bunches small,

perhaps of a half pound or even less in weight; but as the season advances and the stuff gets more abundant and cheaper I make them larger. In city markets the size of the bunches is about the same right along, but the prices vary. A bunch may bring fifteen cents, or two may be sold for five cents, according to supply and demand, and, of course, quality. If you get one of the regular asparagus-bunchers as found on sale in seed-stores and at hardware-dealers you will have to make the bunches of the regular size. If you have none of these bunchers, place the stalks, tip-end down, into an ordinary coffee-cup until tightly packed, then slip a rubber band around the bunch, and after you have cut the butt-ends off square you have the regulation-sized bunches. The stalks are usually about eight inches long. Some are shorter. It depends somewhat on the way the "grass" is grown.

Manuring for Vegetable Crops.—V. A. W. (location not given) writes: "I have a piece of ground that produces from thirty to forty bushels of oats to the acre with irrigation. It is a light-colored clayey loam underlaid with a hardpan clay subsoil. I wish to plant it to cabbage and onions next spring. I can get unlimited quantities of half-rotted sheep manure for the hauling (two miles). How many cords of the manure to the acre for the best results? What variety of medium late cabbage is the best, especially as to freedom from cracking open under irrigation?"

REPLY:—With such a chance for getting one of the best of manures for the hauling I would keep the team or teams going; in fact, I could afford to hire extra teams at a reasonable price. On a fairly good level road a good team ought to be able to haul not less than eight tons a day, and up to twelve tons, and the ton is worth to you a dollar or more. You need not be afraid of hurting your soil even if you should apply an even coat of this half-rotted sheep manure several inches deep. As to the best variety of cabbage to plant it depends on what the market calls for. In our local markets I can sell any good solid head. For large shipments the variety which takes the lead, and in many cases the only one called for, is the Danish Ball Head. You do not want loose heads; but all hard-heading sorts are liable to crack when nearing maturity and still growing fast under the stimulus of irrigation and a plentiful food supply. The flat Dutch or Sure-Head sorts are very good.

Starting Celery-plants.—J. J. P., Gibson City, Ill., writes: "Where and when shall I sow celery-seed to raise plants? Also how should I prepare the ground for raising a crop of celery? I have raised some celery before, but had a hard time to start the plants."

REPLY:—For fall and winter celery you can start the plants by sowing seed in a well-prepared plant-bed in open ground. Draw light marks or furrows, sow seed thinly by hand, cover lightly, and firm well, best with the foot. If the soil bakes after sowing I sometimes fail with this plan, and for that reason I now usually start the plants for the later crops in same way as I do for those of the early or summer celery; namely, by sowing the seed in shallow boxes filled with well-prepared soil, scattering thinly in shallow furrows which are made only about an inch apart. The boxes are kept under glass in a shaded spot at first, until the plants come up, then set into the light, to be watered as needed. For an early crop I sow in February, for late celery I sow in March. Just as soon as the soil out of doors is in fit condition for planting I prepare a nice plant-bed out of doors, and here set the plants in rows, lifting up sections of each row in the plant-box, like strings of plants with the soil attached, and press them down into the open furrow or mark in the loose soil of the plant-bed; then give a thorough watering, and let the plants grow until fit for transplanting to the celery-patch. Soil to produce a good crop of celery should be rich and moist. Murky or sandy loam is best.

ORCHARD AND SMALL FRUITS

BLUEBERRIES AND HUCKLEBERRIES UNDER CULTIVATION

I have been acquainted with huckleberries and blueberries in their wild state for many years, but like Mr. Greiner in his replies to inquiries concerning their culture, must confess that my knowledge of the cultivated plant is limited. I am the only person in this part of the country that I know of who has tried cultivating the blueberry. I have made two trials, with partial success each time, and my experiments have convinced me that these fruits can be cultivated if properly treated. Blueberries and huckleberries naturally grow on sandy or gravelly soils, and are found growing on light clay loam if gravelly and well drained. They will not grow on rich soils, such as prairie loam, muck or heavy clay land, nor will they be likely to withstand an application of barnyard manure. Probably a mulching with forest-leaves or straw is beneficial, but from the nature of the plants I believe fertilizing with anything, unless lightly with wood ashes, will injure them. The blueberry dearly loves shade, and dislikes the cultivator. Last spring I set out fifty plants to finish out a row of raspberries, and they

received the same cultivation as the raspberries. This fall I find twenty of them living. I set the plants about six inches apart in the row, and think if one has a sandy or gravelly piece of land that is free from weeds, so that the plants will not have to be disturbed much with the cultivator until they are well established, that they can be domesticated. Those of mine that are living are the smaller plants, one year old, which convinces me that with young plants, or the root cuttings, we shall soon succeed in growing the blueberry in our gardens if we do not force them too much from their natural habits. We should try to domesticate them by slow degrees.

GEORGE H. DAMES.

HEALING INJURED TREES

The man who appreciates his orchard should feel hurt when his trees are injured in any way. Too often he allows broken limbs and scraped trunks to take care of themselves, or at best gives them but a poor treatment, as bad as the injury itself. He is surprised to find, when a few years later an injured tree blows down, that it is rotten at the heart. Disease and decay have been at work while he slept.

Injuries should be dressed as soon as sustained. A broken bough should be trimmed off close to the point from which it springs, whether this point be the main trunk or a large limb. The cut should be clean, and should be painted thoroughly or covered with grafting-wax. A scraped trunk should have all the injured and loosened bark cut away with a sharp knife, and the wound painted. Attention to these injuries costs but little in time and money; neglect may mean the loss of the tree and the crops it might bear.

M. G. KAINS.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN

Grafting Fruit and Nut Trees.—L. J. F., Janesville, Minn., writes: "1. What tame cherry can be successfully grafted on the wild black cherry? 2. I have some bitter-walnut trees, and would like to graft some other variety of nut on these trees, English walnuts preferred; can it be done? 3. What fruit would it be possible for me to graft on mulberry-trees? 4. What can be grafted successfully on wild plums? 5. Can I not graft pears or peaches on hawthorn-trees?"

REPLY:—1. There is no variety of our cultivated cherries that can be successfully grafted on the wild black cherry. However, the cultivated cherry can be grafted on the wild bird cherry, which is the small red cherry that ripens about the first of August, and is found quite abundantly in some sections of Minnesota on the cut-over timber-lands. It is interesting to know in this connection that the flowers are hunched in clusters in the wild black cherry, while in the cultivated cherry each flower has a special stem of its own, so that in one case the fruit may be said to hang in bunches, in the other each fruit has a separate stem, and it is found that these two classes of cherries will not graft well together. While the cultivated cherry will grow upon a wild bird cherry, yet it will probably not be very successful. There are but few portions of Minnesota where cherries have been raised successfully, and they are confined to the southeastern and eastern portions of the state, and even in these sections the fruit-buds are frequently killed in severe winters, and while the trees may leaf out and grow, yet they are barren of fruit. 2. While it would be possible to graft bitter-walnut trees with the edible walnut, yet it is such a difficult matter that the chances are very slight that you would be successful; in fact, the whole subject of the grafting of the walnut is slightly obscure, and it is seldom attempted. While at Santa Ana, Cal., last summer, which is a place where the English walnuts grow very well, indeed, I was pointed to a grafted orchard of young English walnuts which was referred to as an experiment, the first of its kind which had been attempted in that section. I quote this to show you that in those sections which are very favorable to the growth of the English walnuts they seldom regard it as practical to graft them. The English walnut, however, is not sufficiently hardy to stand the winters of Minnesota. 3. The only fruit that you can graft on the mulberry that is of any value are the better kinds of the hardy mulberry, of which there are a few varieties. In my experience, however, I have found that the best way to manage mulberries in a severe climate has been by growing them from cuttings of the best seedling kinds which could be found in the hedges in the vicinity. 4. The better varieties of cultivated native plums can be grafted upon wild plums successfully, but the trees that are growing in the woods are hardly worth while bothering with, for the reason that they are seldom located where you want them, and they cannot be easily cultivated. Young trees of named kinds can be obtained for such a low price that I would suggest that you get such named varieties as the Rollingstone, De Soto, Wolf, Wyant and Surprise. If these trees are obtained early in the spring you can use the scions from them for top-working the wild trees which you now have, and the trees will not be injured by the scions which are cut off, and in three years' time will themselves begin to bear for you. 5. Peaches cannot be successfully grafted on hawthorn-trees, but pears take very well upon our common native blackthorns. However, there is no pear that is well adapted to growing in Minnesota. The variety which has done the best is the Flemish Beauty, which if favorably located has sometimes produced abundantly very nice fruit.

A FARMER'S SIGN-BOARD

JUST why farmers do not use sign-boards like merchants and other business men is because they do not realize the value of advertising. If the merchant has a call for something that his customers can furnish, he immediately puts a call for it in the local paper and puts up a shingle with his wants written upon it. If he has an oversupply of anything on hand he puts out his shingle with the notice of reduced prices in order to get rid of the surplus. It has been demonstrated beyond doubt that advertising pays. The successful business man is the one who runs after the market, not the one who sits down and waits for the market to run to him. The farmer is no exception. True, to a great extent his market is controlled by produce dealers in his home town, but still there are many articles that do not come under these dealers that would mean a profit to him if he could find the market.

Mr. Mason is the owner of a fine farm. He takes great pride in it, and well might any farmer be proud to own "Elmwood." Its owner has certainly solved the problem of how to make a farm pay. One of his rules in business is to allow no waste. On his front gate is a neatly painted board one and

ELMWOOD FARM

E. L. MASON

Smith Center
1/2 Mile North,
2 Miles East.

Wanted FARM-HAND FOR SALE

Two hundred bushels of windfall apples.
Fresh cider and vinegar.
Six settings of W. P. R. eggs. Cheap because late in the season.

one half by three feet long. The name of the farm occupies the top of the board, with the owner's name directly beneath. Under this is the distance and direction of the nearest town. This does not occupy half the board, the rest of which is painted black. Mr. Mason is in need of a hired man. He writes on his board "Wanted, farm-hand." Every one passing notices it, and any one looking for work in the neighborhood is sent directly to him. He is the owner of a large orchard. A heavy wind brings down two hundred bushels of apples. There is no market for windfalls, and owing to the rush of work they cannot be made into cider. Mr. Mason advertises the lot on his sign-board. He has a number of neighbors who are glad to purchase the apples for drying and refilling their vinegar-barrels. They see his sign and take the apples.

Mr. Mason has a pen of fine chickens, from which he gets all his eggs for hatching. It is rather late in the season, so there is no demand for the eggs and he wishes to hatch no more. He is left with half a dozen sittings of eggs on hand. He does not wish to dispose of them at the price of common eggs, so he advertises them, and is willing to sell at half the price he could command during the season. A neighbor who has admired Mr. Mason's poultry, but who felt that he could not afford the high-priced eggs, buys the lot, and next season has a fine flock of birds himself. And so the sign-board is used almost constantly the year round. The neighbors see the advantage of it, and many of them are putting up like boards. It is a plan worth following.

In a neighborhood where this has never been done one may feel a little disinclined to putting out a sign-board. But by talking

it over with several of the neighbors they will become interested and see the advantages of it, and all can then make the move simultaneously. It is a practice that should become general. Aside from the advantage from a business point of view, it will act as a stimulus to a farmer and his family to keep the home and the farm worthy of its name and owner.

J. L. IRWIN.

LUPINES

The importance of returning to the soil of orchards and vineyards an amount of nitrogen at least equivalent to that removed by the fruit crop, and also the humus gradually burnt out during the dry season, in order to maintain fertility, has caused the California experiment station to devote much attention to the testing of various leguminous plants—plants of the pea and clover family—recommended for this purpose in other parts of the world.

The legumes combine all the points required of a green-manure plant—nitrogen-absorption from the air, deep rooting, and at the proper stage of growth that succulence which is conducive to quick decay, thus rendering the crop ingredient available at the earliest moment.

In cultivation it was found that spring-sown plants did not have time to reach maturity before the hot, rainless season dried them up. It was therefore determined to try fall sowing, with a view to catching all the moisture available, thus inducing winter growth and deep-rooting. As a result of this experiment it was found that whereas the spring-sown plots were a complete failure, the fall-sown, in accordance with Italian experience dating back to the Romans, produced heavy crops and were so promising that it was determined to test the species on a more extensive scale with a view to the adoption of the best of them for green-manure crops.

For heavy, calcareous soils the large blue lupine showed to be most desirable. It gave no signs of root-rot, although species adjacent on all sides were affected, is not injured by frosts, and is more succulent than the varieties of Lupine augustifolius, produces more and larger foliage, and covers the ground better, branching more freely from the base.

Thirteen species or varieties of lupine are more or less extensively cultivated as agricultural crops in various parts of Europe and North Africa; of these eleven are natives of Europe, one of Chili and Peru, and the other of North America.

Lupines as well as other leguminous plants do not, as a rule, make tubercles in soil freshly manured with stable manure; the manure is injurious to the tubercle-forming bacteria. This does not prevent the lupines from making a good growth, however; indeed, they will often become very rank in manured soil, but the manure tends to check the formation of seed. It can readily be seen, therefore, that it is needless expense to manure land for lupines, or to sow lupines on land already manured, as the presence of stable manure prevents the accomplishment of the chief end for which they are sown; namely, the collection of nitrogen from the air by means of the bacteria on the root.

The seeds of many, perhaps all, species of lupine contain a bitter alkaloid known as lupinim, which is very poisonous to human beings. This bitter principle can be removed, however, by boiling or by maceration in salt-water or soda solution; in this state the seeds were used for human food by the ancients, and are still used in India (imported from the Mediterranean) and in Corsica, Piedmont, Spain and Portugal.

For forage purposes the lupines do not appear to offer any advantages over other leguminous crops, except as winter growers, and they are certainly more or less dangerous and not to be recommended indiscriminately. While lupine fodder is fed either green or in the form of hay, but more frequently in the latter condition, owing to its bitterness when green, yet it is found to be unsuitable for feeding alone, as it then produces the disease called lupinose. It is stated that lupinose is particularly severe when stock are fed almost exclusively on lupine-chaff, only mild when hay, oil-cake or mangel-wurzel form a certain proportion of the ration and it is given at intervals.

The Berkeley experiment station (California) has sent for a sufficient supply of seeds of the several kinds of lupines for distribution of small trial packets. But it is hoped that some enterprising seedmen or private parties may be induced to make importations from France or Germany for large-scale trials, which cannot fail at least to pay expenses, if they do not prove highly remunerative.

GUY E. MITCHELL.

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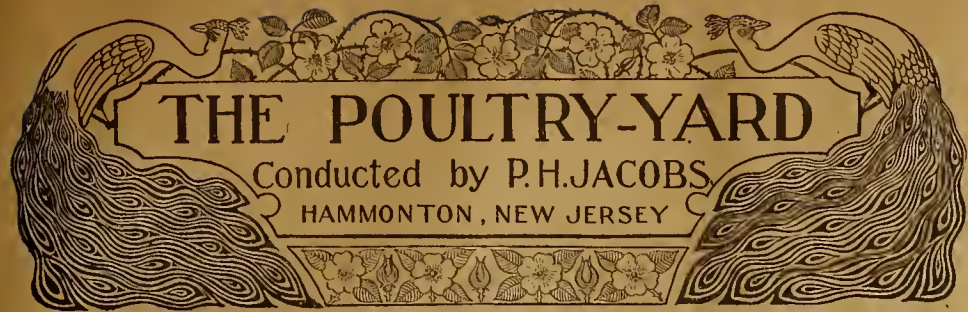
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THE POULTRY-YARD

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SMALL FLOCKS

THE practice of the method has demonstrated that one of the ways to make poultry profitable is to divide them into small flocks. Large flocks of fifty or more have occasioned a loss, and always will, as crowding is just opposite to the needs of the fowls. It may be safely claimed that every form of disease that makes its appearance in the poultry-houses and among fowls is traceable to crowding. Then, again, crowding is injurious in many other ways. It places the weak under the dominion of the strong, causes competition for existence, and prevents systematic breeding. To sum up the advantages of keeping poultry in small flocks its advocates mention the following: Small flocks in separate yards enable one to breed fowls to suit the inclinations, and it is easier to make crosses with certainty. As no two cocks are together in the same yard there is no warfare, and better hatches will result from the eggs. The feeding can be performed to the requirements of each flock. The maintenance of a superfluity of cocks should be avoided, as only the breeding-yards need contain them. Should disease appear it can be confined to the yard in which it makes its appearance, and can be more effectually checked. Should a thief make an attempt he will find greater difficulty with several yards than with only one. There will be greater security against natural enemies of the fowls. Accounts can be kept with greater certainty and accuracy. Hens will lay better when but few are together. It will be as easy to keep five hundred hens in small flocks as one hundred running at large. If not over ten are kept in a yard twenty by fifty feet in area, with a house about ten by ten feet square, not only will the eggs be fertile, but health and productiveness will be the result. Perfect cleanliness can be practised, and the fowls do not make filthy the stables, lofts and other places on the farm. The soil on which they are confined will become very rich. If trees are in the yards, the fowls will do them service by ridding them of noxious insects. The fence can be built of lath or other cheap material. If well managed a profit of one or two dollars or more may be expected from each hen in eggs and chicks, which has often been the case.

BROODER-CHICKS

Chicks when taken from the incubator should be placed in a brooder in a warm room, with the thermometer of the brooder at ninety degrees. Lukewarm water and dry pin-head oatmeal should be placed within their reach. They will feed as soon as they require it, but it is best to give no food for thirty-six hours. The second day feed stale bakers' bread slightly moistened with milk. This food may be continued for one week; then gradually give chopped cabbage, mashed potatoes and ground meat, always keeping the pin-head oatmeal before them. Give fresh water every morning, and never allow the vessels to get empty. There should be enough vessels to admit of the chicks drinking without crowding and wetting each other, as they will do in their eagerness to drink, especially in the early morning. A small box of ground bone and oyster-shells may be constantly before them. Raw eggs mixed with bread, four eggs to every one hundred chicks, may be given daily with advantage. Raw eggs in moderation serve to correct any bowel trouble. Whole wheat may also be given with benefit as soon as they can eat the grains. The chicks can be taught to eat it by mixing the whole grains with some that have been passed through a coffee or bone mill, and which have been slightly crushed. The importance of strict cleanliness must also be impressed upon the poultry-raiser, likewise that of proper ventilation and fresh air; but drafts must be avoided. Chicks do far better in warm houses, especially at night, and all the pure air they need can be given them during the day. The reason that so many chicks die during the first ten days is too little heat, too much cold air, and sloppy food. Any of these evils will cause loss at any period, but especially during the first ten days. It is important that all the details be carefully attended to, especially if the weather is cold.

LOCATION FOR INCUBATOR

A cellar is an excellent place for an incubator, because it is usually of an even temperature, especially if the cellar is one that will preserve roots and fruits; but the atmosphere should be dry and pure, which will be the case in winter. Any place that is of even and regular temperature will answer for the incubator. If the incubator is in a room where the temperature changes no harm will result, provided the operator watches the lamp-flame, and does not allow too much heat to accumulate. The hot-water incubator (no lamp) must be operated in a warm place, if possible, in order to avoid loss of heat at night. When hot water is used the heat is the same over every part, and it makes no difference where the spout may be placed. Heat rises, however, and will go to the highest point. All that is necessary is to have the incubator level. This can be easily done by placing a level on top of the incubator, but it will be better to level it by placing the level in the egg-drawer. If the heat is too low at one end raise that end a little. A few days' experience will settle the matter. One of the first things to remember when the chicks are coming out is not to disturb the eggs. If the thermometer is kicked over no harm will be done, as the temperature will not change if the chicks are not taken out. When the chicks are removed the heat falls, as the animal heat of the chicks largely affects the temperature of the incubator. Avoid drafts of air in the incubator when the chicks are coming out, and it is safe to say that very little moisture is needed, as the warm moisture when it meets the cold air causes a loss of heat much greater than may be noticed. Evaporation of moisture from eggs is always at the expense of a loss of heat. Incubators with regulators, either of hot air or hot water, will easily regulate the heat and moisture.

THE PROFIT

The farmer who can estimate the amount of profit derived from a flock at the end of a year will be not only fortunate, but will have a higher opinion of poultry as a source of revenue than may be supposed. If he is one who observes his flock, and feeds only when necessary, taking advantage of all the waste foods on the farm, and allows his fowls to do their share in securing food, he will find that he has a handsome profit on the investment of poultry; but unless he will take hold of the poultry end of the business on the farm, and keep an account, he will feed a great many worthless hens, and compel the good ones to support those that are unprofitable. The farmer should keep no fowl that does not give a profit, and he should not keep a large flock if he can get as good results from a smaller number. There are too many fowls on farms that are non-producers, and as they simply increase the cost and give nothing in return they reduce the profit proportionately, and lead the farmers to suppose that fowls do not pay them, when in fact they may have some in the flock that are paying them well.

LIVER COMPLAINT

Nux vomica is used as a specific for liver complaint. The symptoms of this disease are a sickly yellowish color about the head, the comb turns dark-colored, the liver is larger (upon post-mortem examination), and the discharges are watery and light-colored. Liver complaint is supposed to attack birds soon after being on exhibition, or is caused by any sudden change from warm to cold houses, or from overfeeding. If taken in time nearly every case can be cured by giving nux vomica in homeopathic form, allowing six pills three times a day to a large fowl, and less to a small bird.

FESTIVALS AND THE MARKETS

A great many consumers of poultry are the Hebrews, their religious rules and regulations being peculiar in relation to poultry, and have much to do with the making of the market prices. They have thirty-five various feast and fast days, during some years requiring forty-seven days for the celebration.

They have in January two holidays (one day each), February two holidays of four days each, March three of five days, April three of five days, June three of three days, July two of three days, August four of one day each, October eight of ten days, November one day, December three of four days. The consumption of poultry at some of these feasts is the great feature of their enjoyment, and their regulations require this poultry to be killed by church officials, so of course the demand is for live fowls. Geese and ducks are the most popular varieties with them, although chickens are bought extensively. The number of holidays that are mentioned here may not apply to every year, but are given for one of the years when forty-seven holidays occurred, and the number is about the same every year.

FEATHER-PULLING

In regard to feather-pulling, catch the hen that does the feather-eating, take a sharp knife and trim the edges of the beak, and feed plenty of fresh meat. They generally commence by picking the comb and wattles of the cockerels and making them bleed; the blood gets on the feathers around the neck, and then the hens eat the feathers by plucking them from each other.

CORRESPONDENCE

RESULTS WITH A SMALL FLOCK.—I would like to give you my first experience in keeping hens. April 23, 1899, I began with eight scrubs—two old ones and six pullets. Up to December 15, 1899, they have laid seventy dozens of eggs, for which I received \$12.32. The cost of feed was \$2.44, leaving a net profit of \$9.88, or \$1.23 1/2 a hen. I did not raise any chicks. Mrs. L. A. M. Oakland, Maine.

SOLD OVER TWO HUNDRED AND FIFTY DOLLARS' WORTH.—I will give your readers my experience with poultry for the year 1899. I have White Leghorns, numbering one hundred and fifty. From these chickens I collected in January 188 1/2 dozens; February, 122 1/2; March, 194 1/2; April, 191 1/2; May, 151 1/2; June, 121 1/2; July, 109 1/2; August, 105; September, 91 1/2; October, 64 1/2; November, 37 1/2; and December, 46 1/2. The total number of dozens was nearly 1,314. I have also raised five hundred chickens, and have left one hundred and fifty old hens and two hundred young pullets. My eggs have averaged me sixteen cents cash a dozen. I have sold poultry and eggs amounting to \$250.21. Cooksville, Ill. M. W. B.

SAVING THE DROPPINGS.—Seeing in a recent issue a question asked by Mr. A. L. Alganssee, of Michigan, in regard to poultry-house perches and droppings, I will state that when I keep fowls I arrange my perches to save the droppings, and make the fertilizer pay for their living. I take boards twelve or fourteen inches wide, nail together, and put the roost over, so they will roost over the trough; then I sift coal ashes (not wood) over the sides; the droppings will roll up and keep all the ammonia in, and make the house sweeter. Every week I clean the trough into a box or barrel, adding plenty of coal ashes, and I keep the trough covered all the time. I use ten times as much ashes as droppings. In the spring I work it all fine, and it has been worth to me all that the feed cost. I have the trough level and high, with steps for the hens to get up easy. Put the roost high so they will not roost on the trough. Naples, Fla. A. A.

INQUIRIES ANSWERED

Green Bone.—G. S., St. Marys, Ohio, writes: "How can green bone be dried after being cut so as to preserve it for future use?"

REPLY:—Subject the cut bone to the fumes of burning sulphur for twenty minutes in a box having a top that opens like a trunk. When taken out it will keep for months.

Lameness.—R. L. M., The Dalles, Oregon, writes: "Some of my chickens and turkeys have lumps or knots on their feet immediately above the separation of the toes, which make them quite lame. They are fed a mash in the morning, and grain—corn or wheat—at night, and roost on the low roosts in the hen-house at night, having the run of the farm during the day. Is it a poultry disease, or is it from some other direct cause? What should be the remedy or treatment?"

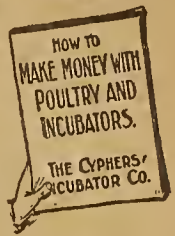
REPLY:—Although the roost may be somewhat low, yet the fowls may be quite large and heavy, jumping from the roost daily gradually causing the injury. Remove the roosts and give them clean straw.

Feeding.—E. W., Livonia, Ind., writes: "1. Does cooking injure bone for grinding for fowls? 2. How often should it be fed? 3. Should fowls have a warm mess every morning? My hens (forty of them) only lay from one to four eggs daily."

REPLY:—1. Cooking removes the nitrogenous elements to a certain extent. Green bones, however, cannot be ground, but must be cut. An ounce of green bone is considered sufficient for a fowl, with other food, daily. Dry ground bone may be scattered, and the fowls allowed to eat all they desire. Lack of eggs may be due to your pullets being late-hatched or to severely cold weather. They will begin to lay early in the spring.

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The Money-Makers in the poultry business, whether owning a dozen hens or a thousand, are the people who watch what other successful poultry-keepers are doing and how they do it. It is to disseminate just such knowledge as this that "How to Make Money with Poultry and Incubators" was published. It is admittedly the handsomest book ever printed treating of the poultry question. It contains nearly 200 illustrations and numerous other features which brought its cost up to more than \$4,000. While it gives complete information regarding the Cyphers Incubator it is primarily a guide and manual for the person who is considering poultry from a purely business and money-making standpoint. Its 192 pages (9x11 inches) are filled with practical articles, written expressly for this book by leading poultry experts. For example, Geo. H. Pollard, the well-known practical poultryman, contributes three chapters on "Profitable Broiler Raising," "Winter Chickens or Roasters," and "Best Breeds for the Market." Michael K. Boyer of national reputation, has an article on "Poultry for Profit on One Acre;" Myra V. Norys tells what energetic women have done in "Women's Work with Poultry;" A. F. Hunter, the well-known editor, discusses the "Demand for Fresh Eggs and How to Meet It;" Jas. Dryden, of the Utah Experiment station, writes of "Pullets vs. Hens as Profitable Layers." These are only a few of the many special articles. In addition there are many photographic illustrations and descriptions of the largest and most successful poultry farms in the world; also numerous copyrighted plans and specifications for laying and brooding houses, together with letters from over 250 successful poultry keepers reporting their experience with the Cyphers Incubators. Sent to any address for 15c. postage. Ask for Book No. 71. Address nearest office, The Cyphers Incubator Co., Chicago, Ill., Wayland, N. Y., Boston, Mass.



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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE 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 inclose 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.

Applying Stable Manure.—M. A. N., May, Mo. For a corn crop your best plan is to haul out and spread the manure broadcast and plow it under. Top-dressing with composted manure after plowing is a good plan for the wheat crop.

Apple Pomace.—E. S. S., Canal Dover, Ohio. Apple pomace is not of great value as a fertilizer. It can be used profitably, however, if it can be applied with little expense. If well rotted use it in the orchard; otherwise apply it to light soil and plow it under.

Cooking Food for Hogs.—L. H., Bronson, Kan. Some have found it profitable to cook food for hogs, but many have tried and abandoned it. Whether it pays or not depends on circumstances. Would advise you to experiment in a small way before undertaking it on a large scale.

Seeding a Lawn.—M. V. D., Mt. Clemens, Mich., writes: "Kindly tell me what kind of grass-seed to use for a lawn, and when to plant it. I live at the edge of town, have no water-works, the ground is clay mostly, and I find seed hard to start."

REPLY:—Apply a thick coat of well-composted manure. As early in the spring as the ground can be worked spade it, mixing the manure thoroughly with the soil. With the garden-rake make a fine, smooth seed-bed. Sow Kentucky bluegrass seed and white clover at the rate of four bushels of the former and four pounds of the latter to the acre. To avoid trouble with weeds get pure, clean seed.

Axle-grease.—N. J. A., Kelonna, British Columbia, writes: "Please give a receipt for making axle-grease, the principal part of which will be lard. What other ingredients should be added?"

REPLY:—Lard should not be used on wooden wheels, for it will work its way out around the tenons of the spokes. Use tallow for wooden axles, and castor-oil for iron axles, or the following for both: "Five ounces of tallow, four ounces of good lubricating oil, six ounces of water, one half ounce each of soda and potash, and one half pound of plumbago. Dissolve the potash and soda in the water, melt the tallow, mix it with the oil, and pour in the water, stirring it until the grease is cut; as soon as possible after the water is added turn in the plumbago. Stir the whole mass until it is thoroughly mixed."

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose 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. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Scabby Teats.—M. L. K., Bath, N. Y. Please consult answer under the heading, "Very Sore Teats," in the FARM AND FIRESIDE of February 1, 1900.

Worms.—H. W. L., Craig, Okla. You fail to specify or to describe the worms your horses are troubled with. Please consult the answers given under the heading, "Worms," in this and preceding issues of this paper.

May Be Worms.—W. J. P., Society Hill, S. C. The symptoms you mention strongly indicate the presence of worms. Please consult the answers given to questions about worms in this and preceding issues. I cannot tell you anything about the "condition powders" you inquire about. I do not know what they are composed of, and have no use for them.

Curb.—J. L. D., Harmonsburg, Pa. If your mare, of which you say she has a curb, is six years old and is lame when first started on a drive there is surely something else than a common curb that causes the lameness, or else the curb is so bad (the elevation caused by a diseased condition of the bones and equivalent to a spavin) as to render the animal a cripple. Have the mare examined by a veterinarian.

Injured Knee.—S. F. W., Odessa, Mo. You say your mule by falling on frozen ground was injured on the knee above the knee-cap, consequently it must be the hind knee that was injured, because the fore knee has no knee-cap or kneecap; but as it is usually the fore knee and very seldom the hind knee that is injured by a fall, and as you have already used proprietary medicines and thereby changed the original condition and probably made it worse, the best advice I can give you is to have your mule examined and treated by a veterinarian. If you again send questions to be answered in the veterinary column, please read first the heading of the same, and act accordingly.

Skin Disease.—C. W. V., Columbus, Kansas. Your description is too indefinite for a reliable diagnosis. Your whole description just amounts to this: Your mare began to show an eruption of hard lumps (?) three years ago. These lumps (?) have spread over the whole fore quarters of the animal and cause an itching sensation. I advise you to have the mare examined by a veterinarian. Possibly the disease may be mange.

Small Worms in the Rectum.—L. H., Stolpe, Mo. According to your description the worms of your mare very likely belong to the species known as "oxyuris curvula." They are not accused of being very injurious to their host, but when in the rectum they cause some irritation and considerable itching. When already in the rectum they can be easily expelled by a few injections of raw linseed-oil, say from half a pint to a pint at a time.

An Eruption of the Skin.—E. A. S., Stateville, N. Y. If I have to take your statements in their literal meaning—"large bunches (as defined by Webster, bunches are protuberances or clusters) of the size of a quart bowl on the neck, brisket and udder of your heifer, and smaller ones on the head and sides, all dry and hard, light-colored like the skin, and rapidly growing and overlaying each other"—all I can do is to advise you to have the animal examined by a veterinarian. It is barely possible that you mean to describe clusters of warts, but then they would hardly be hard and light-colored like the skin at the same time.

Ascariides—Swine-plague.—C. H. B., Tecumseh, Kansas. The worms you sent me are ascariides suis, and their presence in large numbers shows that your hogs must have had access to surface-water and to water in stagnant pools and ditches containing the worm-brood; but it is hardly probable that the worms alone caused the death of ten hogs and fifty pigs. On the contrary, the symptoms you communicate almost conclusively show that your animals died of swine-plague, or so-called hog-cholera. It may be, though, that the presence of a large number of ascariides decreased the resistibility of the animal organism and thus increased the death rate. Concerning a remedy against the worms please consult the FARM AND FIRESIDE of January 1, 1900.

Possibly a Case of Tuberculosis.—C. C. A., Pontiac, Ill. Although your statements are not sufficient to base upon them a definite diagnosis, the symptoms you describe are characteristic enough to justify suspicion, because in a great many, perhaps in most cases of pulmonary tuberculosis in cattle the morbid process develops first or most conspicuously in the retropharyngeal and other lymphatic glands in the vicinity of the larynx and along the trachea, and then just such symptoms as you describe will make their appearance. If a definite diagnosis cannot yet be secured by a careful physical examination of the respiratory apparatus it is advisable to subject the animal to the tuberculin test, which, though perhaps not absolutely reliable in every case, unquestionably constitutes the most reliable means to arrive at an early diagnosis in all cases in which the same cannot yet be secured by any other means.

Eggs of Orcheminum Glaberrimum, or Meadow-grasshopper.—W. P. C., Mt. Zion, Mo. The eggs on the corn-stalks you send me appear to be those of the meadow-grasshopper, orcheminum glaberrimum, and it is not at all probable that the same constitute the cause of the fatal sickness that befell the horse after eating the corn-stalks. It is much more probable that the dry and indigestible cellulose had something to do with the fatal sickness. This, however, does not include the possibility of an infection of the corn-stalks with pathogenic (disease-producing) bacteria, which, being consumed with the corn-stalks, found an entrance into the animal organism, and thus an opportunity to develop their pathogenic properties. This question of course can be solved, but to do so requires time-consuming and expensive experiments. If you had given me an accurate description of the symptoms presented by the sick animals during life, and of the morbid changes observed at a careful post-mortem examination, it might have furnished a very good clew concerning the probable cause of the fatal disease.

Sick Sows.—V. W. J., Smithfield, Texas. The symptoms of the sickness of your sows as you describe them are simply such as may be observed in several diseases of swine, swine-plague, or so-called hog-cholera, included, but especially is such in which the digestive organs are seriously affected. You say that one of your sows had died, and that the other one was still alive, but severely ailing at the time you wrote your letter, and that both had a litter of pigs, which were separated from the sows when the first sow showed serious symptoms of sickness and when her litter was about seven weeks old. The pigs, it has to be inferred, are well, because you do not say that they are sick, which most likely would have been the case if the disease of the sows were as highly infectious as swine-plague, or so-called hog-cholera. It would have been comparatively easy to secure a diagnosis if you had made a carefully conducted post-mortem examination of the sow that died. The disease-producing effects of cotton-seed are not known to me. Might it not be possible that your sows are tuberculous? If the second one is yet alive, but dies afterwards, as she very likely will, be sure to have a post-mortem examination made, and if you find morbid changes more or less resembling those produced by tuberculosis in the lungs, on the pleura, the peritoneum or on the intestines, show them to a competent physician if a veterinarian is not available, or send them in a preserving-fluid to Prof. Dr. M. Francis, of the A. & M. College of Texas, in Brazos county, Texas, for examination.

Worms—Colic.—J. E. S., Ashley, Mo. The long white worms of your mare and your colt, according to your statements, are probably ascarides. Their presence shows that your horses must have had access to stagnant water of pools and ditches containing the worm-brood. As these worms have their principal seat in the duodenum and the stomach, the same are best expelled by medicines administered by way of mouth and given after the horses have been fasting for six to twelve hours, therefore in the morning after the horses have received no food the evening before. One of the best remedies to expel these worms is tartar emetic, to be given in a dose of two or two and one half drams to a full-grown horse, and of two scruples to one dram to a colt like yours, and combined with a few drams of each, marshmallow-root powder and licorice-root powder, and just enough water to make a stiff dough, to be formed and administered in the shape of a cylindrical pill covered with a piece of tissue-paper. After the pill has been given it is advisable to let the animal fast for another six hours. The answer to your question whether or not "worm-destroyers are dangerous to horses" depends upon what is used as a "worm-destroyer." You cannot expect me to enumerate everything that possibly might be used as a "worm-destroyer."—Your request to give you a "good remedy for colic in horses" I cannot comply with, for the simple reason that what is denominated colic is neither a specific nor a definite disease, but simply a combination of morbid effects produced by widely different causes, consequently a "specific" remedy, or what you call a "good" remedy, applicable to all cases does not exist.

Hydrops Anasarca.—E. M. G., Rosland, Oreg. The swellings you describe are such as are observed in anasarca (cutaneous dropsy), which, however, cannot be considered as an independent disease, but only as a consequence of some other morbid condition, and is either caused by general hydraemia, or is the product of, usually infectious, morbid processes seriously interfering with the free circulation of the blood. In sheep and cattle particularly it is often a regular attendant of parasitic, especially worm, diseases, and in horses it is often observed in the later stages of the influenza group of diseases and in diseases in which lungs, pleura, liver and kidneys are seriously affected. If you had not said that there appears to be no fever (but in this you probably are mistaken, because you say the pulse rises, and you very likely failed to take the temperature of the sick animals) I would suggest that you very likely had to deal either with the very infectious and dangerous disease known as chest-plague, an infectious pneumopleuritis of horses often complicated with more or less serious affections of other vital organs, or with the also very infectious and dangerous disease called horse-typhus. If there is no veterinarian available, the only safe advice I can give you under existing circumstances is to avoid blood-letting and blanketing, and to give your sick horses, without exposing them to drafts of air, as much fresh air as you possibly can. After a reliable diagnosis has been secured, which may be done by causing a carefully conducted post-mortem examination to be made of the first animal that dies and by giving an exact report of the result, I probably can give you more satisfactory advice in regard to future cases, although it will be too late to benefit those now diseased.

A So-called Sand-crack.—L. H., Lock Spring, Ind. If you have a good horseshoer the sand-crack you describe, unless it causes lameness, contains too much decayed horn, is ulcerating, or extends up into the skin in consequence of too much destruction of the matrix of the horn, can be made to disappear in about a year. Take the horse to your horseshoer, ask him to make a transversal or so-called T cut at the upper end of the crack where the hoof hits the skin, severing the horn from the skin, but if possible without drawing blood. Let the cut be three fourths of an inch in length. This done, let him about two inches down from the skin on each side of the crack, say about half an inch from the border of the same, bore horizontally and transversally a small hole into the horn of the wall of the hoof in such a way that the two holes if bored clear through would meet. This done, let him drive a thin hoof-nail through the holes, inserting in the hole on one side of the crack and let it come out through the hole on the other side of the same, and then clinch it so as to bring the borders of the crack in close contact and to prevent any further spreading or gaping of the same. This done, let him pare the lower border of the wall of the hoof where the crack is for at least half an inch on each side of the crack to such an extent as will bring it out of contact with the upper surface of the shoe, and thus prevent any pressure or bearing whatever of the shoe upon that part of the wall of the hoof. This done, let him prepare the hoof for shoeing, and put on a shoe with two lips or tips about one and one half inches apart and equidistant from the crack. Then have the shoe reset once every month, and in about three or four months when the horse-nail rivet holding the borders of the crack together has grown far enough down to make room for another horse-nail rivet, let your horseshoer put in another one above in the same way, and at the same distance from the top of the hoof. If the cross or T cut has been well made and at the right place nothing further will be necessary. If not, and if the splitting upward has not been stopped, another T cut will have to be made. Some horseshoers make the T cut with a red-hot knife-shaped iron. Whether this is to be recommended or not depends upon the dexterity of the operator. I prefer to make it with a small and very sharp hoof-knife, because with that I can better control the depth of the cut.

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THE GRANGE

Conducted by MRS. MARY E. LEE, New Plymouth, Ohio

INTERESTING QUESTIONS FOR DISCUSSION

THE GAME LAWS

SURELY the farming community that cannot find topics of enough interest to make an interesting program must be either very ignorant or else the people are extremely intelligent.

From nearly every state comes complaints of the game laws and ever-present dog. That in most instances the laws have been made in favor of the sportsman is self-evident. Meanwhile the slaughter of the innocents goes on with unabated energy, while the man with dog and gun reigns supreme. Fences are thrown down, cattle and sheep worried, and often some valuable stock shot by the careless hunter. The loss of sheep alone from mongrel curs would mount far up into the thousands, while the loss arising from the worrying of the flock would duplicate that amount. In some states the killing of a dog entitles the killer to a heavy fine and the payment for the dog killed. To order the worthless pot-hunter off the premises entitles the farmer to a volley of abuse, and if he prosecutes the offender he runs the risk of having his property destroyed.

Were this the only reason for complaint we would indeed be fortunate; of far more consequence is the wanton destruction of our quail and other birds, and of the skunk. Following the wholesale killing of these, the farmers' friends, insect pests have become so abundant as to seriously curtail the profits in a large per cent of our crops. In some localities the white grub ruined the pastures and seriously damaged the corn crop. State and local institute societies, granges and farmers' clubs are vigorously protesting against the present game laws. Let petitions be circulated and personal letters written to your senators and representatives. Agitate the question until justice is done. There is a great deal of moral suasion in a vigorous though at all times courteous letter.

THE GROUT BILL

Not only are dairymen interested in the enactment of such laws as will compel oleomargarine and similar products to appear on their merits, but every farmer who owns a cow as well. Determined effort on the part of the grange, and of farmers generally, will have great influence in shaping legislation on this all-important matter. It is not enough that we send our legislative committee to look after our interests; we must supplement their efforts by petitions and personal letters.

The fight against the Grout bill will be furious. Manufacturers with millions to back them will use every means to defeat the measure. Now is the time to do effective work. No one doubts the justice of the measure, the opponents least of all. It is not right or justice they are fighting for, but dollars and cents, and the arguments they will use will not appeal to the conscience alone. In these days of political, independent thought, when the intelligent farmers place business before partisanship, principle above party, a congressman is very shy about offending them. There are few things a congressman fears more than an indignant, influential constituent. Write to both your senators and to your representative. Send petitions to the legislative committee of the grange. The address is 541 F street, Washington, D. C.

In writing to your senators and representative bear in mind that the same courtesy of expression is as potent as in other transactions. Express confidence rather than doubt in his integrity and willingness to look after your interests. He will thank you for it. Avoid flattering terms; such usually do more harm than good. Simply be sincere, genuine. State your desires tersely, plainly and connectedly. Express approbation where you can honestly commend. At all times preserve a dignified, courteous attitude. Your letter will then attract attention, create respect, and add force to the subject-matter. Let it be as short as possible, that it may be quickly read and its contents grasped in one reading.

GET BOOKS

One of the most serious drawbacks to the accomplishment of thorough work is the lack of sufficient works of reference. Often a subject that is of great interest cannot be studied fully because the necessary material

for such study is not at hand. We would suggest that arrangements be made with some near-by library if you have none in your own town. The trustees of most libraries are usually willing to extend their boundaries of usefulness. If there is a system of traveling libraries in your state, this offers an opportunity of securing the books you need. In the absence of these advantages buy a few books of your own.

Entertainments are very popular with the young people. Get up an exhibition, and devote the proceeds to the purchase of books. One neighborhood which had never enjoyed good educational advantages gave an exhibition, and the proceeds were about ten dollars. With this small sum were purchased a few books. These were eagerly read by the community, and others were added thereto. As an outgrowth of this small library movement several young people were encouraged to secure a better education. Seven became teachers in the public schools, and three of these spent several terms in college. They all trace their start to that little library movement.

History delights to record the fame of Lincoln, Burritt, Franklin and hosts of others who received their inspiration from the books they read. Many of lesser fame have been led to a better, nobler way of living through the influence of some heroic character of whom they have read. How many of whom the world never hears are encouraged to better living by the influence of some good book! How essential it is, then, that an abundance of good reading be supplied!

In selecting books be sure to include a large number for the children. They are the ones most easily influenced by their surroundings. They have not the power of choosing between right and wrong in their earlier years, and their minds are plastic. If the surroundings are healthful they will develop into creditable men and women. Surround them with books of a stimulating nature. Encourage them to emulate the example of noble men and women. See that they are associated with good minds. Teach them habits of observation. Give them books on nature studies which will lead them to study the beauties of nature all about them. The study is fascinating, and will develop in them habits and inclinations that will influence them through life. Books can be procured so cheaply that no one should be denied their companionship.

TWO TYPICAL COMMUNITIES

When we speak of a strong grange community we instinctively think of a neighborhood of beautiful and artistic homes, commodious barns, well-bred stock, and farms well tilled; progressive schools, with teachers keenly alive to the best educational thought of the age; neat churches, with a minister well groomed and glowing with spiritual enthusiasm, and of a church choir of sweet voices well trained; of free rural-mail routes, and of a telephone system connecting the farmers with one another and with the adjoining town and the far-away city. We think them the most favored of humanity. To be sure, they bear unjust burdens, but even with these adverse conditions they have pleasant homes, an abundance of food, and a horse and buggy always at hand. In their grange halls they meet for social and intellectual improvement. When they discuss questions of public importance they know that in hundreds of other halls all over our land thousands are pondering over the same subject. This knowledge of kinship of interests adds zeal and enthusiasm to their discussions and imbues them with courage to act. They are the farmers who back up their words by deeds. They are the ones who have been instrumental in securing legislation favorable to our interests. They have had the faith to believe and the courage to do. They are not the servile class, but the free, independent thinkers.

In thinking of these more favored communities, are we not apt to overlook the other side of the matter? In how many neighborhoods the direct opposite is found—run-down farms, dejected-looking houses and barns, schools so poor as to hardly justify the name, churches the scenes of brawls and ill-natured gossip, and the people dull and spiritless, often quarrelsome. They grumble at their fate, but have not the knowledge, hence lack the courage to co-operate with one another. Usually there are a few intelligent men and women who long for a better way of living, but fail to attain it. Their only hope is to sell out and go to some more favored locality. Probably they have tried to better their community, but all their efforts have been looked upon with suspicion.

We seldom find good stock in such places, and a man with a bank account is a genus homo scarcely known. But envy, strife, ignorance, discouragement and a deadly fatalism are found.

What a blessing to such a community a good grange would be! How the tired eyes would brighten! What new meaning life would hold! What possibilities of usefulness would unfold before them! How mean and petty would their frivolous lives look, and their causes of quarrels and heart-aches would pale into insignificance in the light of new hope, new ideals and new lives. How capable of judging the events that daily arise they would become! What new courage they would receive from knowing that thousands of other hearts were beating in unison with theirs! How eagerly they would set about redressing wrongs and striving for a nobler, purer citizenship! Instead of a community hated and shunned by all it would become a blessed retreat, and a center from which would radiate an intelligent helpfulness. This change would not be accomplished in a week or a year. Such changes at first are of slow growth; but let the impetus be given, the instruction furnished, and marvelous results will follow. It will not do to organize a grange in such a place and leave it to its own devices. The community would not be able to continue it. It should be visited often, helped and encouraged until it learns how to care for itself. The end will fully justify the means.

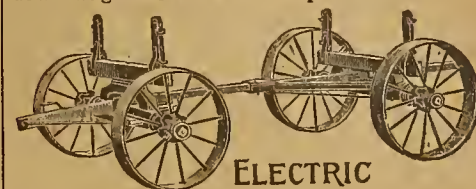
When we realize that there are just as large families in the ignorant neighborhood, that they cast as many votes, and their votes are just as good as those of their cultured fellow-men, it will be seen that we have a moral obligation to help bring such a place to a higher type of civilization.

The problem of the country is of no less importance than the problem of the city, nor is it easier of solution. We have our shuns that must be purified, our ignorant and vicious that must be helped and taught. There is no better way than that of establishing a grange, and staying with it until it can care for itself. This work must not be left entirely to the deputy. The grange does not pay them enough to warrant them in doing this single-handed. It is the duty of every member wheresoever he may be found. If you want the deputy to do the work, if you are willing to support him while he gives his time to this missionary reform, pay him a living wage and send him forth. It will richly repay the grange as an organization. Every backward community is a living obstruction to good work by the wide-awake, intelligent farmer. The grange cannot afford to leave it in darkness. An old-time fable says "that the gods divided man into men, that he might be more helpful to himself, just as the hand was divided into fingers, the better to answer its end." If a finger is maimed it cripples the usefulness of the hand. So will a maimed, distorted, ignorant community cripple the usefulness of the whole body of farmers. As an organization of farmers it becomes a matter of business with us that we help these communities to help themselves. Our deputies for the most part are capable and zealous; let us uphold them and lend a helping hand.

The two communities are typical. Between them are many mediate grades. Then there is the rich, intelligent communities, with their various clubs all contributing to the social and intellectual improvement of the members. No one doubts the excellent work done, or questions the benefits arising therefrom. But could not the same quality of work be accomplished if connected with the grange? Would not the intelligence of that place reach a larger circle, and be of far greater benefit to the world and to itself, if connected with a great national organization? Could it not derive greater strength and influence in legislative matters if it voiced its demands through the organization recognized as the spokesman of the intelligent farmer? The grange has all the benefits of a farmers' club, with the central organization added. In its meetings no attempt is made to dictate what questions should be discussed, barring political and sectarian ones. Legislative questions are suggested for study, and it is highly desirable that the farmers discuss them as a unit. If due regard were paid this matter there would be a more united effort on any question arising. Brother farmers, let us get together, talk and act together. The grange needs you, you need the grange. With your trained intelligence you could do a noble work—far nobler and greater if connected with a central organization, through whose channels you could pour out your treasures of knowledge to all the country round.

FARM WAGON ECONOMY

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HINTS HERE AND THERE

WONDER if all our readers know how good bean soup can be made without meat, bones or stock. Black beans are preferable for soup, or if you have saved more than you need for seed of any of the garden snap-beans, this is just the use to make of them.

Put a pint of dry beans to soak over night; in the morning drain off the water and put the beans over the fire in two quarts of cold water. Slice one small onion and fry it in one tablespoonful of butter until it is a light yellow, then add it to the beans. If you have celery, cut up the root and green leaves of one bunch, or put in half a teaspoonful of celery-seed. Simmer the beans three or four hours, or until they are soft, adding from time to time half a cupful of cold water as the water boils away. Have about two quarts of the soup when the beans are soft. Now rub all through a sieve, put back in the soup-pot and add two teaspoonfuls of salt, one salt-spoonful of black pepper, one fourth of a salt-spoonful of cayenne pepper and one salt-spoonful of mustard. Put another table-spoonful of butter in a frying-pan, and when it melts stir into it one tablespoonful of flour. Let it brown slightly, then pour into it slowly one cupful of the soup, stirring it all the time as you would make gravy. When it is smooth stir it into the soup, let it boil up once and it is ready to serve.

This soup is nice served with croutons instead of crackers. To make the croutons, cut some slices of stale bread, trim off the crust, butter them thinly, cut into half-inch squares, put them on a pie-pan and set in a medium-hot oven until the croutons are a very light brown. Serve croutons hot with the soup.

If you have no smoke-house, and want to smoke one or two hams at home, the following is a good plan: Take a large barrel and put a stick across it near the bottom, fastening it securely, and hang the hams on it. Have a trench dug large enough to hold a joint of stovepipe, lay in the pipe and fill up the trench, leaving both ends open. Over one end of the trench set the barrel, open end down, and throw a little dirt around it to stop any crevices. Build a fire in the other end of the stovepipe with green-hickory chips and sawdust, set a flat stone or a piece of iron up to the pipe for a door and the smoke will draw through the pipe and fill the barrel. Medium-sized hams will require five or six days to smoke. When the fire is made in the barrel directly under the hams they are apt to get too hot, and I have known them to fall down on the fire. I am told some build smoke-houses with the place for the fire outside and a trench as above described. Home-cured hams are so much better than those cured by the patent process.

"Law, honey, don' yo' pahball yo' ham foh yo' brall it?" asked an old colored auntie. "We-uns allus do." I tried it and now "we-uns allus do."

Ham for either frying or broiling is much better if parboiled. Scrub the ham as if for boiling. Boil a ten-pound ham slowly for two hours, and then keep it in a cold place and slice it as you would a raw ham. After you have used all that will slice nicely for broiling or frying, the rest may be chopped very fine, allowing two parts of lean to one of fat. Season it well with pepper and a little ground cloves and mace, pack it in a stone jar, cover, and set it in a kettle of water. Let it boil for two or three hours, then stir it up well and pack it down tightly in small jars. Pour enough grease from fried meat over it to cover it well, and paste a paper over the tops of the jars. If this is well seasoned it will keep a long time in a cool place and be found nice for sandwiches, croquettes, etc.

"I don't know, but I will consult my 'Household Mentor,'" said my friend when I asked her advice about a household matter; then going to her pantry she brought out a large scrap-book. "I used to come across so many useful receipts and hints," she explained, "and then in the hour of need could not recall them. So I got this scrap-book, and now I always read with scissors and pencil at hand. If I do not want to cut the paper in which I find some hint about household work, care of flowers or children, I

copy it, and in either case preserve it in my scrap-book, which has become to me a veritable 'Household Mentor.'"

"Take walks in the winter!" exclaimed my little neighbor, "why, I do not have time, and if I did I cannot see where the pleasure would be." Women need to walk in the winter more than at any other time. In warm weather the house is open and they get some fresh air without going out. By a little planning time will be found, and very soon the oddity of the idea will wear off. Dress warmly and soon you will enjoy these walks and they will make you feel like new. A short, thick jacket, skirts which clear the ground, a hood and warm mittens, with overshoes or rubber boots, will effectually prevent any discomfort, and such a sense of freedom and exhilaration comes from defying the sharp, wintry air as will soon make you feel that you will deny yourself almost anything else rather than your daily walk.

MAIDA McL.

OF INTEREST TO FARMERS AND FARMERS' WIVES

"A typical country scene" suggests itself to my mind as I view from my window the yardful of chickens, turkeys and pigs, and the destruction the last-named have wrought with the sod when it was wet. Unfortunately, the yard is not pig-tight, and if the little fellows were shut up they would die; as it is they are certainly a "necessary nuisance."

Perhaps the scene described would be anything but charming to some, and I admit that a tight fence at least would be an improvement; but who ever had a fence that would not at times refuse to turn turkeys and chickens?

To the average farmer's wife the scene has its attractions. It not only represents a great portion of what she by hard work accomplished through the past summer, but there is life and animation, which, though seen only in the poultry about the door, mean something to the woman shut in for the winter with only brown pastures and wood to view, or else a broad expanse of snow-clad landscape. So be careful before you think her ambition does not soar higher than her surroundings would indicate.

While to the extent these things were intended to benefit she enjoys them, yet to the true woman, be her environments what they may, there are aspirations and longings as far apart from the scene suggested as come to you, my dear reader, who would perhaps hold in contempt the "scene," and also the idea of there being in the life and mind of the farmer's wife anything suggestive of high ideals lived up to each day. Yet it is true. If only you were penetrating enough to see into her heart, as each day she goes about tasks either of love or necessity for her husband and family, you would discern an eagerness for knowledge for which you have never given her credit.

As she sits in the evenings reading her monthly magazine—perhaps her only literature in all the year—how eagerly she scans its pages for something helpful and strengthening in the building of character and expansion of intellect, something to aid in hushing her own sorrows, that her life may be wholly devoted to the giving of joy to others.

Often you would see a heart that bleeds while the face smiles compassionately, and she speaks words of cheer and comfort to the down-trodden or sorrowing who seek her, knowing they are sure of a friend and sympathizer, never stopping to think that it is only by experience she can enter into their griefs. Oh, no; she has always seemed so "happy and contented" they did not dream she had ever known sorrow. Yet her sympathy soothes, even though they stop not to inquire why, and as the cloud is lifted she reverently thanks God for a sorrow which is the means of bringing her to an understanding of the grief of others.

Who shall say there is nothing noble in the woman described, be she the wife of a farmer performing her daily work with her own hands, or a woman with the most tasteful surroundings?

The true woman is she who forms and lives up to lofty ideals regardless of surroundings. Then surely she who does so when surroundings are not in accordance with her desires and aspirations is noble

indeed. Do not imagine the picture over-drawn. Such women are the wives and mothers in thousands of our American homes to-day—women of intellect and ambition, with hearts full of affection, which are daily being sacrificed for those they love.

But viewed from another standpoint, is it quite right that this sacrifice be allowed to go so far? These women themselves need help and sympathy. Where shall they find it? Not, I am sure, in an illumined picture or story of city life, where there are just as many—yes, more—disadvantages in some ways than advantages in others; certainly not in the haughty manner of one seeming to say "country bred;" not in the woman who, though perhaps her best friend, can come out from the city to visit, yet enter no further into her plans than feel it a shame to get up to breakfast at six, when perhaps even then the meal was deferred an hour that all might be served at once, thereby economizing strength for other imperative duties, and giving an hour more of rest to one so unappreciative.

Where, then? Let it begin at home. If only each husband and father would study to broaden the mind of wife and child as he does to provide for their bodily comfort soon would we see the country woman able to cope with her city cousin. If she does not as it is, it is from no want of brightness nor because of a less receptive heart or faculty. If a husband, father or brother doubts my statement, try proving me wrong by offering wife, mother or sister, or all, the very best advantages you can afford. Present to them periodicals and magazines especially adapted to the broadening of minds and upbuilding of character; surprise them with a good book, and note the pleasure it gives even before they read; draw on their minds for the impression made as they read. You will in your delight of the unfolding of mind forget you made the experiment to prove my mistake, while I, could I know you had taken my advice, would be so pleased that simply triumph over you would be the least of my thoughts.

Farmers, wake up to these duties you owe your wives! Do not allow them to feel the sacrifice they make for you is unappreciated. You will love your wife more, and respect yourself as you behold the joy such giving cannot but bring to the woman who would be true to herself, to you and to God.

Farmers' wives, I appeal to you. Join me in standing for each other, or for ourselves, as you please; the terms to me seem synonymous. In so doing we help ourselves as well as each other, and command the respect of those we admire and love. We must combine if we would derive the greatest good that may issue from earnest effort. R. S.

NEW-YEAR'S RESOLUTIONS

"We live not by years or by ages,
But simply from day unto day."

What a blessed thing it is that the above couplet is true. How sadly discouraged we would become if it were not. Some of us may even thus soon be disheartened because we have not been the better able to keep our New-Year's resolutions. We declared that we would not allow ourselves to become angry at trifles, that we would break ourselves of the nagging habit, even if we had acquired it in a diminutive degree only. Yes, we had determined that only kindness, consideration and courtesy should mark our manner and speech during the coming year, and yet—and yet—we are sorry to admit it, we can remember that once or twice—surely not more than that—we have proved traitor to our good resolutions. Then do we remember that "Not failure, but low aim is crime," and the couplet again repeats itself,

"We live not by years or by ages,
But simply from day unto day."

Thus each day is a new day, and we may begin all over again, remembering that if we "Keep close to the Prince of the Ages," "He will give wisdom and power."

We as mothers and home-makers should have a foundation principle that should govern our every action. We should determine to be scrupulously polite in whatever we do or say.

"That is easy enough," say you?
Not so easy as we imagine when we come to study all that this implies.

Have we never in the least degree shown the slightest disrespect to our husband? Are we always as careful of our words to our own child as we are to our neighbor's child?

"But they are so aggravating at times," you say.

True; but is that not the greater reason why we should keep sweet? We remember how it was with Lydgate in "Middlemarch;"

he felt that he must be the stronger because of Rosamond's weakness.

What numberless heartaches might be avoided if husband and wife while yet in their honeymoon should firmly resolve never to be impolite to each other. What an amount of nagging would be buried forever. What a quantity of fault-finding would never be allowed to see life. How much twitting should be done away with for all time. What a numberless amount of unkind remarks and acts would never see the light of day. How much more room would there be in the home for love to grow. How much more homelike would be the house.

Can we expect children to show respect to parents who do not show respect to each other? Will they be courteous, genteel and patient when their parents are not so?

An unpleasant disposition, like the roots of vegetation, grows by what it feeds upon. If it were not nourished it would die. Its soil is the soul. Therein it finds its ready nutriment; therein, plant-like, it spreads its roots in confidence of support. More than this, it is a banian-tree, which, discontented with what nourishment it secures from the soil of any one soul, strikes its spreading branches down into other hearts also. It must have its food or die. Then let us bravely say that as far as we are concerned we will deprive it of its food, and make it die. We can do it. A field full of wheat has little room for tares.

"This is the cruel cross of life, to be
Full-visions only when the ministry
Of death has been fulfilled, and in the place
Of some dear presence is but empty space;
What recollected service e'er can then
Give consolation for the might have been?"

ELLA BARTLETT SIMMONS.

TWO NEW FISH RECEIPTS

HERRING.—Two herrings, six tablespoonfuls of grated and sifted toast, six tablespoonfuls of grated veal, one onion cut fine and stewed in butter, the yolks of three eggs, two tablespoonfuls of sour cream, some grated bread-crumbs and some melted butter. Soak the herrings four or five hours, then skin them, remove the entrails, heads and all the bones, and chop very fine; then mix with the grated toast, veal, onion, yolks of eggs and cream. Mix thoroughly, then put in a well-buttered pan, sprinkle with the bread-crumbs and melted butter, bake twenty or twenty-five minutes, then turn out on a dish, and serve. This is a very delightful and appetizing dish.

CODFISH.—Freshen one pound of codfish, and cook until done. Take a package of macaroni, break into two-inch pieces, and boil until tender; drain, put a layer of the macaroni in a granite baking-dish, sprinkle over it a little salt and pepper, also drop bits of butter over it, then a layer of fish, and so on until the dish is nearly full. Take five eggs, one tablespoonful of flour and one half cupful of sweet milk; stir the flour to a smooth paste with some of the milk, then beat the eggs, milk and flour well, and pour over the mixture in the dish. Bake carefully about fifteen minutes.

MRS. J. R. MACKINTOSH.

USES OF SKIM-MILK

One of the most important uses of skim-milk is as a food for poultry. I have found from experience that hens lay much more abundantly when I have plenty of skim-milk to give them each day. They are very fond of it when sweet, and also eat it greedily when sour. They seem to enjoy it, too, when mixed with the grain in making "mash" food. The casein contained in the milk is very valuable in the formation of the white of the egg.

As a matter of course we all know that that new old-time product, cottage cheese, is made from clabbered milk. The clabbered milk should be heated in a crock or new pan; then when the whey is thoroughly separated from the heavier part empty the whole in a bag and hang it up where it can drain till the clabber is dry; season with salt, pepper and rich sweet cream, mix thoroughly, and place in a dish, garnishing with parsley-leaves.

If oleo and brown sugar are added to skim-milk that is fed to calves it will be found that the veal will be much fatter than when milk alone is used.

In some instances milk-cows have been induced to drink the skim-milk with very good results, as it contains nearly all the elements of new milk except the fat; and as this can be made up from other foods it is found to be a very cheap food, one that causes the cow to give an abundance of rich, fresh milk.

ELLA BARTLETT SIMMONS.

RECRIMINATION

I.

Said Life to Death, "Methinks, if I were you,
I would not carry such an awesome face
To terrify the helpless human race;
And if indeed those wondrous tales be true
Of happiness beyond, and if I knew
About the boasted blessings of that place,
I would not hide so miserably all trace
Of my vast knowledge. Death, if I were you!
But, like a glorious angel, I would lean
Above the pathway of each sorrowing soul.
Hope in my eyes, and comfort in my breath,
And strong conviction in my radiant mien,
The while I whispered of that beautiful goal.
This would I do if I were you, O Death."

II.

Said Death to Life, "If I were you, my friend,
I would not lure confiding souls each day
With fair false smiles to enter on a way
So filled with pain and trouble to the end;
I would not tempt those whom I should defend,
Nor stand unmoved and see them go astray;
Nor would I force unwilling souls to stay
Who longed for freedom, were I you, my friend;
But, like a tender mother, I would take
The weary world upon my sheltering breast.
And wipe away its tears, and soothe its strife;
I would fulfill my promises, and make
My children bless me as they sank to rest,
Where now they curse—if I were you, O Life."

III.

Life made no answer, and Death spoke again:
"I would not woo from God's sweet nothingness
A soul to being, if I could not bless
And crown it with all joy. If unto men
My face seems awesome, tell me, Life, why then
Do they pursue me, mad for my eases,
Believing in my silence lies redress
For your loud falsehoods?" (so Death spoke
again).
"Oh, it is well for you I am not fair—
Well that I hide behind a voiceless tomb
The mighty secrets of that other place;
Else would you stand in impotent despair,
While unfledged souls straight from the mother's
womb
Rushed to my arms, and spat upon your face!"
—Ella Wheeler Wileox, in April Century.

2.

A (?) SOCIAL

WHAT new can we get up under the
head of amusement? is the question
often asked. Why not have
"a (?) evening," if entertainment
for a private party be desired, or "a (?)
social" if it be for a more public occasion?
A social of whatever nature always meets
with better success if invitations are sent
far and wide to all who will be at all likely
to come. These invitations must be "cute,"
no matter how inexpensive they are.

On a sheet of yellow paper have this quotation type-written:

Yellow and red were the apples,
And the ripe pears russet-brown,
And the peaches had stolen blushes
From the girls who shook them down.

On a sheet of red paper let the following appear:

What is it? Apple Social.
When is it? March 5th, 7 to 11 P. M.
Where is it? Look and see.
By whom given? Alpha Club.
For whom given? YOU.
Why? To get the B. A. P. or the L. A. P. or the
P. A. P.

Bring ten cents—two nickels or a dime.

You may imagine that curiosity if nothing else will be aroused and will prompt a goodly number of young and old to "look and see" where the unique social is to be held, and report themselves on hand promptly to see what it all means.

As each guest enters the room have the committee hand him a small card on which is written a letter and a number, and tell him to find as many persons as he can who hold the same number. A merry search will ensue. At a given signal those holding the same number are instructed to place the letters together to form the name of the apple which has thus been dissected. It is not difficult to see that T U S R S E makes russet. But to get bellflower out of L L R E O E B W F is not so simple.

The varieties at last being rightly named and spelled, the members of each group are to be informed that a poem must be composed by them containing the name of their apple. It matters not how strongly they protest against it, the decree has gone forth, and the work must be done. At the tap of the bell all pencils are laid aside, and what has been written has been written, and what has not been written cannot be read, that is all.

The "russet crowd" may produce the following effusion, or something equally as meritorious(?):

Beautiful russet, with sunburnt cheek,
Wish I could taste you, you're so sweet;
A sight of you now would cure a sore eye,
And, my! how good you'd taste in a piece of pie!

Judges will need to be appointed, and the fortunate man or maiden who is declared to be the best poet will receive an immense apple pie, while a tiny tart will be presented to the "booby." This explains the letters B. A. P. and L. A. P., big apple pie and little apple pie, and when each one has eaten a piece of apple pie he knows what P. A. P. signifies.

After refreshments any kind of amusements may be engaged in. Much sport is often derived by calling for impromptu speeches on "the apple," or music, recitations or readings may be had on the subject. Whatever be the nature of the entertainment let it not be "stiff."

ELLA BARTLETT SIMMONS.

2.

PRESERVE THE COMPLEXION

The desire to be beautiful was born in the heart of every woman, and is praiseworthy rather than to be condemned or condoned. While an occasional few look on with disapproval and comment at the attempt and effort made by many women to preserve their complexion and to remain as youthful and attractive as possible, the world in general has come to accept facial massage and care of the skin as part of a womanly duty to self and family, and in nowise a waste of time or money.

"Personal beauty endows its possessor with an influence everywhere felt and acknowledged, and the desire to be beautiful is inherent." It is useless to deny that a feeling of envy crosses the mind and adds another line of care to the face of one who, seeing her sister friends admired and called attractive, looks herself again in the face as she stands before her glass, and notes that her own face is growing seamed and wrinkled and her complexion coarsened and faded. And still she goes carelessly on, declaring that she "doesn't care," when every one knows that she does.

Though plain of features, many a woman has been called beautiful whose sole beauty, when closely examined and summed, has been found to consist of a soft, velvety skin free of wrinkles and whitened by constant care. Few women seem willing to give proper personal care to retaining the freshness of complexion that in youth remarked them as bright, pretty girls. But without that care the most beautiful face will grow unlovely as the years creep on, while the always plainer face of her who takes the time and the thought and the care to retain the little of "good looks" that was hers by birthright grows younger in appearance, despite the inroads of time. And her friends are surprised that she does not fade and "grow old"—does not lose her youthful look.

2.

The spring winds roughen and tan the complexion if one allows them to, and the heat and fierceness of the summer's sunshine burn and redden and blister, and a coarseness of texture of the skin will follow, the face will become parched and wrinkled, and years that do not belong there are suggested to those who look upon it, not knowing how old or how young is the owner. And all because a woman does not know how to preserve her complexion, or that she will not take the time and pains to preserve it, or that she really does not, as she says, care for the results that are following her neglect of personality. The latter we cannot believe. We do not believe it, though she repeat it over and over. For care she does, else she is not in every reality a womanly woman, for a womanly woman loves both to be loved and admired. Mothers love to be the admiration of their children, and children, old and young, love to look upon the mother-face and find her pretty, her skin soft and white and but few if any wrinkles there, be she ever so well along in years. And the husband of many years, as well as the lover, takes pride in the pretty-faced wife, the well-preserved woman that has been so long his companion and his home-maker.

And why should she not be beautiful if she can? If the Creator bestowed the gift of a beautiful face or of even a beautiful complexion, though all other attributes of beauty were withheld, it is plainly the duty of all to preserve, to retain and to perfect the gift as best they know how. Not understanding, she is wisest who ponders and reads and who puts into effect such knowledge as she gleans. It is right that she expends both time and dollars toward this most laudable and legitimate end. To accomplish this the most assiduous care must be bestowed. According as the work is well and often done or greatly neglected will the results be satisfactory or indifferent. It is worth doing well, for the prize is worth the exertion of the victor.

Thorough and oft bathing of the entire body is necessary. But it is to be supposed that every woman understands and practises much bathing for the sake of cleanliness and wholesomeness, even though no thought of her complexion came into her mind at the time. But in the bathing of the face and neck too great attention cannot be given to detail. One must study the nature and needs of their own skin, for while the face of one will respond in tone and vigor to hot-water baths, the face of another will not endure it without a coarsening, roughening effect.

To the latter the warm-water bath will be best. One who uses advantageously the hot water for her face follows it closely with a dash of cold water—the colder the better. The physician who gave me lessons of a verbal form on the care of the skin, the massaging of the face and obliteration of wrinkles advised the use of ice or ice-water immediately following the five or ten minute bath in as hot water as the face could bear. And I have found it beneficial and a very pleasant treatment. A small piece of ice is taken from the refrigerator in summer and smoothed over the face and neck for a minute or two.

In facial and "fine soaps" the best obtainable is not too good for any woman to use, no matter what the cost. Of excellent brands there are several on the market, and none of them that are truly of the best can be bought for less than twenty-five cents a cake. The cakes are small, but worth the price to any one who covets the boon that a good complexion is. How many times, though, have I found women using the coarsest of laundry-soaps for the bath and for the face, with the resultant ruined complexions, roughened and reddened skin, and wrinkles fast coming and deepening.

2.

And I have never failed to preach a sermon to every such careless woman met with. Some have accepted the sermon all in good faith and have immediately turned over a "new leaf." Others have said, "Don't care." But I knew they did care, and that envy filled their hearts at the same time that resentment filled their hearts likewise at the discovery of "the difference" in complexions and the needlessly pennywise practice of using laundry-soaps for the face.

An occasional "can't afford" has met me when I have suggested the best of soaps and facial creams and toilet articles. But I do not believe that a woman can afford to lose the priceless gift of a good complexion when five dollars a year will preserve it. Two or three cakes of the very best soap will last one face for a year, and be used daily. And one dollar has covered the cost of soap for a year for one individual. The remaining four dollars are left for creams and lotions. It is sufficient, and there will be a margin besides.

"I shall think more about this than I have ever thought before," said a wife of thirty-five a few days ago, to whom I had talked of the necessity of caring more systematically for her complexion, a woman with plenty of means at hand, and plenty of leisure. No reason in the world for the neglect of her facial defects except carelessness and thoughtlessness. "I shall begin at once," she said, and will take your advice as to the manner of bathing and massaging the face and neck, using the best of soaps, facial creams, etc. I know my complexion is getting bad. I seemed to think I must endure it as a part of the coming of years upon me. But I see now how I may improve myself, and I'm going to do it. I confess that it has been with misgivings and regrets that I have watched myself grow less fresh and youthful in face and neck. I'll begin right away."

2.

But another to whose home I went I found less inclined to take that stand. For finance was at low ebb in that home, and the pretty-faced young wife and mother does not believe that she can afford either the time or the necessary things to give to her own personal appearance. I visit her yearly, and yearly I see her losing her once beautiful complexion. It is not strange. There was not in that house a particle of soap except a piece of tar-soap and coarse, strong soap of her own home make. Her face is showing the effects of washing with hard water and these soaps.

And as we take constantly from the skin, by daily bathing with soap and water, its natural oils, we are causing the skin to grow harsh and dry and set in seams and wrinkles. One who began a year ago to give daily attention to her complexion found the skin so set at the corners of her eyes and in two deep wrinkles between the eyes, just above the nose, that it was impossible to lift the skin between the thumb and finger. But in a few weeks' time, with persistent atten-

tion to bathing the face in hot water, massaging with the fingers and a silver face-roller purchased for the purpose, the lines grew less and less deep and the skin so flexible that at any point it was readily taken up by thumb and finger. The skin grew softer and whiter, the complexion began to take on the freshness of years ago, and friends were soon remarking the improved appearance and were wondering from whence sprang the changed condition and "looks."

The skin must be nourished, else it will wither and fade as does a plant deprived of water. The greater number of cosmetics or powders for the face are harmful, containing as they do chemicals and poisons. Be sure that the brand of powder for the face that you use is harmless and good, if powder you are in the habit of using. And be equally sure that before retiring it is washed thoroughly away and the face liberally treated to some manner of reliable skin-food or facial cream. Learn to massage the skin, do the work carefully and regularly, smooth away wrinkles and lines, keep the pores of the skin free of dust and perspiration and grime, protect from sunshine and wind, feed the skin with foods suited to its nature, and watch yourself growing beautiful in complexion, and you will smile with satisfaction as you note your lost youth returning. You will call it time and money well expended, and your husband will, too.

NEDELLA HAMPTON.

2.

ABOUT THE HOUSE

FLOOR-CUSHIONS.—Two new coverings for floor-cushions are at once so handsome, suitable and durable as to deserve being generally known. Both are made of pretty, soft worsted, silk and velvet pieces cut and sewed as for a hit-or-miss rag carpet. The handsomer ones are woven as for silk portieres, while the others are made in short crochet, working back and forth across the cushion. Much taste and ingenuity can be shown in the choice and arrangement of colors, the best effects being secured when all the colors blend softly together. Finish the edges all around with a cord, an effective one being easily made by winding about six strands of Germantown yarn evenly together and making a simple chain in crochet. The corners may be finished with one, two or three even-sized loops, or the cord for each side may consist of a separate piece tipped with a short, full, worsted tassel, and be tied in a double bow at each corner. The woven ones are twenty-seven inches square; the others are easily made any size desired.

TABLE-COVERS.—No table covers or scarfs are more popular for all except handsomely furnished parlors than those made of plain colored linen or denim finished with white linen crochet, or knit insertion and lace, or insertion and fringe, especially that of crochet made in medallions, or with scalloped edge finish and buttonhole-stitched to position. Canvas table-covers ornamented with cross-stitch and finished at the edge with a knotted-in fringe of worsted are also in decided favor. They deserve to be, too, for they are at once inexpensive, easily made, handsome and durable. The canvas comes in several different weaves and colors.

COMFORTABLES.—If you live on a farm, and must provide bedding for working-boys and hired men, try covering comfortable with domestic gingham instead of calico, and see how much longer it wears and holds its colors.

PHOTOGRAPHS.—The old saying that "fashions move in a circle, and the good ones are certain to return in due time," has been exemplified in the matter of photographs of persons. From being absolutely tabooed from our parlors and libraries, one can now scarcely have too many. Portfolios, open receptacles of all sorts, and small easels are used to hold them, but the old-time album is sure to return to favor. Photography is now such a general art that pictures of celebrated persons and of the most interesting and restful outdoor scenes are easily obtainable.

DECORATIVE HOUSE-PLANTS.—Another fashion that is well worth making a note of is that of utilizing growing house-plants, especially those with highly decorative foliage, like palms, Boston fern, Asparagus plumosa, Zealanica, Farfugium grande (leopard-plant) and begonias, for gifts. One could easily buy young plants or start slips in the late summer, and at almost no money outlay have elegant plants by winter.

TABOURETTES.—If "John" or one of the boys is handy with carpenter tools, prevail upon him to make you a tabourette or two for your choicest plants. Pretty octagon-shaped ones are easily made of oak or other hard wood. KATHERINE B. JOHNSON.

[HOUSEHOLD CONCLUDED ON PAGE 19]

THE STORY OF AN OVERFLOW

By Pauline Shackelford Colyar

CHAPTER IX.

HER father was away at a neighboring plantation the morning Nellie went to keep tryst with her lover, and she found Kirkland already awaiting her coming when she reached the broad, sandy road that led to the creek.

"Am I late?" she questioned, having noted from afar the look of eager expectancy upon his face.

"Only a little," was the reply; "but I had a sort of foreboding that you might not come at all."

"I always keep my promises," said Nellie, with pretty imperiousness.

"But I felt that this one was scarcely hindering, since you gave it under compulsion."

"No, it was not quite compulsion, but I suspect I would have promised almost anything just then to insure your departure before father found us together."

"I passed him in the grove a few moments after I left you, but of course he did not know that I had seen you."

"Yes, he did," said the girl, with a touch of resignation in her tone, "for when he asked me I told him the truth. He was very, very angry with me, and I almost cried my eyes out over it, and—and I only came to-day to—tell you that I can never meet you like this again."

"So you, too, are going to condemn me for another's sin," murmured the young man, eloquent protest in his dark eyes.

For a moment Nellie parted her lips as if about to speak, but suddenly averted her face and remained silent. It was Kirkland's nature to be quick and decided in all he did, and there was both strength and fire beneath his soft indolence.

"I love you, Nellie!" he cried, catching one of the girl's hands. "I have loved you, dear, from the first moment I saw you that day over at The Oaks. But I had not meant to speak so soon. I did not want your answer until you knew me better, until you were sure of your own heart. I would do anything to conciliate your father—serve him, if need be, as Jacob did Lahan of old for Rachel; but this unreasoning antipathy—"

"And they are going to take me away from you, to Europe for a year," Nellie burst forth, tearfully.

Kirkland unconsciously tightened his grasp upon her hand, and felt the slender fingers tremble like a captive bird.

"And you do not love me? You will go? You will leave me?" demanded Kirkland, with fierce impetuosity.

A flood of emotion swept over the girl, and she grew cold and faint while she listened. They had halted in the shade of a great moss-draped oak, which like some giant gray-headed sentinal kept watch and ward over them. The energetic rattat-tat of a woodpecker resounded through the stillness; with every passing breeze a shower of leaves, all crimson and gold, fluttered to the earth, and in the distance there was the mystic chant of the wind through the pines.

"I am waiting, sweetheart," said Kirkland, very softly, "to hear my sentence from your lips. Have I been wrong in hoping, in almost believing that you care for me?"

Still Nellie did not speak, but her eyes usurped the office of her tongue.

"Then you do love me? You will not let them take you away from me?" cried the lover, covering the hand he held with passionate kisses.

"But," faltered Nellie, "I will be compelled to go if my parents so decide."

"There is one alternative," said Kirkland, holding her with the magic of his smiling eyes.

"And that?" asked the girl.

"That," repeated Kirkland, with impressive emphasis, "that alternative is to stay with me, to give me the right to keep you here, to be my wife."

A swift blush fluttered up into her cheeks, and there was a sudden catch in her breath. "Oh, I should never dare do such a thing!" was her startled reply.

"Listen, my darling," he went on, nothing daunted; and he now took both little hands unresisting prisoners. "You do love me. I am sure of it now, and a year is a long time to be separated. A great many things may happen in twelve months, and even if we waited, would your father be any nearer giving his consent to our marriage than he is to-day?"

Nellie sighed audibly, and gave a dreary little shake of her head.

"We both understand the hopelessness of attempting to overcome his prejudice, but I believe that after we are married he will finally relent."

The sun had already reached its zenith, and the plantation bell was ringing out its summons to the field-hands. In sudden affright Nellie remembered that it was nearing the time for her father's return.

"I must go home!" she exclaimed, turning her horse's head. "I would not dare have father even suspect that I had seen you!"

"But promise me, promise me now, dear," pleaded the lover, in impassioned tones. "Unless you do we may never meet again."

Nellie felt a sharp tension about her heart at these words.

"It is all so sudden—so unexpected—so terrible!" she faltered, torn by contending emotions. "I cannot decide now—"

"Then I will write to you," said Kirkland. "Is there no one at home whom you could trust?"

"Send your note to Aunt Rindy; she will never betray us," came the answer, and the next moment Nellie was speeding back home.

It was not to be marveled at that the young girl went to the old negress for comfort in her sore trial, certain that she would find it without stint or measure.

"Oh, Aunt Rindy," she cried, bursting into tears at the sight of the kindly yellow face, and throwing her arms about her neck with the impulse that marked all her actions, "father is angry with me, and he doesn't love me like he used to, and I am so, so miserable!"

"What's he he'n doin' to my po' leetle lamb?" queried the woman, stroking the bright hair with the same gentle touch that had so often proven a panacea for childish woes.

"It is all about Mr. Kirkland over at The Oaks," sobbed the girl, "and father won't listen to reason. Just because this young man's grandfather killed my grandfather in a duel before either one of us was born father won't let him come here, and says I sha'n't even speak to him any more."

sagely. "I done heerd young folks talk befo' now, an' as for yo' pa takin' ou so biggity, I wonder if it's done slipped his 'memb'ance how him an' Miss Ellen wuz 'bleeged to run orf so as to git married."

"You don't mean it!" interjected Nellie, startled out of her former mood. "Father and mother eloped?"

"It's de Lawd's truf," asserted Aunt Rindy. "You see, Miss Ellen's folks, dey wuz monst'ous rich, an' Marse Taylor he wuz only jest tollable well-to-do, so right den an' dar him an' ole marster locked horns."

"And did they—mother's parents—ever forgive them?" asked Nellie, eagerly.

"Forgive 'em?" reiterated the old woman, reassuringly. "Why, suttinly dey did, chile. Ole marster, he thunk de worl' an' all o' Marse Taylor befo' he died, but he wuz scan'lous mad at fust, an' he ripped an' 'ared terrible for awhile."

These startling disclosures regarding her parents did much to smooth the way for the furtherance of Nellie's own happiness, and when the next night Aunt Rindy tapped softly at the door of her room, and gave into her keeping a sealed note, she decided to take the faithful old servant fully into her confidence.

"Come in here, Aunt Rindy," she whispered, beckoning mysteriously; "I want to tell you something—to ask you to help me, too, maybe."

"Well, honey," replied the woman, entering noiselessly, and speaking in such hushed tones as to be scarcely audible, "lemme know what you wants wid me."

Going to the lamp Nellie read and re-read the

CHAPTER X.

Even at the eleventh hour Nellie's courage almost failed her at the thought of parting from her parents, and when she stole down the long dark hall on tiptoe she paused for a moment—a moment pregnant with fate—in front of their rooms, listening for any word or sound. But they were evidently both asleep, all was silent there, and she heard only her own insistent heart-throbs and the measured ticking of the bronze clock on the library mantel.

As she noiselessly opened the big front door she was greeted by a rush of cool, fragrant night air, and when she silently closed it she realized, with a sudden sharp tug at her heart-strings, that she was writing finis to the short, girlhood chapter of her life.

The habits of punctuality and early rising, acquired from necessity upon the little farm, still obtained, in a modified degree, in the Bufords' more pretentious dwelling, and Nellie's absence from the breakfast-table next morning at once caused remark.

"I declare, I am always panicky about the child when she is long out of my sight," said Mrs. Buford, after dispatching Rachel, the housemaid, to learn the cause of her daughter's tardiness. "Don't you remember the fright we had over her that day long ago, when she ran away to call on old Ganny Betty?"

"Yes," replied the husband, gravely; "I shall never forget what I suffered when I discovered those little foot-prints leading to the creek. It was hardly short of a miracle that she was not engulfed in the quicksand, and until I thought I had lost her I don't believe I ever fully realized how every tendril of my heart was entwined about her, and how utterly hopeless and desolate life would be without her."

"She ain't in her room, Miss Ellen, an' her bed ain't never he'n slep' in las' night, but dis heah note wuz pinned to de piller," said Rachel, breathlessly, while her dusky face took on a shade of ashen gray.

Mrs. Buford seized the envelop and tore it open with nervous haste, but with one comprehensive glance at the contents of the letter she thrust it from her and burst into a passion of tears.

"Oh, Taylor," she sobbed, "Nellie is gone! She has left us and married him, after all!"

Contrary to what might have been expected, Buford uttered no outcry, gave vent to no reproach, but his face was white and drawn, his lips compressed, and there was a strange hunted look about his eyes.

All day the servants moved about with noiseless tread, and spoke in awed, hushed tones, as though in a house of mourning; and even after the first storm of grief had spent itself Mrs. Buford still wept silently, repeating, with dreary iteration, "Our darling is gone. Our daughter has left us."

"She is no longer our daughter, Ellen," said Buford, arousing himself from his lethargy. "She has made her choice, and must now abide by it."

"No, no, Taylor," protested the mother, suddenly drying her tears; "say anything but that. Come what may, she will always be ours, and I know that she still loves us devotedly. Only listen how she pleads in her note here for forgiveness."

Buford waved a silencing hand, and refused to discuss the question; but the next day when he returned from his accustomed ride over the plantation and found his wife alone in the sitting-room, he himself reverted to it. "Ellen," he said, putting his arm about her, and speaking with infinite pathos, "we must make the rest of the journey alone—end it as we began it long ago."

"No, dear," urged the wife, looking up with tender appeal, "we will not be alone. Nellie will tire of Europe after awhile. She says in her note that they are to stay only a year or two, and then she will come back."

"But not to us," was Buford's stern rejoinder. "She has forfeited all right to a home under our roof."

"I admit she has done wrong—very wrong; but she is so young, Taylor," pleaded the woman, with the deep, unselfish love of a mother.

"She is a year older than you were when we were married," supplemented Buford.

"Yes; but I was hardly as much of a child, and certainly not nearly so ignorant of the world as she. I am afraid we kept her too isolated from young company. She pined for companions of her own age, and fell an easy victim to the wiles of her lover. So, Taylor dear, we must not judge our little girl too harshly, and," stroking his cheek as tenderly as though he had been the daughter about whom she was speaking, "you remember it was not all smooth sailing in our own courtship. We, too, had to be married in secret, and although my parents grew to be very fond of you, they bitterly opposed our marriage."

"The cases are not in the least degree parallel," retorted Buford. "Your parents objected only on account of my poverty, but the blood of my father cried out against this union."

The morning after Nellie went away Aunt Rindy was reported as confined to her bed with illness, and for several days longer she did not leave her room.

"I believe the faithful old creature misses our darling almost as much as we do," said Mrs. Buford, in answer to inquiries concerning her.

"Yaas, ma'am, she do," vouchsafed Rachel, dolefully. "De house is dat lonesome an' sorryful widout Miss Nellie dat I 'clar' to grashus it's all I kin do to keep from bustiu' out cryin' my own se'f."

Mrs. Buford was not mistaken in her surmise regarding Aunt Rindy, though no one even suspected her complicity in the elopement. And yet it was remorse over this act that most preyed upon her mind. All day long she dwelt upon the consequences of what she had done, and some-



"AM I LATE?" SHE QUESTIONED

"Now, now, don't ery 'bout it no mo'," murmured Aunt Rindy, with ready sympathy. "Set down heah an' lemme bresh yo' ha'r for you whilst we-all talks it over. I don't know what all Marse Taylor, nohow," she went on a moment later, busy with her self-appointed task. "When I wuz a gal a gent'man wuzn't wuth callin' a gent'man what hadn't fit leastways one or two juels, an' some of 'em wuz jest natchelly hleeged to git kilt now an' ag'in. Why, didn't Miss Ellen's own pa git a clip took outen one o' his yers wid a pistol-bullet in a juel, an' wuzn't her Uncle Tom winged in de knee in de very same way?"

"But all of this doesn't have any effect upon father," interrupted Nellie, with a little mournful sigh. "He met Mr. Kirkland in the grove upon their return home from the station the other day, and he said if he had known who he was he would have ordered him off the place; and I never did see him as angry as he was because I had been talking with him."

"Huh!" sniffed Aunt Rindy, with an upward tilt of her chin, "Marse Taylor ought ter be pint'ly 'shamed o' hisse'f gwine on so terrible 'bout you an' yo' sweetheart, when I 'members—"

"Who told you he was my sweetheart?" demanded Nellie, smiling through her tears.

"Lawdy mussy, chile, I wuzn't hawnded yistiddy, an' I kin see thro' a mill-stone even if it ain't got no hole in it. How come you's gwine on so distressful 'bout him 'ceptin' he's yo' sweetheart?"

"Well, I do like him ever so much," Nellie admitted, "and I think he is very haudsome and outertaining, and—"

"You don't need to nominate no mo' to me," said the old woman, nodding her turbaned head

brief message contained in the note; then suddenly facing Aunt Rindy she cried, with a tragic little gesture, "He says I must give him my answer now—to-night. That if I don't marry him he is going away, never to come back again."

For a few moments Aunt Rindy sat silent, while Nellie sank upon the carpet at her feet and buried her face in the old woman's lap.

"It takes a monst'ous sight o' love to last out a lifetime," announced Aunt Rindy presently, philosophizing, as was occasionally her wont. "An' when you starts on dis heah journey you's 'bleeged to trahble in double harness all de way."

"I am not afraid about that," said Nellie, with quiet decision. "I love him well enough to go to the end of the earth with him, but my heart fails me at thought of father's and mother's anger. And I could never be happy even with him if they cast me off and refused to forgive me, and—and he says it must be to-morrow night."

At first Aunt Rindy sought to dissuade Nellie from so rash a step, but finding this to no purpose she reluctantly promised her aid.

"If they will only forgive me I will be so happy," was Nellie's oft-reiterated plaint.

"Forgive you? Go 'long, chile! Dey gwine ter do dat quick as a wink time de knot gits tied. What 'u'd dis heah house be 'dout you, anyways?"

Nellie sprang to her feet, but for a moment paused irresolute; then catching up the lamp from the table, she passed it rapidly back and forth three times before an open window.

"Well, the die is cast. I have given him my answer. I have told him I will be there," she said, with an odd little tremor in her voice and a heightened color in her face. And already the waiting lover over at The Oaks had read the signal as it flashed across the darkness.

times in the dead of night, when old Uncle Tuck was peacefully sleeping, she would raise her voice in earnest supplication for a happy outcome of the marriage.

"Oh, good an' mussyful Lawd, smooove de parf for dem thoughtless chiddu!" she prayed. "I ought ter git de mos' part o' de blame, anyways, kaze I mought 'a' hendered 'em; hut 'pears like my heart wuz too soft, an' now dey's done went 'cross de water, an' we mebbe won't never git to see dat preshus chile no mo'."

It was after a week of such suffering that she decided to share her secret with her husband, and with this object in view she supplied herself with a pot of coffee, and gave him an ample cup of the same before she began her story.

"Now, Tuck," she announced by way of preface, eyeing him keenly the while, "I got somethin' what weigh on my miin' an' won't gimme no res' day or night, an' so Ise jest natchelly 'bleeged to tell it to somebody. Beinst as you is one o' dese close-mouf niggers Ise gwino ter 'fess it to you."

Uncle Tuck vouchsafed no reply, but settled himself comfortably upon his splint-bottom chair in the corner, crossed his short legs, and alternately stirred and sipped his coffee.

"Is you heard me, Tuck?" exclaimed Aunt Rindy, irately.

"Is I deaf?" retorted Uncle Tuck, looking up over the rim of his cup with an unctuous smile.

"Well, den," the narrator went on, "if you's sho 'nuff listenin', look like you is. I does 'spise to talk to folks when dey ain't payin' no 'tention, an' dat's how come I done pervided dat cawfee—to keep you from noddin'."

The blaze leaped merrily over the charred logs in the wide-mouthed fireplace, touching with high-lights the festoons of red peppers and bunches of life-everlasting that hung from the rafters, and casting dark, Rembrandtish shadows in the remote corners of the room.

"Tuck," said Aunt Rindy, after a short interval of silence, lowering her voice and looking about with a mysterious air, "I help 'em to run orf."

"Help who?" cried Uncle Tuck, taken unawares, and sputtering hopelessly in an abortive effort to swallow a mouthful of coffee.

"Miss Nellie an' her beau," came the reply.

"Don't nobody even so much as spishun dat I done it, hut now sence it's too late I ain't got a minute's peace. Ev'ry time I shet my eyes, 'pears like I kin see dat po' leetle thing when she fling her arms 'roun' me befo' dey start, an'—an'—" She did not finish the sentence, but sat hopelessly rocking herself to and fro, in dreary abstraction.

"Rindy," said the old man, one black stubby forefinger held admonishingly aloft, "won't you never stop meddlin' wid what ain't yo' bizness?"

"Tain't no use to argify, Tuck," the old woman rejoined, contritely. "You can't l'arn a ole dog new tricks, but I made sho her pa wuz gwine ter make up wid 'em jest as soon as de knot got tied good an' tight, kaze he's mighty purty, an' mannerly, too, dat Mr. Kirklan' is, an' he looks at Miss Nellie like he think she's pure gol'. I never had no idee Marse Taylor wuz gwine ter hol' out ag'in 'em like he do."

"An' right dar wuz whar you wuz harkin' up de wrong tree," remarked the ole man, sagely. "Ain't nobody axed 'em to come back, an' what's mo', dey ain't gwine ter, nuther."

"Ise skeered dey ain't—Ise skeered dey ain't," confessed Aunt Rindy, with solemn emphasis upon her words, "kaze dis mawnin' when Miss Nellie's letter come from New York (an' 'twuz a big fat one, too) Miss Ellen she beg, an' cry, an' coax Marse Taylor jest to let her git one peep inside o' it; but 'tain't no use, an' he fling it in de fire widout even openin' it, an' he stan' dar wid his face white an' drawed, watchin' it twell it hu'nt up." Until a late hour Aunt Rindy continued to discuss the question, but turn and twist it as she would Uncle Tuck could discover no ray of comfort in the outlook.

"Ise powerful glad it's you what done it, in place o' me," he announced, as he rose stiffly from his chair, "kaze it's a moust'ous ticklish bizness, de way I looks at it."

Mrs. Buford's grief found vent in frequent tears, but from the first no such solace was granted the father. He went about the house like an automaton, dry-eyed and silent, and his step lost its alertness, his face its smile. For many weeks after Nellie's departure her letters continued to come, but despite Mrs. Buford's entreaties each in turn shared the fate of its predecessors. Winter had now come in earnest; the flowers were all dead, and the wind roared through the leafless branches of the trees.

Christmas day was cold and cheerless, with a skurry of snow in the air, and the sky piled high with dark, leaden clouds. But the clouds were no darker nor gloomier than the lives of the stricken inmates of Aubrey Hall. There was no Santa Claus for the sable denizens of the quarters this year, and their reiterated "Chris'mus gif", Marse Taylor, Chris'mus gif", Miss Ellen," had lost its erstwhile cheery ring. Nellie had been the presiding genius of these simple celebrations, and without her it was like playing Cinderella with no fairy godmother.

Buford's odhracy was crushing in its effect upon his wife, and she faded and drooped like a flower; hut not so with Aunt Rindy. For a time she vibrated like a pendulum between hope and despair, hut grew finally to believe that the present discomfort was merely a term of probation through which they must pass before attaining their end. She had, too, a nebulous plan floating through her own mind for furthering events, and one day in the early springtime, when she discovered Buford alone in the library, his head bowed, his face buried in his hands, and his whole attitude bespeaking utter dejection, she confided to her husband in a tone almost of elation, "De strain's tellin' on him. He's gittin' to look powerful ole an' feeble, an' if somethin' don't happen befo' long he's gwine ter break down."

Her prophecy was in a measure correct, for the strain was indeed telling upon Buford. He was already bowed and broken, and over him was creeping the shadow of premature old age. But despite his physical infirmities he showed no signs of weakening in his attitude toward his daughter.

It was after the summer had dragged out its weary length and the leaves were again falling that he finally took to his bed. The attending physician was puzzled over his patient's condition, for although he could discover no signs of organic disease, there seemed to be a gradual giving away of all the vital forces. It was after learning this that Aunt Rindy determined to take the law into her own hands and carry out her long-cherished idea.

"I made sho you could tell me whar dey is, Mr. Lawson," she remarked a short time afterward, addressing the young white man left in charge of The Oaks, "kaze Mandy, she nominate to me dat you done heerd from 'em, so I come to ax you, please, sah, to write Miss Nellie a letter for me."

Lawson was sitting at his desk looking over some plantation accounts when the old woman entered, and readily agreed to accede to her request.

"How is Mr. Buford?" he asked, extracting a sheet of paper and an envelop from one of the numerous pigeonholes.

"Po'ly, sah, mighty po'ly," replied Aunt Rindy, with a lugubrious shake of her head. "Gwine from bad to wuss, an' de doctor don't 'pear to know what ail him. But I does, an' dat's how come I done ercep over beah oubeknowinst to 'em all at home. You tell Miss Nellie, please, sah, an' sign my name to it, dat her pa ain't gwine ter las' much longer widout she come back to him—dat he done waste away twell he look like a shadder."

The energetic scritch-scratch of Lawson's pen went on, back and forth across the paper, for a few moments, and then facing the old negress in his revolving chair, he read aloud what he had written.

"Will that do?" he asked.

"Oh, yaas, sah, an' thauky, too," came the answer. "It do all right as fur as it goes, but you better put it down ag'in to come quick as she kin git heah."

"I don't doubt but they will return as soon as this reaches them," Lawson assured her; and after an elaborate curtsy and hearty thanks she took her leave.

It was already a little more than three weeks since Lawson's letter had started on its long journey across the water, and Aunt Rindy's patience was fast wearing threadbare. More than once she had been tempted to impart her weighty secret to Mrs. Buford, but the fear lest she should raise false hopes as often deterred her.

"Ise powerful sorry for Marse Taylor, even if he is done fotch all dis misery on his own sef," was her mental comment on the situation; "but as for po' Miss Ellen, she ain't never be'n axed no odds 'bout it. I'd like to see ole Tuck try to ack dat mannish an' biggity wid me!"

It was late in December, but one of those radiant, restful days that come to the Southland even in midwinter, and Mrs. Buford had tried all the morning to tempt her husband out of the house, but argument and entreaty proved alike unavailing.

That night after supper, while she sat in her accustomed corner, and her husband, wan and emaciated, dozed in bed, Aunt Rindy stole in on tiptoe and deposited a mysterious little bundle, all pink and white, close to Buford's side. Mrs. Buford had just laid aside the book she had been reading, and turned down the lamp, but the crackling wood-fire sent a ruddy glow throughout the room.

The same little bundle looked about it for a time with wide-open blue eyes, then catching sight of Buford's long beard it tangled its chubby fingers in it, and gurgled and cooed much as another baby had done years before.

"Little Nellie," murmured the invalid, looking at the tiny intruder in a dazed, helpless fashion, and passing his hand across his brow as if trying to collect his thoughts.

"No, father, not little Nellie," cried a familiar voice, "it is little Taylor Buford, and I think he looks like you."

The next moment Nellie's arms closed about her father and mother, and she was showering kisses upon their thin white faces.

"Will you forgive me? May I come hack to you?" she pleaded, tightening her hold upon them, and appealing first to one and then to the other, while the wee stranger continued to put himself in evidence by vigorous kicks and gurgles. "And, father, mother," added Nellie, "there is some one else waiting outside. May he not come in, too? He has been so good to me, and if you will only forgive us our cup of happiness will be full."

Buford needed no further entreaty, and raising himself with sudden energy, he called out in his old-time, masterful way:

"You, Mose! Rindy! Rachel! Tuck! With a whole yardful of darkies, can't I make any of you hear me? Go tell my son that we are waiting for him."

"Taylor, hadn't you better lie down? I am afraid you are overexerting your strength," suggested Mrs. Buford an hour later.

"Strength," echoed Buford, incredulously, "why, I am as strong as I ever was, and besides, there is no time to be sick now, with Christmas only a few days off and not a preparation to celebrate it."

"And our baby is going to hang his stocking up, too," supplemented Mrs. Buford, with the sturdy youngster hugged close to her breast.

"You scarcely understand what all this means to me," said Kirkland. "I have known almost nothing of home-life, for my mother died when I was a child."

"We will do our best to make amends," replied Mrs. Buford, laying her hand upon his arm with a maternal caress.

True to his nature of doing nothing by halves, there was no residuum of bitterness in Buford's forgiveness of his children, and upon the doctor's next visit he acknowledged that his patient would need no more of his medicine, for he was already on the highroad to recovery—meuding with every breath.

When Nellie and her husband moved over to The Oaks the first part of the next year Aunt Rindy declared her intention of accompanying them.

"Ise sho gwine ter nuss dat baby," she announced, in a tone of finality.

"Even in spite of the ghost?" queried Kirkland, smiling.

"My son, there are no more ghosts in our home," Buford added, very earnestly.

THE END

RAIN ON THE ROOF

When the humid shadows hover
Over all the starry spheres,
And the melancholy darkness
Gently weeps in rainy tears,
What a bliss to press the pillow
Of a cottage-chamber bed,
And to listen to the patter
Of the soft rain overhead!

Every tinkle on the shingles
Has an echo in the heart,
And a thousand dreamy fancies
Into busy being start,
And a thousand recollections
Weave their air-threads into woof,
As I listen to the patter
Of the rain upon the roof.

Now in memory comes my mother
As she used long years ago,
To regard the darling dreamers
Ere she left them till the daw;
Oh, I see her leaning o'er me
As I list to this refrain
Which is played upon the shingles
By the patter of the rain.

Then my little seraph sister,
With her wings and waving hair,
And her star-eyed cherub brother—
A serene angelic pair!—
Glide around my wakeful pillow,
With their praise or mild reproof,
As I listen to the murmur
Of the soft rain on the roof.

And another comes to thrill me
With her eyes' delicious blue;
And I mind not, musing on her,
That her heart was all untrue;
I remember but to love her
With a passion kin to pain,
And my heart's quick pulses vibrate
To the patter of the rain.

Art hath naught of tone or cadence
That can work with such a spell
In the soul's mysterious fountains,
Whence the tears of rapture well,
As that melody of nature,
That subdued, subduing strain,
Which is played upon the shingles
By the patter of the rain.

—Coates Kinney.

FACTS ABOUT CHICAGO'S BIG DRAINAGE-CANAL

The Chicago drainage-canal ranks among the greatest of engineering feats during the nineteenth century. As an artificial waterway its cross-section is larger than the Suez canal. The projected Panama canal will have but two thirds the volume of water. The Nicaragua channel will be no larger. The North Sea channel, which provides a short route for the commerce of Germany, alone of the modern waterways constructed by man has a greater capacity than that of the drainage outlet of Chicago. Dredged to the same depth as that of the German canal, the volume of water passing through this Illinois outlet would be much more.

Constructed for the drainage of Chicago's turbid and muddiest and filthiest of all streams—the open sewer of the city—the channel was made large enough to float the biggest of vessels that sail or steam over the Great Lakes. It combines the functions of a ship-canal with a drainage-duct.

The problem which confronted the city ever since the municipality passed its half million in population was the disposal of sewage. Chicago is built upon a ledge of the earth but ten feet above the level of Lake Michigan. The Chicago river and its two branches were originally sluggish lagoons, winding in and about sand-dunes. They were dredged and widened by early settlers, and were extended as the city grew to accommodate the growth of the increasing commerce of the lakes. After a heavy rain the current of the river was outward, at other times fluctuating with the rise and fall of the lake. Chicago's water supply was and is drawn from the lake.

The law creating the district requires that for one part of sewage six parts of lake-water must be sent through the canal. The minimum flow is fixed at 300,000 cubic feet a minute. That is upon the estimate that Chicago now contains 1,600,000 people. When this figure is exceeded by 100,000 the flow must be increased 20,000 cubic feet every minute. When the system of intercepting sewers and conduits, now in progress, is finished, turning the sewage into the river, which now flows directly into the lake, the population draining into the channel will reach, if not exceed, 1,900,000 souls, which will increase the flow of water—that is, if the law is obeyed—about 60,000 feet every sixty seconds. The dilution of the sewage by the current that will flow in from Lake Michigan is expected to make the water of the Chicago river

as clear as that of the Hudson at Albany, and to reduplicate on the wharves of the river the throngs of anglers that crowd into all the open space on the banks of the Seine near Paris.

The sanitary district was incorporated in 1889; the first board of trustees and directors was elected in December, and in the following month there was organization. The first spade of dirt was turned at Joliet, September 7, 1892. The right of way has cost \$3,163,685, and the construction to date is \$22,000,000. The other expenses, such as interest, salaries, losses, etc., make a grand total of \$31,602,000. By the time all the work is done the estimated cost is \$33,500,000. Of the amount already expended \$17,600,000 was secured by taxation, and \$14,000,000 from the sale of bonds.

When the channel was originally planned a depth of fourteen feet was considered sufficient. But the trustees, looking forward to ultimate connection with the Gulf of Mexico, decided to make the depth eight feet more, thus securing twenty-two feet and forming the first link in the proposed outlet to all the seas. It would cost the government less than \$25,000,000 to complete the enterprise, and thereby make a way for deep-draft vessels from Liverpool to Chicago.

The immediate effect of the ship-canal is to extend the wharfage front of this city fifty-six miles, giving to Chicago five times the mileage now possessed by New York City.—James S. Evans, in Collier's Weekly.

PROCESS OF MAKING SALT

Although the industry of catching birds by sprinkling salt on their tails has never attained the development which it once promised to achieve, there are enough other demands for this article of commerce to make its production an extensive if not a profitable business. In round numbers 3,500,000,000 pounds of salt are needed every year in this country to offset the inherent freshness of Americans, and of other people to whom we sell cured hams and the like. Of this amount—about fifty pounds per capita—an eighth, or more than an eighth, is imported, and all the rest is home-made. As yet scarcely more than one per cent of our American product is sent abroad, but this branch of the trade is slowly increasing, and the importation of salt is diminishing.

There are two general sources from which salt is obtained, natural brines and solid deposits. A number of theories have been advanced to account for the latter. The general impression among scientific men is that rock-salt has been formed by evaporation from ancient seas, which had become inclosed in some way. In confirmation of this notion it is pointed out that deposits are being made to-day at the bottom of several well-known salt lakes. But doubts have been expressed as to the applicability of the explanation to such thick strata as those at Stassfurt, Germany, eighteen hundred feet deep, and at Spereberg, near Berlin, thirty-six hundred feet thick. However this may be, the substance is found, in greater or less purity, in all parts of the world. The minerals associated with it are those which are apt to exist in the ocean. What is commonly known as "salt" is principally chloride of sodium. But chlorides of lime and magnesium, sulphates of lime and magnesium, and even minute quantities of iodides and bromides are usually mingled with the chief constituent.

For a long time Turk's island, in the West Indies, was a copious contributor to this country's supply of rock-salt. But a number of mines are now being worked in the United States. The most famous at present are those at Livonia, New York. The salt is taken out in solid chunks, ground, passed through sieves of different mesh—to be graded according to coarseness—and put up in bags or barrels. There is a famous deposit in Louisiana, much nearer the surface of the ground and more easily worked, which will be an important producer some day.

There are many salt deposits in this country which are made available not by mining, but by the pumping of brine from their vicinity. Through a large part of Michigan, for instance, and from the central part of New York state out as far as Buffalo there are beds varying in thickness from one hundred and twelve to three hundred feet, and lying from six hundred to two thousand six hundred feet below the surface. All through these two regions, as well as in northern Ohio, wells have been sunk, and the brine is pumped up like oil. Fresh-water springs supply the water, no doubt, and this flowing over and through the solid salt dissolves the latter and puts it within man's reach. In a few places there are salt-springs which eject their mineral-laden fluid without coaxing.

There are five principal methods of treating brines in order to get the salt from them. One of the oldest systems is that so extensively employed at Syracuse. The brine is poured into enormous shallow wooden vats, and exposed to the sun and wind to dry. Whenever there is a rain-storm covers are drawn over them to exclude additional water. Precautions are also taken against the admission of dirt. The product obtained in this way is called "solar salt." Owing to the slowness of the evaporative process the grains thus formed are coarse.

To hasten matters artificial heat is often used. For instance, rows of kettles are arranged so that coal-fires may be maintained under them. As the water boils off the salt crystallizes in the bottom of the receptacle. By regulating the degree of heat applied, and providing for marked differences of temperature in two sets of kettles, grains of different sizes can be secured—the finer ones resulting from the more rapid evaporation. This method is an ancient one.

In Wyoming county, New York, artificial heat is used in another way. Metal pans about one hundred and twenty-five feet long, twenty-five

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feet wide and perhaps two and one half feet deep are warmed from furnaces directly under them. Coal is used in the latter. The heat being applied directly the system is known as the "direct-heat" plan. It is further characteristic of the process that it is conducted with open pans. An indirect mode of bringing the heat to bear on the brine is to line the vats, which are smaller receptacles than those just described, with steam-pipes, which run around the inner edge of the same, and transmit their heat to the fluid. The indirect-heat apparatus is called a "grainer."

Finally, it has been found feasible to save fuel and obtain a purer salt by inclosing the brine in a tight vessel from which the air has been almost entirely exhausted. This is called a "vacuum-pan." It is a well-known fact that evaporation takes place at a lower temperature when the air pressure is reduced than at ordinary pressures. This is the reason why water boils at a lower temperature on a mountain-top than on a plain. In the vacuum-pan the work can be done by heating the brine to only one hundred and twelve degrees. Vacuum-pans are in service at three places in New York state—Watkins, Ludlowville and Silver Springs.

The product of the vacuum-pan process is a beautiful article, and commands a higher price than other salts. The grains form in cubes instead of flakes. The salt obtained from the indirect-heat (steam-pipe) system is also of an excellent quality. Years ago there was a prejudice in the minds of some provision-packers against American salt, because it was not quite so pure as the most fastidious buyers wanted. That objection—in the main a just one, no doubt—was based on the quality of Onondaga salt, which contains a good deal of lime and was obtained by solar evaporation. But now that the grainer, or indirect-heat, process and the vacuum-pan have come into vogue in this country, and purer brines have been found, it is possible to get as good a quality of salt as can be had anywhere in the world. There is now no reason for importing the English article any more.

Salt has been obtained from sea-water in many parts of the world. Owing to the foulness of the drainage into the ocean from the land it is desirable to be particular about the source of supply. Moreover, there are regions in the tropics where the salinity of the water is greater than it is in colder climates, and where the same amount of labor will yield a larger quantity of solids. The industry is carried on, however, in a modest way on Cape Cod, and in Bristol county, Massachusetts. A more considerable business is done in San Francisco bay, in the county of Alameda. From twenty-five to thirty establishments are in operation in that part of the country. Other factories for getting salt from the sea are situated in Los Angeles and San Diego.

The salt-beds of America are found in various geological formations. Those of western New York, northern Ohio and some parts of Michigan represent the Silurian period, when the earliest forms of animal life made their appearance. The deposits near East Saginaw, Michigan, belong to the Carboniferous age, which is much later. The Kansas beds are placed in the Triassic series by Professor Robert Hay. And some of the Virginia wells tap Tertiary rocks. From the taste of the ocean of to-day it is apparent that a good deal of salt is still left undeposited. The work of solidification and storage has been going on, then, more or less intermittently for an almost incalculable period, and yet is not finished.

The purity of salt in a commercial sense depends more upon the kind than the amount of other minerals mixed with the chloride of sodium. Sulphates of calcium and sodium are less objectionable than chlorides of calcium and magnesium. The latter impart a bitter flavor to the salt. A sample containing from one to one and one half per cent of the former impurity is a fairly marketable commodity, but half that amount of the chlorides or carbonates of calcium and magnesium is a serious objection. In addition to the chemical composition of a brand of salt the buyer is apt to consider also the appearance and mechanical condition to some extent. Looks count for a good deal in this business, as in many others.—New York Tribune.

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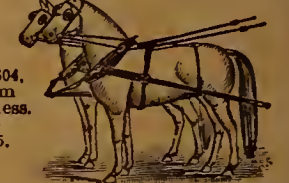
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"IT MIGHT HA' BEEN WAUR"

When failures becloud the blue of your sky,
And troubles begin in torrents to pour,
Just think of the floods that others have whelmed,
And say to yourself, "It might ha' been waur,"
You're drenched but no droon'd; it might ha' been waur!

When out on life's sea your vessel is wrecked,
Beyond the relief of a humanly shore,
Cling fast to the spar God's put in your hand,
And say to yourself, "It might ha' been waur,"
Some haven't the spar; it might ha' been waur!

When Death, blanching Death, stalks into your street
And knocks with appalling hand at your door,
Hold fast to the hope God's put in your heart,
And say to yourself, "It might ha' been waur,"
What if you'd nae hope! It might ha' been waur!

And when you shall stand before the Great Judge,
Who'll open the book and scan your life o'er,
May he in his love forgive where you've tried,
And say to your soul, "It might ha' been waur;
Gang ye wi' the sheep; it might ha' been waur!"
—John H. Finley, in The Interior.

THE SPIRITUAL PLEASURES OF MEMORY
BY REV. LOUIS ALBERT BANKS, D.D.

MEMORY has been compared to a granary, in which is stored away the grain which has been gathered in the harvests of the years that are gone. It has also been compared to a portrait-gallery, on the walls of which hang pictures of the deeds and observations of life. But it is another phase of memory upon which I wish to lay the emphasis. I do not care whether you call it a storehouse or a granary or a picture-gallery; I wish to comfort our hearts by recalling the goodness of God in making it possible for us to reproduce comforting and gracious and heroic experiences through which we have passed to console or cheer or inspire our hearts on hard and trying days.

As it is possible for us to feed our love upon the kindness and tenderness of our friends to us in the past, and so to refresh our souls when they are absent from us, so it is possible for the Christian to cheer his heart in the days of temptation and trial with the memory of other days when the consciousness of Christ's presence was very precious and very real. In the assurance that he is the same "yesterday, to-day and forever" the heart takes new courage in the memory of that tender communion.

That is a sweet little touch in the gospel narrative that tells of the conversation that the disciples had who had been overtaken by Jesus on their way from Jerusalem to Emmaus, and had had a most delightful conversation with him before they realized who he was. After he was gone they found great comfort in talking to one another about that experience, and they said, "Did not our hearts burn within us while he opened to us the Scriptures?" And every one of us who has been walking the Christian path has experiences like that. We remember when we walked with our heads down, with the heart heavy, with the countenance sorrowful, with the conversation depressed, and we saw only the dark side of everything; but Jesus came and walked with us. We did not know it was Christ at the time. But afterward we knew him, and he entered our homes and broke bread with us and blessed our humble cheer, and forever after that wayside experience of life is a spring of comfort to us. And we ought to make much of such occasions, and go back at every time of need and drink again that cup of remembrance.

A great deal of the pleasure of memory comes from the associations of life's opening years. A man may grow old and wrinkled, but memory has the power to soften him by recalling the tender associations of his youth. One of the most beautiful stories in the Bible is that that tells of the hot, thirsty day when David lay with his men of war about him in the cave of Adullam. The Philistines were encamped about in great force, and David and his men had been hunted like a fox to the earth. David was sore struck with thirst, and cried out in his anguish, "Oh that one would give me drink of the water of the well of Bethlehem which is by the gate!" In the hour of his thirst and extremity memory brought back to David the picture of that old well where he had so often refreshed himself in the days gone by. What Christian is there so poor

that he has not some well of Bethlehem to which memory can carry him back, and which shall not mock him in his thirst, but shall refresh his memory of God's goodness? God be thanked for the wells of Bethlehem. —The Religious Telescope.

WHY I GO TO CHURCH ON RAINY SUNDAYS
BY FRANCES R. HAVERGAL

I attend church on rainy Sundays because—

1. God has blessed the Lord's day and hallowed it, making no exception for hot or cold or stormy days.
2. I expect my minister to be there. I should be surprised if he were to stay at home for the weather.
3. If his hands fail through weakness I shall have great reason to blame myself, unless I sustain him by my prayers and presence.
4. By staying away I may lose the prayers which may bring God's blessing, and the sermon that would have done me great good.
5. My presence is more needful on Sundays when there are few than on those days when the church is crowded.
6. Whatever station I hold in the church, my example must influence others. If I stay away, why may not they?
7. On any important business rainy weather does not keep me at home, and church attendance is, in God's sight, very important.
8. Among the crowds of pleasure-seekers I see that no weather keeps the delicate female from the ball, the party or the concert.
9. Such weather will show me on what foundation my faith is built; it will prove how much I love Christ. True love rarely fails to meet an appointment.
10. Those who stay from church because it is too warm or too cold or too rainy frequently absent themselves on fair Sundays. I must not take a step in that direction.
11. Though my excuses satisfy myself, they still must undergo God's scrutiny; and they must be well grounded to do that.
12. There is a special promise that where two or three meet together in God's name he will be in the midst of them.
13. An avoidable absence from the church is an infallible evidence of spiritual decay. Disciples first follow Christ at a distance, and then, like Peter, do not know him.
14. My faith is to be shown by my self-denying Christian life, and not by the rise or fall of the thermometer.
15. Such yielding to surmountable difficulties prepares for yielding to those merely imaginary, until thousands never enter a church, and yet think they have good reason for such neglect.
16. I know not how many more Sundays God may give me, and it would be a poor preparation for my first Sunday in heaven to have slighted my last Sunday on earth.—Selected.

RHYMES WORTHY OF BEING REMEMBERED

Education, the capital of mind;
Success without it will be hard to find.

'Tis well to let this thought the mind impress,
That Enterprise leads always toward success.

When with Enthusiasm we begin
Life's busy race, we never fail to win.

Economy—it is a magic door
That leads to wealth's accumulated store.

To win the good and overcome the ill
Requires but Purpose, reinforced by Will.

'Tis sad, but none the less it is a fact,
That half life's failures come from want of Tact.

He who by Faith is led no danger knows;
He dreads not unknown ills nor unseen foes.

'Tis Push that puts one's business in the lead,
And makes success an easy prey indeed.

Most any one the warrior's garb may don,
But in the fight 'tis Grit that leads one on.

Than Purity there is no brighter gem
Set in man's heavenly diadem.

'Tis Perseverance wins the victor's crown,
And carries one of honor and renown.

Let Patience be thy guide along life's busy way,
And ever be thy helper night and day.

Let Prudence shape thy every word and deed,
And to her admonitions eye give heed.

Promptness is always much to be desired;
The prompt man honored is, and much admired.

Purpose, the chart, the architectural plan,
Serves well to shape and mold the life of man.

—Success.

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You can cough yourself into bronchitis, pneumonia, and consumption.

Bandaging and bundling your throat will do no good.

You must give your throat and lungs rest and allow the cough wounds to heal.

There is nothing so bad for a cough as coughing. Stop it by using

Ayer's Cherry Pectoral

Even the cough of early consumption is cured. And, later on, when the disease is firmly fixed, you can bring rest and comfort in every case.

A 25 cent bottle will cure new coughs and colds; the 50 cent size is better for settled coughs of bronchitis and weak lungs; the one dollar size is more economical for chronic cases and consumption. It's the size you should keep on hand.

"All families ought to be on the watch for sudden attacks of croup or acute lung troubles. Every country home in the land should keep Cherry Pectoral constantly on hand to provide against an emergency."
JOSIAH G. WILLIS, M.D.,
Dec. 14, 1898. Holland, Mich.

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Last year, when times were hard, we purchased from a manufacturer, who was compelled to get cash, an immense lot of games for much less than the cost of making. We have sold thousands, and all are pleased with them; they are great value for the money. We still have a quantity on hand, and to dispose of them we will give one complete set and three months' subscription to The Illustrated Companion (a 48-column Family Story Paper) for 10 cents. Don't miss this chance—worth many times the money. See what you get all for 10 cents.

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SMILES

SAVED

The parson victim was to loss of sleep,
His nights no sweet repose did e'er secure him,
No known hypnotic would his senses steep,
Nor could the doctors, with their science, cure him.

Massage and sanitariums he'd tried,
And taken lithian waters without number,
Yet still unto his longings was denied
The blessed comfort of refreshing slumber.

He grew more wane-like day by day, and friends
Looked grave, and prophesied his quick transition,
When lo! some influence in mercy sends
Sweet sleep unto his couch of halmy mission.

What wonder wrought relief, you ask? His wife,
With that quick wit which woman's way determines,
Had hit upon the means to save his life,
And stuffed his pillow with the good man's sermons.
—The Richmond Dispatch.

A SAD TALE OF GENIUS

There was a young man in the choir,
Whose voice rose hoir and hoir,
Till so high it did soar,
You could hear it no moar,
And 'twas found next day on the spoir.
—Chicago News.

A TELLING POSTSCRIPT

MISS JONES was ill and in great haste to go out of town. She wrote to the proprietor of a mountain farm-house that had been recommended to her to engage board. This is the reply:

"Miss Jones:—My terms are five dollars a week each, where two occupy a room; six dollars when occupied by one. House is very near the river, and a large brook runs through the place. Table of the best, with milk and cream in abundance. Plenty of shade about the grounds. Horses and wagons at disposal of guests."

But it was the postscript that went to the heart of the matter (and of Miss Jones). It read: "I could not accommodate you this year, as my house was burned to the ground last May."—Judge.

INNOCENCE? IN NO SENSE!

Mabel—"Say, ma!"
Mrs. Manyblessed—"What, my darling?"
Mabel—"Well, you know that you said that Charlie looked like pa, Marion like grandpa, Helen like Aunt Lizzie, me like you, and the baby like Uncle Bill. Now, what I wanted to know was whether God makes babies specially for certain families, like dressmakers does dresses, or whether he just makes them and then hunts up folks that look like them, and gives them to them."—Judge.

WELL-FOUNDED SUPERSTITIONS

"Superstitious!" he exclaimed. "Of course I am superstitious. I sat down to dinner as one of a party of thirteen once on the thirteenth of the month, and thirteen courses were served."

"And one of them died?"
"Yes, sir. One of them died."

"How soon after the dinner?"
"Thirteen years after. Oh, I tell you, when thirteen sit down to dinner it's a dead sure thing that somebody is going to die some time."—Chicago Post.

MR. CAUDLE ON TOP

As she paused for breath he reached for his hat and started for the door.

"Where are you going?" she asked.
"I am going to telegraph for Marconi," he replied, "and tell him that after he has perfected his wireless telegraphy there is another field of much the same nature for him to invade."

"What is it?" she demanded.
"I want him to devote his intellect to the invention of a voiceless curtain-lecture."—Chicago Post.

OUR MOTHER-TONGUE

From a Western Colorado postmaster to the department at Washington:

"Pleas except my resanation of p m of the government at this town i haf been alected j of the peace & school commisner said duties perventing me from bitin off more than i can chaw by true to kill three birds with 1 ston. Yores respectahly."
—Exchange.

HIS JUST DESERTS

A correspondent wants to know "What a feller should get for a novel of 70,000 words."
Well, we were going to say ten years, but we really think he ought to get twenty.

BADLY OFF

Dorothy had never before seen a cork-screw. "Goodness!" she exclaimed, "that nail's got spinal trouble awfully."—Judge.

THE PARSON'S REPLY

A country pastor, who was very bright and original in his remarks, attracted the notice of a wealthy lady who was spending the summer in the vicinity. One evening she called at the parsonage just as the old minister, clad in overalls, was coming in from the stable with a brimming pailful of milk.

"Why, Mr. Smith!" exclaimed the lady, "do you milk a cow?"

"Certainly, madam," was the reply. "What would you have me milk?"—Judge.

THE INDOLENT GARDENER

Mrs. Suburb—"No more milk? What's the matter?"

Gardener—"The cow has stopped givin' milk, mum."

Mrs. Suburb—"Goodness me! Why?"

Gardener—"Because she's dry, mum."

Mrs. Suburb—"Then why in the world don't you give her a drink?"—New York Weekly.

SHORT AND POINTED

The man a woman is in love with is always a hero, even if he is cross-eyed.

No woman can make a mau weak who cannot first make him think he is strong.

A woman may admit that she was wrong, but she won't ever admit that anybody in her position wouldn't have done just exactly the way she did.
—New York Press.

HE FOLLOWED DIRECTIONS

The doctor (to patient, approvingly)—"Well, Patrick, you look greatly improved. I judge you have adhered strictly to my advice and have taken plenty of animal food."

Pat (earnestly)—"Oi hov, docthor. The corn an' oats seems to agree wid me, but Oi honestly t'ink hay is bad fer me shtummick."—Exchange.

CAUSE FOR REJOICING

"What's the matter, Henrietta? You seem very happy this morning."

"I should say I am happy! Last night I discovered a crack in that door-knob I've been sitting on for the last six months. I do really believe it is going to hatch."—Judge.

WAR AND FOOT-BALL

"Don't you think that the word 'game' is the wrong term to apply to such a dangerous pastime as foot-hall?" asked Mrs. Snaggs.

"Not at all," replied Mr. Snaggs; "at least not so long as the expression 'the game of war' is allowable in the English language."—Pittsburg Chronicle-Telegraph.

LIMITED PRACTICE

Father—"My boy, don't you know that when you tell a lie it makes me ashamed to own you as my son?"

Son—"Well, dad, I shouldn't think you'd expect a little boy like me to lie as good as you can."—Judge.

MISUNDERSTOOD

Her father—"No, young man, my daughter can never be yours."

Her adorer—"I heg pardon; I don't want her to be my daughter—I want her to be uiy wife!"—Harlem Life.

CROWDED OUT

"We have got to leave our flat."

"What for?"
"Our baby has got too big to sleep in the chiffonier."—Chicago Record.

THE BIRTH OF IRONY

Adam (to the serpent)—"Come again."

A CONVINCING TESTIMONIAL



"Dear Sir:—When I first began usug your hair-wash my hair was short and stuhhy; it is now long and curly."—The Northwestern.

FREE

A WONDERFUL SHRUB—CURES KIDNEY AND BLADDER Diseases, Rheumatism, etc.

Rev. A. C. Darling, Minister of the Gospel, under date of May 20th, writes from his home at North Constantia, Oswego county, New York:

"I have been troubled with Kidney and kindred diseases for sixteen years, and tried all I could get without relief. Two and a half years ago I was taken with a severe attack of La Grippe, which turned to pneumonia. At that time my Liver, Kidneys, Heart and Urinary Organs all combined in what to me seemed their last attack. My confidence in mau and medicine was gone. My hope had vanished, and all that was left me was a dreary life and certain death. At last I heard of Alkavis, and as a last resort I commenced taking it. At that time I was using the vessel as often as sixteen times in one night, without sleep or rest. In a short time, to my astonishment, I could sleep all night as soundly as a baby, which I had not done in sixteen years before. What I know it has done for me I firmly believe it will do for all who will give Alkavis a fair trial. I most gladly recommend Alkavis to all. Sincerely yours,
"(Rev.) A. C. DARLING."

The venerable Mr. Joseph W. Whitten, of Wolfboro, N. H., at eighty-five years of age, also testifies to the power of Alkavis in curing severe Kidney and Bladder Disorders, Dropsy and Rheumatism. Hundreds of others give similar testimony. Many ladies also join in testifying to the wonderful curative powers of Alkavis in Kidney and allied diseases, and other troublesome afflictions peculiar to womanhood, which cannot with propriety be described here.

That you may judge of the value of this Great Discovery for yourself, we will send you one Large Case by mail free, only asking that when cured yourself you will recommend it to others. It is a Sure Specific Cure and cannot fail. Address The Church Kidney Cure Company, No. 471 Fourth Avenue, New York City.

Winter in the South

The season approaches when one's thoughts turn toward a place where the inconveniences of a Northern winter may be escaped. No section of this country offers such ideal spots as the Gulf Coast on the line of the Louisville & Nashville Railroad between Mobile and New Orleans. It possesses a mild climate, pure air, even temperature and facilities for hunting and fishing enjoyed by no other section. Accommodations for visitors are first-class, and can be secured at moderate prices. The Louisville & Nashville Railroad is the only line by which it can be reached in through cars from Northern cities. Through car schedules to all points in Florida by this line are also perfect. Write for folders, etc., to JACKSON SMITH, D. P. A., Cincinnati, Ohio.

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We Start You In Business Nothing to invest, we want animals raised for us as the demand is greater than the supply and with difficulty we have reserved 6080 animals for breeding purposes, to be distributed free to those who answer this advertisement, and we start you in a paying business and put you in the way of making money without you investing one cent. Genuine Angora Cats are worth from \$25.00 to \$100.00 each, and these animals are easy to raise. No money to send, simply act at once, write us to-day and he one of the 6080 to get a fine Song Bird or Parrot with cage, a beautiful pair of Genuine Angora Cats, a complete Aquarium with fish, shells and plants. When you write send the names of ten people who own either a horse, or a dog, or a cat, or a bird, or chickens or some other animal. Give the name of your nearest express office and say what animal or aquarium you want and it will be sent exactly according to our offer. You will have nothing whatever to pay. We pay express charges. This advertisement means exactly what it says and is simply an enterprising plan to increase our business capacity. Address DEPT. Y, ANIMAL WORLD, 127 E. 23d ST., NEW YORK.

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CASH for acceptable ideas. State if patented, **THE PATENT RECORD, Baltimore, Md.**

HOUSEHOLD

(CONTINUED FROM PAGE 13)

BREAKFAST AND TEA CAKES

VIENNA or French rolls may be all very well for a warm morning, with a cup of coffee for breakfast, but on cold winter days some hot cakes always seem to fill a want for something hearty and appetizing. To my mind, in winter the old-fashioned supper, with "something hot" for the main dish—baked potatoes and a hot tea-cake—is one of the pleasantest meals of the year, and below are given some long-tested receipts from Southern and New England sources that can be used for either meal.

Indian-meal makes one of the best and most nutritious bases for any of these hot cakes, and there are many ways of using it to great advantage. First among these are all kinds of Johnny-cake, and the following is a New England receipt:

RHODE ISLAND JOHNNY-CAKE.—Take one pint of meal and one teaspoonful of salt, and scald with boiling water until you have a stiff, smooth batter, then with cold milk thin this down until it is of the consistency of griddle-cake batter, and fry by the tablespoonful on a hot buttered griddle. When one side is browned, turn and brown on the other. Eat with butter and syrup.

Stepping from Rhode Island to Connecticut we find another way to prepare corn-meal, which is very tasty, also. They call these little cakes "dabs." Scald thoroughly with boiling water a pint of corn-meal. Rub into it one dessert-spoonful of butter, two eggs beaten very light, one tablespoonful of cream (two if you have it) and a little salt. Butter a pan, and drop the mixture from a spoon upon it. Bake in a moderate oven.

Now see how the Southern cook would go to work to make her corn-bread:

OWENDAN CORN-BREAD.—Take about two teacupfuls of hot boiled hominy, and stir in one large tablespoonful of butter. Beat four eggs very light and stir them into the hominy; next add about one half pint of milk, and lastly stir in one half pint of corn-meal. The batter should be about as thick as a boiled custard. Bake in an oven very hot at the bottom and not at the top, so as to allow the batter to rise. It has almost the appearance of a batter-pudding when baked, and is very rich and delicious.

ALEXANDER'S CORN-BREAD is good and simpler, and many people like it on account of the buttermilk. Take one pint of buttermilk, three eggs and one teaspoonful of baking-powder. Mix well, and add enough corn-meal to make a thin batter. Drop from a spoon on tin sheets, and bake quickly.

PORT ROYAL CORN-CAKES are a very delicious griddle-cake. One pint of corn-meal, four tablespoonfuls of flour, one quart of milk and three eggs, with salt to taste. Mix flour and meal with the milk, beat the eggs very light, and add them. Bake on a griddle. Spiced sugar goes very nicely with these cakes. To prepare it, take a cupful of granulated sugar and stir in well one half teaspoonful of ground cinnamon and a good pinch each of ground cloves and mace, sprinkle well with nutmeg; mix thoroughly.

BACHELOR'S PONE.—This is a very delicious tea-cake. Melt a piece of butter as large as an egg in a pint of warm milk. Beat the yolks of five eggs very light. Stir into the milk some corn-meal, then add the eggs and a little salt. Make it pretty stiff. Bake in a quick oven in a buttered pan. Do not cut, but break it when you serve it.

All of the cakes are very much improved by the addition of boiled rice or hominy.

CORN-BISCUITS are great favorites with all who have tried them. Six tablespoonfuls of boiled hominy, one half pint of corn-meal, one large tablespoonful of lard, one half pint of milk. Mix the ingredients well, form into cakes about the size of a saucer, and bake in a moderate oven. A little sweet-potato mashed and mixed with the other ingredients is thought to be an improvement.

PLANKED BREAD.—Just as the most tasty way of cooking shad is on a plank, so many people think that the best corn-bread is that cooked in the same fashion. Into two tablespoonfuls of cold hominy rub a tablespoonful of butter or lard, one egg, one half pint of milk, and corn-flour enough to make the batter just stiff enough to be spread upon a board. Do not let the batter be more than half an inch thick on the board. Put it in the oven, or before a hot fire if you can manage it, and let it brown. Pass a coarse thread between the cake and board, turn it and brown the other side. Use a well-seasoned hard-wood plank.

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We will send the entire list as above and our **HANDSOME PICTURE CATALOGUE**, post paid, for only ten cents. Stamps taken. **HOME ART PICTURE CO., Dept. 307, 134 Van Buren St., Chicago, Ill.**

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FARM SELECTIONS

"TREE-AGENT SCHEME"

In a recent number of the "Rural New-Yorker" Mr. T. B. Wilson handles a new scheme that is used in the nursery-agent business. It is outlined in the following letter, which was sent to a number of prominent fruit-growers:

"Some of our readers in Pennsylvania tell us of a scheme which is being worked by a nursery company in Ohio. The agent comes and agrees to plant one acre of ground in fruit, such as apples, pears, peaches and small fruits, for \$110. One half of this sum is to be paid down on delivery, and the balance to be paid at the end of five years. They agree then to take one half of the fifth year's crop as their payment for the remaining \$55. They agree to send a man to trim the trees and superintend the work of caring for them. The buyer in the meantime is to sell all the small fruits, and guarantees to keep an exact account, so that at the end of five years he can state just how much the acre of ground has produced. In brief, this seems to be about the scheme on which these people are working. We have no confidence whatever in any scheme of this kind, but would like to know if you have ever known of an instance where such work has been successfully carried on. Do you believe such a plan can be carried out so that the buyer will ever get his money back?"

Among the replies is the following, which admirably covers the case:

"The scheme you mention is a profitable one for the nurseryman, since the trees or plants for one acre at \$55, which is the amount of cash paid, would be a good, profitable deal for any nurseryman. An acre of apples would contain fifty trees, which could be sold for \$7.50; an acre of standard pears or plums, 110 trees, could be sold for \$16.50; an acre of peaches, 110 trees, could be sold for \$11. Therefore, the person agreeing to pay \$110 would agree to pay at least twice as much as the plants or trees should cost him. In these days of close competition the planter of orchards and berry-fields must buy his trees and plants as low as possible, and figure all his expenses close in order to make the desirable profit. Generally in such a deal as this a contract has to be made out and signed, and this contract is usually in favor of the nurseryman, and not in favor of the farmer upon whose farm the stock is planted. I should not recommend any one to sign such a contract as this before submitting it to some shrewd lawyer."

FORMALIN FOR GRAIN-SMUTS

The simplest and most effective remedy for oat-smut and the stinking smut of wheat is soaking one half pound of the compound in thirty gallons of water for two hours. Or the grain may be sprinkled with the formalin solution until thoroughly saturated, then placed in a pile and let remain two hours, after which it should be spread out and dried. No particular precautions are required, as the compound is not poisonous, like corrosive sublimate. Potatoes affected with scab are treated in the same way, except that the solution must be double the strength used for grain; that is, dissolve one half pound of formalin in fifteen gallons of water and allow the tubers to remain in the solution for two hours. There is apparently no remedy for corn-smut except the gathering and burning of the smut-balls during the season whenever they can be found. There is also no efficient remedy for the loose smut of wheat.—American Agriculturist.

ANGORA GOATS

Angora goats are now raised in considerable numbers in various states of the Union, the original stock having come from Asia Minor and Turkey. In some parts they have thrived exceedingly well, and as their hair, which is known in commerce as mohair, sells for three or four times the price of common wool, the raising of these goats has been quite profitable. Increased attention is being given to them in California and some of the other western states. In addition to the profit derived from their fleeces, they have been found invaluable in clearing land covered with small scrub and bushes, goats having a great fancy for eating small limbs and twigs of trees.—The Shepherd's Bulletin.

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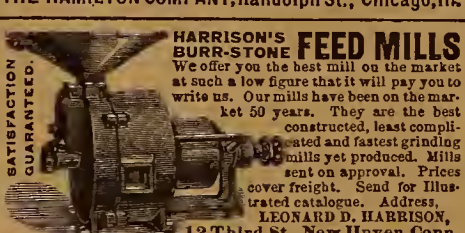
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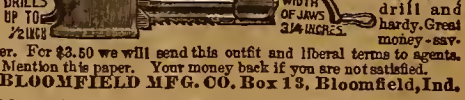
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Wedding-cake was an institution among the ancients as with us, but the cake was a plain one, and was broken above the head of the bride as she went into her new home. This was a special feature of Roman marriages two thousand years ago. The breaking of the cake was part of a solemn ceremony, and was said to be very impressive. A similar custom prevails in some portions of Scotland, where a bannock is broken above the head of the young wife as she for the first time enters her new home.

TWO STATESMEN

Oom Paul, while still a lad, first gained prominence as a fearless tracker and hunter. He could tramp along the veldt all day, driving his string of oxen, and then spend all night in stalking wild animals. While still in his teens he killed a full-grown lion with nothing but a hunting-knife. Now that he is in his old age, he can still bend a rifle-barrel over his knee, or fell a bullock with his fist.

Joseph Chamberlain's distaste for physical exercise is as marked as his passion for orchids. At no period in his life has he indulged in any form of sport, and walking is his special aversion. Practically the longest walk he takes when in London is from Prince's Gardens to his clubs in Pall Mall or St. James street. To his sedentary habits he adds a love of smoking black cigars and drinking strong tea.—Collier's Weekly.

BICYCLES IN SOUTH AFRICA

The present campaign in South Africa is practically the first opportunity the British military authorities have had of putting the cycle corps to a real test. The cyclist corps attached to the Durban light infantry recently covered a route of ninety miles in one day, for the purpose of obtaining information of the Boer forces, doing some skirmishing on the way. The veldt in dry weather is admirably adapted for cycling, as was demonstrated recently by the feat of an Englishman, just after the outbreak of the war, who rode from Pretoria to Ladysmith on his wheel, passing several detachments of cavalry on the way.—Collier's Weekly.

TAKES THE CAKE

John Allgood, of Nevada, said that rain was never needed much more in his section than now. "One of my neighbors," he said, "owing to the scarcity of water, came near losing all his hogs recently. Finally he hauled a load of water for them, and they drank very heartily, and it was soon observed that it was running out through the pores of their skin as fast as they drank it. However, after drinking for some time they soaked sufficiently to retain the water."—Harrodsburg Democrat.

OUR SPINSTERS AND BACHELORS

There are in the United States to-day 5,427,767 bachelors and 3,224,494 spinsters. In the West there are ten available males for every maiden, and even in the Northern and Eastern states there are actually more bachelors than spinsters twenty years old and upward. No state in the Union has as many maidens as single men.—Philadelphia Record.

RENTS AND BOARD IN THE KLONDIKE

The hotels in Dawson City, in the Yukon country, have electric-lights and other conveniences, and average \$100 a month each for rooms. Board at restaurants and other places cost \$100 to \$150 a month, but good board can be obtained at the clubs and messes at \$75 a month.

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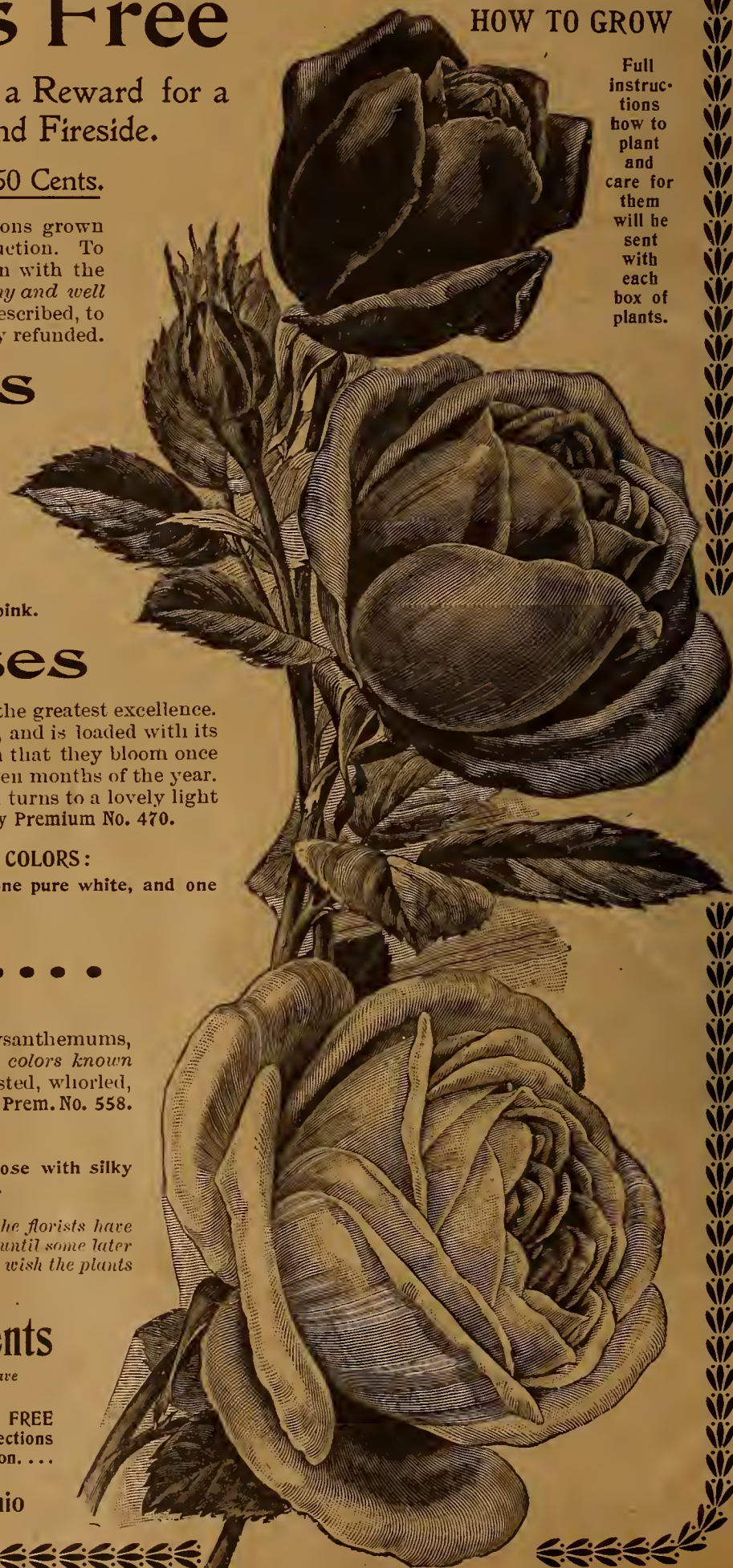
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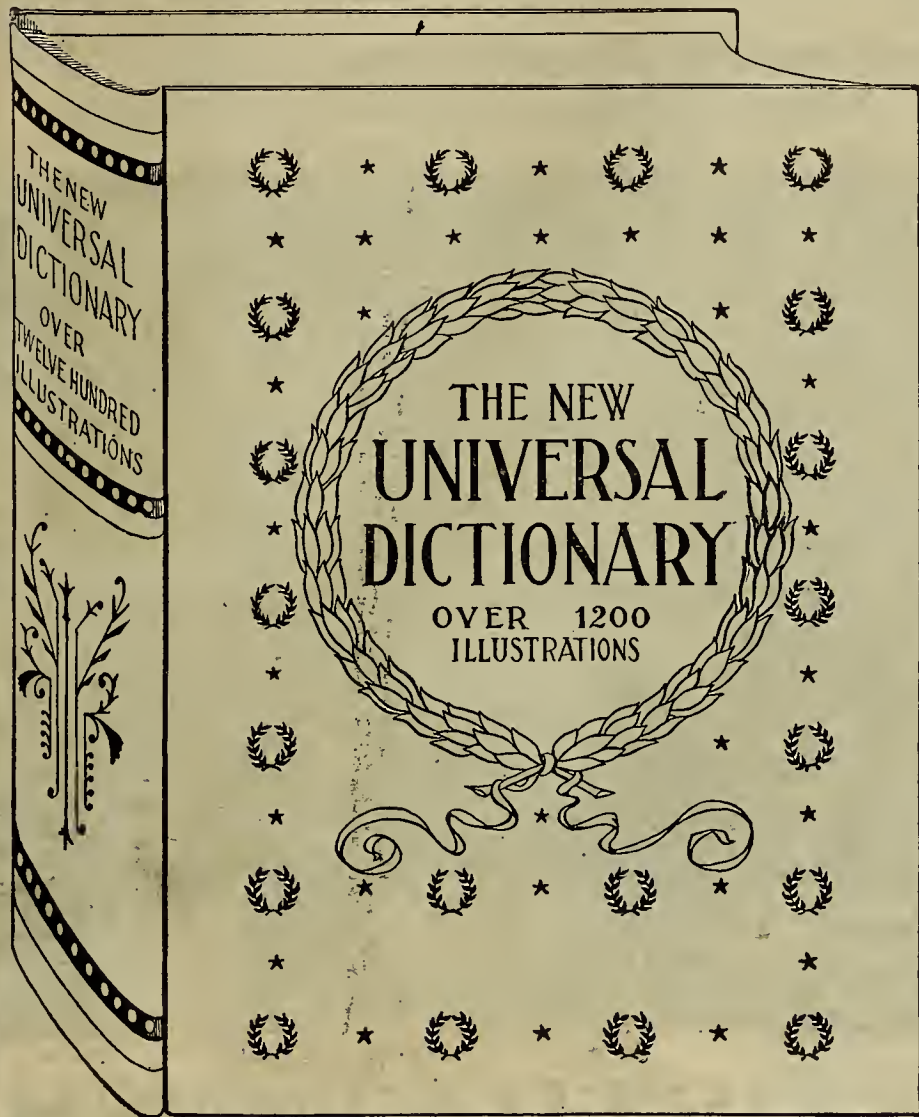
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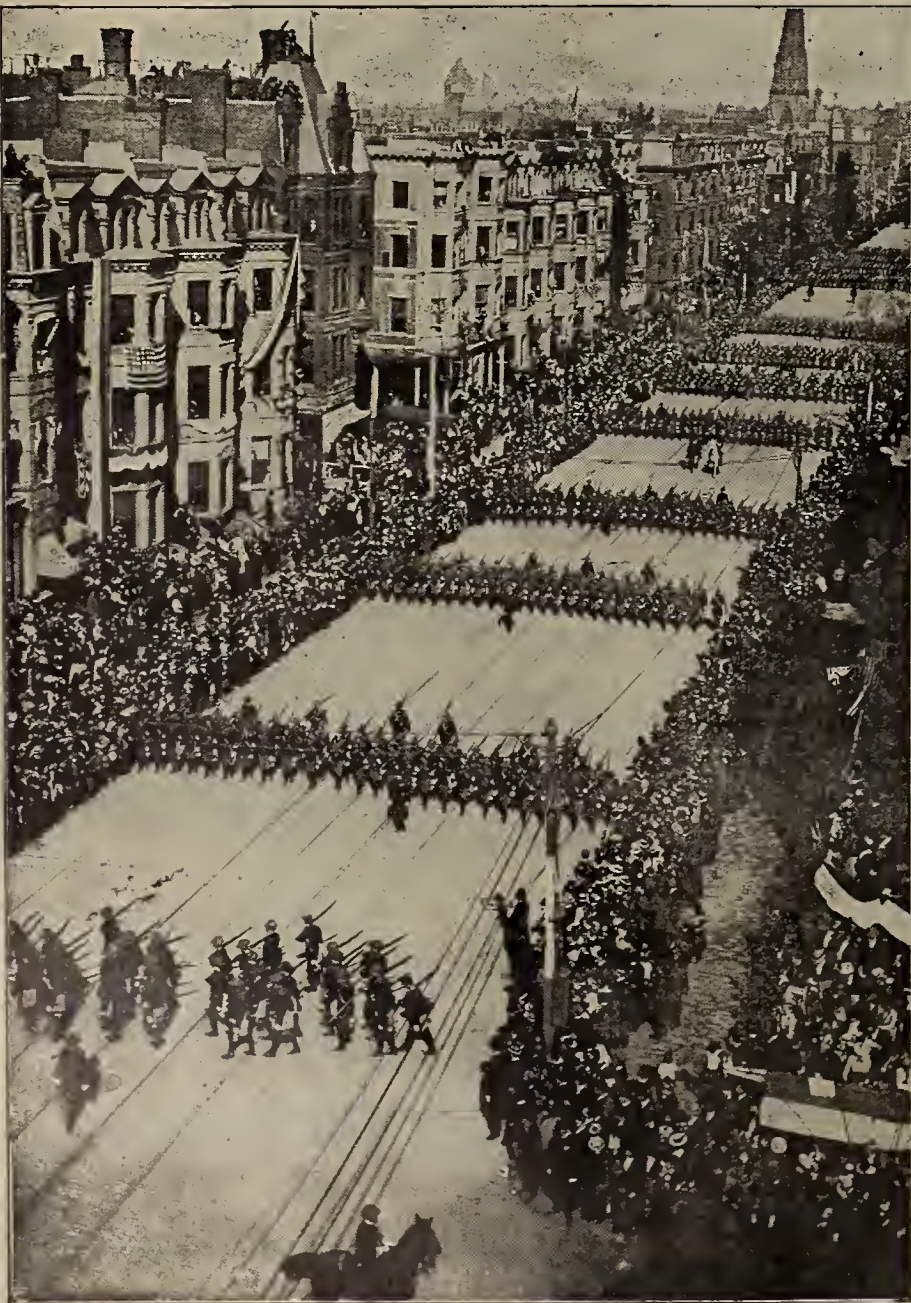
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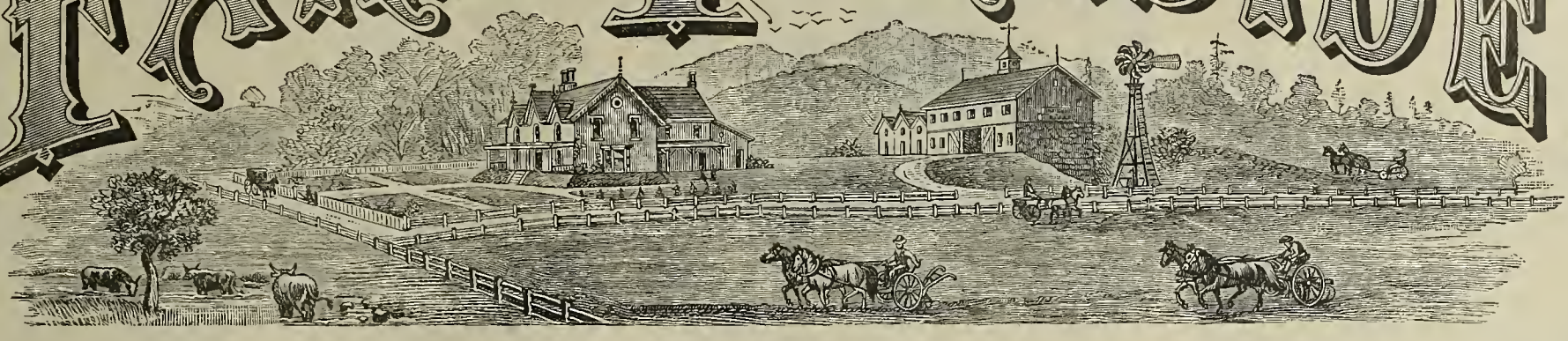
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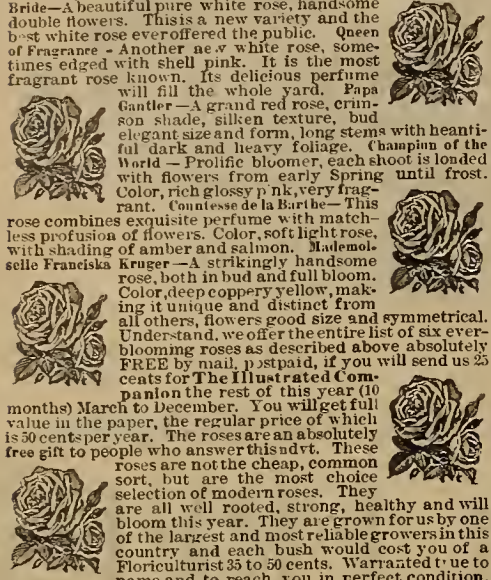
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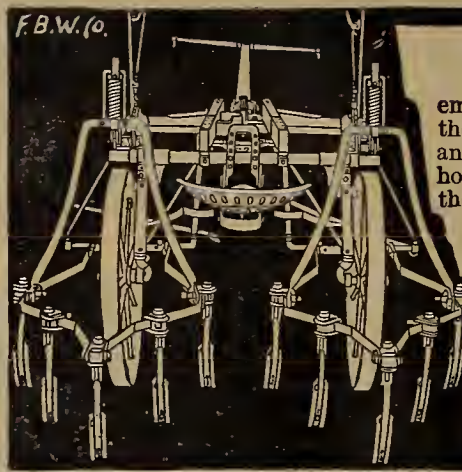
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THE FARM AND FIRESIDE

IN PARIS WITH LITTLE MONEY AND NO FRENCH

BY EDWARD A. STEINER

“ARE YOU going to Paris?” is as common a question now as “Are you going to the World’s Fair?” was a few years ago. If you say you are going, and if you have but little money and no French, this article is to help you to do it; and even if you stay at home (and most of you will), it will be very nice to think and plan about it.

First of all, don’t hesitate to buy a second-class steamship ticket. Second class is good enough for anybody. You will get seven meals a day, and as much brass-band music between as you can stand, and you will get a good cabin, with two or three people to share it with you. By all means get an outside cabin and as close to heaven and as far away from the engine-rooms as you can. This year you’d better buy a return ticket; it is cheaper, and, moreover, it insures you a berth for the return passage. The quickest way to get seasick is to make up your mind that you are going to, then retire to your cabin and stay there until they drag you out more dead than alive. The best and only medicine I know of for seasickness is a dose of good-humor and plenty of fresh air; then if the inevitable comes, just let it come, without thoughts of murder, suicide or of eternal punishment. The tendency on board ship is to overeat, and you must remember that you are under no moral obligations to eat all that is set before you. Choose your company on board of ship; beware of gamblers and pickpockets; carry only a little money, and don’t tell everybody your family affairs, because you might stumble across somebody in Paris who knew your grandfather better than you did, and such people will be numerous there, and rather dangerous acquaintances.

Don’t spend your happy moments on board ship trying to learn French. First of all, you won’t learn any; and secondly, they couldn’t understand you in Paris if you did. Be sure you have the address of a boarding-house or well-recommended hotel, and if you haven’t, find it out before you leave the ship. A boarding-house called a “pension” is the best thing for you, because it is generally cheap, and people will take an interest in you. It will cost at the least two dollars a day, which includes everything.

Let us say that the seven or ten days of ocean journey are over (and they are generally pleasant days) and you are landed at Cherbourg, or Boulogne Sur Mer. At either place the railway is close by, and you will be in Paris in from three to six hours. When you leave the cars you will find that your baggage will be examined; not very closely, though, for the only things they search after are brandy, tobacco and plots against the government, and you are not supposed to carry such dangerous articles.

If you have a boarding-house or a hotel engaged, hire a cab, which will cost you from one to two francs (one franc is twenty cents), hand the driver the address, and you will get there safe and sound. If you have no such place in view, go to any decent-looking hotel close to the station; the employees will all talk English, more than you will want, and charge you accordingly. If you arrive at the station before four or

five o’clock it will pay you to drive, bag and baggage, to the “New York Herald” office, or to your banker if you carry a letter of credit, and there you will get an address of just such a place as you want. Let me warn you against the so-called American hotels, which in many cases will be organized for the especial benefit of unsuspecting Yankee pocketbooks. Of course, if such a place is recommended by some trustworthy person, you may follow his advice. In your “pension” you will find a great many Americans, and you may cling to some especially

You will also be besieged by peddlers of vile pictures or playing-cards; but what these men should get as an answer would be a well-aimed kick, if this were not against the law and likely to get you into trouble.

The Exposition grounds stretch along the Seine, and it will take a great deal of walking or riding to get about. If you have only a week in Paris, don’t spend all of it at the Exposition; give half your time to the city, which will be of more interest to you than the big fair. Of course, you will visit the Palace of Horticulture, that of the National

to rest, and even if you are a pagan you will want to pray. Napoleon’s tomb is close to the Exposition grounds. The castle and park of Versailles, and a hundred or more other places you ought to see, but probably won’t on account of lack of time and money.

Now let me review two items for you. First, that of money. It will cost you for board and lodging at least two dollars a day; for car-fare, tickets to the Exposition, and sundry expenses, two more dollars, so you must count at least four dollars a day—that is, twenty francs French money. If you go to a restaurant to eat you will find that the waiter expects at least ten centimes from you as a fee, for the poor fellow gets no wages, and has to pay for the privilege of working for his firm. A meal costs anywhere from two francs to twenty francs; that for two francs is good enough for anybody.

Ten days’ stay in Paris will cost you forty dollars, and the steamship ticket will cost you (second class both ways) from eighty-five to one hundred dollars. So say for one hundred and fifty dollars you can go to Paris, for fifty dollars additional you can see a good part of Germany and England, which you ought not to neglect doing.

In regard to the lack of the French language, first of all, don’t be afraid of anybody or anything; they are bound to understand you, for they will want your money, and you won’t pay it until you get what you want. You can write names and addresses on paper, and everybody nowadays can read. Half of the people you will meet in Paris during the Exposition will be English-speaking people, and you will find that there will be many days when you will think you are in London or in New York City.

THE PALACE OF THE LUXEMBOURG was built by Debrosse (1615-20) for Maria de Medici. There are three stories, the lowest arched, with entablatures and coupled pilasters between the windows. The well-proportioned fronts are marked by projecting, high-roofed pavilions. The smaller diameter of the rectangle is about three hundred feet. The large court is now colonnaded. Many of the interior apartments are splendidly painted and adorned with sculptures. Since the Revolution this former royal palace has served as the House of Peers or of the Senate, and long contained a museum of modern art, now removed. The fine gardens contain a number of good sculptures and beautiful fountains.

THE CHURCH OF NOTRE DAME is one of the most imposing and famous of cathedrals. The present structure was begun in 1163, but is chiefly of the early thirteenth century. The facade, with its three large portals, its great roses, its gallery and arcades, and its twin square towers, is one of the two or three finest produced by Pointed architecture. The transept fronts are unsurpassed in their way, and the long range of windows and flying buttresses of nave and choir are highly effective. The figure and foliage sculpture of the exterior is abundant and artistically remarkable. The graceful rood-spire was built by Viollet-le-Duc in place of the original one. The interior, with nave and double aisles continued around the choir, measures 156 by 420 feet, and 110 feet high. The three roses retain their original glass, but the remainder of the glass is modern. The choir screen is carved with interesting New-Testament reliefs of the fourteenth century.—From the Century Cyclopedia of Names.



LUXEMBOURG PALACE

friendly crowd, and so be piloted about, or you may do as I have done many a time—get a plau of the city and Exposition grounds, and then follow your tastes, time and state of pocketbook.

Don’t let any guide get a hold of you unless he leads a party, which you join at a fixed rate of remuneration. You will find such guides at the Cook Tourist office, to which anybody will direct you if you just mention the name. Near Cook’s office, and in every place where Americans are likely to congregate, you will find every evening dozens of French-Americans and American-Frenchmen whose business it will be to

Manufacturers and also the Palace of Art. Just here let me give you another piece of advice: Don’t try to see too much at once. Don’t buy anything on the grounds; you will get cheaper things to take home outside. Don’t stop and price anything without being sure you will buy it, because foreign tradesmen are not polite to such customers. Unless you want to bankrupt yourself, carry a lunch with you, and buy a cup of coffee to help it down. Don’t forget to visit the United States Building; it will be the best building there.

When you are tired of the Exposition, and you have but little time left, be sure to see at least the following places: First the



THE BRIDGE OF SAINT MICHEL AND THE CHURCH OF NOTRE DAME

engage you through the wicked Paris, of which they will talk to you in hushed whispers, as if it were some great mystery and rarity. If you go with them you will see what you will try to forget all the rest of your life. Remember this, that Paris is nasty enough in the daytime, and that you will see more than you care to see without spending any extra money for the privilege.

Louvre, which is the finest picture-gallery and museum in the world. It costs you nothing to see it, and you will never forget it. It would take you a month to see it thoroughly, but in four hours you can run through it if you take a good pace. Next you should see Notre Dame Cathedral, one of the finest churches in the world, rich in historic interest. It is a good place in which

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OFFICES:

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ONE of the most practical publications of the Department of Agriculture is the illustrated bulletin, "Good Roads for Farmers," prepared by Mr. Maurice O. Eldridge, assistant director, Office of Road Inquiries. The introduction reads as follows:

"Bad roads constitute the greatest drawback to rural life, and for the lack of good roads the farmers suffer more than any other class. . . . Localities where good roads have been built are becoming richer, more prosperous and more thickly settled, while those which do not possess these advantages in transportation are either at a standstill or are becoming poorer or more sparsely settled. . . . Life on a farm becomes, as a result of 'bottomless roads,' isolated and barren of social enjoyments and pleasures, and country people in some communities suffer such great disadvantages that ambition is checked, energy weakened and industry paralyzed.

"Good roads, like good streets, make habitation along them most desirable; they economize time and force in transportation of products, reduce wear and tear on horses, harness and vehicles, and enhance the value of real estate. They raise the value of farm lands and farm products, and tend to beautify the country through which they pass; they facilitate rural mail delivery, and are a potent aid to education, religion and sociability. Charles Sumner once said: 'The road and the schoolmaster are the two most important agents in advancing civilization.'"

"SOMETHING has been done during the past year by the Office of Public Road Inquiries," says Secretary Wilson in his annual report, "to ascertain what can be accomplished in making roads by the use of the material found in the several states. Co-operation has been had with the experiment stations of several states in making steel roads, macadamized roads and gravel roads. The people of all the states are very much interested in the improvement of their public highways. There is a great demand upon the

Department of Agriculture for assistance in road-making, in addressing the students at our agricultural colleges, and in giving instruction regarding the best methods of using what material may be found convenient. Publications have been sent out from the department covering the several features of road-making, and for these there is great demand. Much attention is being given to this subject by the legislatures of the several states of the Union.

"I am of the opinion that it would be wise to have the resources of the Eastern, Southern, Middle and Western states carefully inquired into by the appointment of competent men in each of these sections, who would ascertain and report upon the road-making material obtainable, and at the same time give instruction in the actual construction of roads. There is also a necessity for scientific inquiry into the composition of road material in the several sections of our country, and the facility with which these materials when brought together combine to make good highways. Many sections of our country have within reach hard rock from which good roads can be made. Other sections are entirely lacking in this regard, and must, in my opinion, eventually look to steel tracks for supplying permanent good roads. In order to get information along these lines short sections of steel track were laid during the past year at Omaha, Nebraska, Ames, Iowa, and St. Anthony Park, Minnesota. The Western states are not well supplied with stone and gravel for road-making purposes, and the people of these states are watching these experiments with great interest. It is our intention to encourage the laying down of steel-track sections during the coming year wherever we can induce the localities to purchase the steel. We do not yet know what is the best shape for the steel rail, nor do we know the best material to lay between the tracks; but inquiry is being made along these lines, and information is being gathered from experience.

"The people of the United States have associated themselves into national and state organizations for the purpose of encouraging the building of better roads and for the consideration of ways and means to that end. There is a great deal of agitation and considerable education along road-making lines. The people of many localities are exceedingly anxious to have the co-operation of the department in improving their roads, and demands of this kind are so numerous that our limited force is entirely inadequate to give the assistance required. The objectless road-work of the year has been as extensive in territory covered as it has been far-reaching in results accomplished. Model roads of various kinds have been built, under the supervision of agents of the Office of Public Road Inquiries, in Maryland, Nebraska, Minnesota, Iowa, Kentucky, Indiana and Wisconsin. Elementary knowledge of road-making is being rapidly spread among the people. Students at our colleges are taking a great interest in the study of road-making. Gentlemen of means, enterprise and public spirit are doing much along experimental lines for the education of their neighbors.

"The principal inquiries during the year were upon the following subjects: New road legislation, especially as regards state aid; the use of convict labor in road-building or in the preparation of road material; experiments with steel roads and other new plans; methods of raising road funds; conditions of new roads under wear, especially the sample roads designed by officers of the Office of Public Road Inquiries; the promotion of rural free delivery of mails by good roads; the progress of organizations for road improvement; the prospects for road construction in several localities. The invention of road-graders for use in the great productive prairies of the West has simplified the construction of roads more than any other one feature of progress. The value of these graders in making roads by horsepower is not well understood in all parts of the United States."

IN A press interview General Ludlow, military governor of Havana, describes the present condition of affairs in Cuba as follows: "Since January, 1899, Havana has had, for the first time in its history, an honest, intelligent and effective administration. The city business has been carried on by the mayor, the council and the city officials in an orderly and economical way, without scandals, disorder or defalcations.

Very valuable results have been attained, and the city has been converted from a middle-ages reproach to a twentieth-century metropolis, which in healthfulness, decency, security and orderliness is exceeded by no community I know. Certain standards of efficiency have been established and certain methods of practical administration have been put in force and persisted in that are object-lessons of the greatest value. It remains but to carry forward the work on the same lines and according to the same principles.

"The changes in general conditions in Cuba since a year ago are almost phenomenal in the thoroughness and success with which modern principles of administration have been applied, and a scrupulous insistence upon orderliness and thoroughness in the conduct of public affairs has been carried out. Time is needed for the completion of missionary and regenerative work of this kind, and the training of civil organizations to the discharge of administrative and executive functions.

"Politically, the situation awaits the gradual formation of elective governments, beginning at the bottom and developing upward. Socially, order is practically perfect and peace universal. Economically, conditions in most respects are improving. The tobacco crop, for example, is extraordinarily good and plentiful. Sugar needs capital, which still hesitates, and many ingenios await rebuilding and plantations replanting. Sanitary and health conditions all over the island are better than ever before in its history."

THE text of a new Chicago platform reads as follows:

"WHEREAS, in the opinion of the national anti-trust conference, assembled at Chicago, February 12, 13 and 14, 1900, the just and true remedy for the combinations known as trusts, which consist of corporations and natural persons controlling legalized special privileges, is the abolition of those privileges; and

"WHEREAS, the legalized privilege of telegraph monopoly, the legalized privilege of protection against foreign competition with American goods controlled by trusts, the legalized privilege of monopolizing the issue of paper money, and the legalized privilege incident to the private ownership of railways, are potent factors in creating and maintaining trusts; therefore, be it

"Resolved, 1, That Congress take immediate steps, under the power of eminent domain, or otherwise as may be deemed the most expedient (but in any event by paying the just value, irrespective of franchise value, of any property taken or condemned), to establish the telegraph and telephone systems of the United States as adjuncts of the Post-office Department and subject to its operations;

"2. That Congress defeat all measures that have been or may be proposed, and repeal all that now have the sanction of law, whereby private corporations may acquire control of the volume of the circulating medium, and create a banking trust;

"3. That the tariff shall no longer be employed to foster and buttress trusts, but that Congress shall place on the free list all articles the sale of which in the United States is controlled by a trust;

"4. That Congress take immediate steps under the power of eminent domain, or otherwise as may be deemed the more expedient (but in any event by paying the just value, irrespective of franchise value, of any property taken or condemned), to take, own and operate the interstate rail highways now owned and operated by private persons or railway corporations; and

"Whereas, the political power of the trusts rise in their frequent representation in and control of the houses of legislation, we recommend the adoption of the system known as direct legislation; to make government once more, as of right it ought to be, and as was conceived alike by Thomas Jefferson and Abraham Lincoln, a government of the people, for the people, and by the people."

The anti-trust conference that met in Chicago last September discussed the trust question at great length. The remedies offered were nearly as numerous as the prominent speakers. Socialism, free trade, free silver, government ownership, single tax and other things were offered individually as panaceas for trusts. But the conference did not propose in definite form a remedy for the evils, real and imagined, of trusts.

The recent conference has in the above platform formulated a remedy. The remedy is state socialism. The delegates know little or nothing about the ultimate results of the remedy, but, of course, did not let a little thing like that stand in the way of offering it. Although by the call for the conference partisanship was to be avoided, the turbulent discussions were full of open partisanship of different varieties, and the platform presents it in a somewhat diluted form.

The first step proposed is for the government to buy, at its own price, all the great public utilities, and then operate them. One of the leading spirits of the conference endeavored to have the resolutions provide for taking railway, telegraph and telephone lines without paying anything for them, but saner minds prevailed, knowing that absolute confiscation would carry its own condemnation. Among the prominent delegates to the conference were George Fred Williams, of Massachusetts; Tom L. Johnson, of Cleveland; Mayor Jones, of Toledo; General Weaver, of Iowa; Joe Parker, of Louisville, Kentucky; Congressman Sulzer, of New York; John P. Altgeld, Jerry Simpson and Helen M. Gougar.

A BULLETIN recently issued by the Department of Agriculture from the section of foreign markets gives a complete statement of the quantities and values of the various agricultural products exported from the United States to each country of destination for the period of five fiscal years—1894-1898. The following summary shows the distribution of our agricultural exports:

"The agricultural products exported from the United States during the five years—1894-1898—had an average annual value of \$663,536,201. Of these enormous exports about sixty per cent found a market in the United Kingdom and its various dependencies. The sum paid by the British people for the American farm produce purchased during the period mentioned reached as high as \$403,953,658 a year.

"In the five years under consideration the United Kingdom alone took more than one half of all our agricultural exports, the consignments credited to that country forming about fifty-five per cent of the total shipments, and having an average annual value of \$362,407,701.

"Germany, which ranks next to the United Kingdom as a market for the products of American agriculture, received about thirteen per cent of the exports for 1894-1898, the average yearly value amounting to \$86,320,274.

"France, with purchases that averaged \$43,988,791 a year, was the third country in importance. The exports to France, however, formed only about 6.6 per cent of the total, and were hardly more than half as large as the shipments to Germany. The shipments to Germany, on the other hand, were less than one fourth the size of those to the United Kingdom. These three countries—the United Kingdom, Germany and France—received together nearly seventy-five per cent of the total agricultural exports.

"After the three countries just mentioned, the Netherlands, Belgium, Canada, Italy and Spain afforded the most important markets. The Netherlands bought 4.3 per cent of the total; Belgium, 3.6 per cent; Canada, 3.5 per cent; Italy, 2.2 per cent, and Spain, 1.5 per cent. The average annual values of the exports to these countries were: Netherlands, \$28,803,157; Belgium, \$23,731,669; Canada, \$23,020,397; Italy, \$14,264,424, and Spain, \$9,761,870.

"Our agricultural exports to Brazil during 1894-1898, although forming less than one per cent of the total, showed a yearly average of \$6,258,729. Shipments almost as large were sent to Cuba, the average annual value being \$6,099,824. The consignments to Denmark were more than doubled in the five-year period, the annual average amounting to \$5,990,952. To the British West Indies there were exports averaging \$5,241,577 a year. Mexico received shipments averaging \$4,636,486; British Africa, \$4,138,925, and European Russia, \$4,060,236. The average yearly exports to Hong-Kong were valued at \$3,555,588, and those to Japan at \$3,407,800. For Portugal the average annual record was \$2,709,694; for Sweden and Norway, \$2,685,549; for Haiti, \$2,281,966, and for British Australasia, \$2,030,804.

"The other countries to which the United States sent agricultural products during 1894-1898 having an average yearly value in excess of \$1,000,000 were Austria-Hungary, Venezuela, British Guiana, Puerto Rico, the Hawaiian Islands, and the French West Indies."



ABOUT RURAL AFFAIRS

The Man and the Hoe Edwin Markham, who wrote "The Man With the Hoe," has had to face some very virulent and, I believe, unjust criticism on account of the alleged slur cast upon the man of labor and the tiller of the soil. In a more recent interview the poet defines his views more plainly, as follows: "I believe in labor; I believe in its humanizing and regenerating power. Indeed, I believe that a man's craft furnishes the chief basis for his redemption. While a man is making a house he is making himself; while he chisels the block of marble he is invisibly shaping his own soul. And it does not matter much what a man does—whether he builds a poem or hoes a field of corn—the thing of chief importance is the spirit in which he does his work. It must be done thoroughly and in a spirit of loving service. Work of this order is a perpetual prayer; work of this sort is sacred, however lowly—sacred though it be the sweeping of a gutter or the carrying of a hod. The spirit of use, of loving service, sends a gleam of the ideal into every labor; and a man needs the ideal even more than he needs bread. The ideal is the bread of the soul."

The Passing of the Special Fertilizer

Director Jordan, of the New York State Experiment Station, at Geneva, is reported (in the "Rural New-Yorker") to have made the statement, at the recent meeting of the Western New York Horticultural Society, that "the day of 'complete' fertilizers is gone." If I understood Dr. Jordan correctly at the time, he said, "The day of the special fertilizer is gone." This is a somewhat different thing, and I rejoiced to hear the learned director say it. I have come to the conclusion long ago that the whole idea of making and using special fertilizers for special crops rests on an entirely wrong principle. The claims of manufacturers that they can make a special manure for potatoes, another for cabbages, another for onions, and so on through the whole list, is absurd in the extreme. For some years I have been trying to convince manufacturers and the public at large of this fact. These claims of the fertilizer trade rest on the now generally exploded theory that we must replace the plant-foods in just the proportion and quantities as they are removed by the crops. It is true that special fertilizers can, and frequently do, increase the crops to a material extent. But it is also true that we usually can obtain the same results by substituting one special fertilizer for another. We may raise just as good a crop of onions with the help of a potato fertilizer as with an onion fertilizer, and just as good a crop of cabbages by using one of these manures as by using a special cabbage manure. It is also true that in a majority of cases we can safely leave out one or even two of the chief elements of plant-food, using potash alone or phosphoric acid alone, or the two together, or nitrate alone or in combination with one of the minerals, as the case may be, and secure the same or even better results at a mere fraction of the cost of the special fertilizer. In fact, this is not so much a matter of the small difference in percentages or proportions as it is a matter of materials. And when it comes to this we may have at least some justification of talking about special manures. It is true that certain materials seem to help certain crops. As I have stated on former occasions, nitrate of soda usually has a marked effect on cabbages, cauliflower, beets, spinach, sometimes on onions, etc. On the other hand, sulphate of ammonia has seemed to be markedly injurious to beets and some other crops. Muriate of potash has been found to be a safe form of potash to use on almost all crops, with the possible exception of beets. In this respect we must make our selection of materials according to the crop we propose to plant, as also with proper consideration of the plant-foods which are already present in the soil in an available form. The fertilizer men cannot help us out with their advice. Observation and experiment must be our guides in this matter. And the same is true in regard to the quantities of these materials that we may use with profit. This is entirely in line with the principles of the economic application of manures as written by me and published in these columns ten or more years ago under the title of "Practical Farm Chemistry." T. GREINER.

SALIENT FARM NOTES

Local Politics In several states all township officers, such as supervisor, assessor, collector, road commissioner, etc., are elected in April, the primaries or conventions being held in March. These are the offices that farmers are, or should be, very much interested in. They are offices that are very close to the people, and they should be filled by men who are in every way competent to fill them—men who will do their duty faithfully and honestly. Any disinterested person would naturally suppose that in the selection of such officers politics would cut little figure; that it would be easy for men to unite in selecting the persons who are to look after home affairs because all have an equal interest in the matter, yet it is a fact that here party lines are drawn as tightly, and "campaigns" are often conducted quite as acrimoniously, as are those for a governor or president.

All of this is due to the machinations of the small "boss," the man who builds up little local "machines," turns the handle, and grinds in or grinds out as will best suit his needs and give him "influence" up nearer headquarters. That a man is in nowise fitted for the position for which he is slated does not concern the "boss" in the least. The question uppermost in his mind is, Will he stand by me when I want him, help me when I want to be a delegate to the county or state convention? If he is satisfied on that score the man must be nominated and elected if possible. Should any voter dare to assert his independence and refuse to be led by the nose, he has a mark put upon him, is not allowed to enter the secret caucuses, is politically ostracized, read out of the party, and his influence destroyed. In almost any locality one can find men who are intelligent and fairly well to do who have no more influence politically than a stump. They have at some time kicked over the "party traces" because they would not be the tool of some unscrupulous "boss," would not wink at rascality and perfidy, and therefore they have been read out of the party. Occasionally one of these ostracized gentlemen is something of a "boss" himself, and he calmly awaits his opportunity, and then makes the fur fly, and the "boss" who kicked him out of the party is in turn kicked out.

I have mixed in local politics to a considerable extent, and have learned that the farmer is the only really independent voter in the country. He gets his living from the soil, and the markets of the world are open to him, and no political "boss" can shut him out of those markets, nor limit the amount of sunshine or rain that may fall on his farm. He can, if he wishes, vote for the men or measures of any party without let or hindrance. The merchant, mechanic and working-man can be materially injured by the party "boss" in many ways, and they know it, and consequently they are generally ready to do his bidding in order to be let alone. As a merchant once said to me, "If I was independent like you can be I would vote just as I pleased, but as it is I have to be a little careful." If the farmers would unite to select the best men for the various township and county offices they could control these matters absolutely in a great many sections. They could put men in these offices who would do good work for fair compensation, and manage affairs so economically that local taxes would be reduced nearly one half. They could put an end to "boss" rule and political ostracism in all rural communities.

Party bosses make special efforts in all districts where farmers are in the majority to keep party spirit alive and active, and generally they are very successful. So long as they can keep farmers fighting each other they are safe, and favorable action on all such measures as they are interested in is easily secured. They hold the offices, or see that their particular friends get them, and they fatten on good salaries or valuable perquisites, and the farmers pay the bill. I hope that the time is not far distant when farmers will comprehend the situation and act sensibly.

Lawn-making A farmer in Iowa writes me that the blue-grass on a portion of his lawn was destroyed last summer, and he would like to know of some effective method of restoring it. He has been advised to have the ground spaded over, but fears that he could not get it level and smooth again. He is right in this. It would be a very difficult matter to work the ground down perfectly smooth again. The best

way to resod the spot is to carefully remove a layer of soil one and one half inches thick from the surface of the bare spot, and then cover it with a sod cut the same thickness. The paring can easily be done with a sharp, bright, long-handled spade, and the sod cut with the same tool. When the sod is laid, sift over it sufficient fine soil to almost cover it from sight. Rains will beat this down and wash much of it into the small crevices between the sods, and make all level and firm. This same writer desires to obtain a good sod on a portion of his old vegetable-garden, and asks at what time it would be best to sow the seed. I would not sow seed at all. I would make the ground level, then with a small hand-marker (which he can make in fifteen minutes), with the teeth six inches apart, mark it one way, then again at right angles with the first marks. Now procure a quantity of blue-grass sod cut one to one and one half inches thick, and cut it into squares two inches across. Place one of these squares, roots down, where the marks intersect, and press it into the soil with the foot. When the plot is planted, smooth it carefully with the back of a garden-rake. If this is done as early in the spring as the soil can be nicely worked, a complete sod will be formed by midsummer. If sod is scarce, the little squares may be placed further apart, twelve to twenty inches. Keep everything that comes up mowed down short.

Shrubs and Climbers

One of the most satisfactory shrubs I ever grew on the lawn is *Spirea Van Houttei*. The bush is now six years old, and is about five feet in height, and droops over so as to cover a space six or seven feet in diameter. When in full bloom it looks very much like a great bank of snow. The flowers are small and borne in great clusters, so great, in fact, that they bend the long, slender stems almost to the ground. It truly is a beautiful thing, hardy as an oak, and does not sucker. If I could have only one shrub on the lawn it would be *Spirea Van Houttei*. A nicely grown Japan quince is a pretty, clean shrub. It grows very slowly, and may be trimmed to suit any fancy. The brilliant scarlet-crimson flowers are borne in the greatest profusion in early spring, and a well-grown plant is a thing of great beauty and always much admired. The lilac, of course, is the loveliest old thing we grow. Everybody knows it; everybody remembers how mother loved it when they were little tots, and how they carried the great spikes of bloom into the house for her to decorate the dining-table with "in lilac-time." Everybody with a soul as big as a peanut has a lilac-bush somewhere about the yard. Take a little better care of the dear old thing. A little judicious pruning will work wonders with the lilac. Then there is the althea, rose and white; they make very pretty shrubs for the lawn, and they bloom so long that they are well nigh indispensable.

How much brighter and more cheerful many farm homes would be with a few of these easily grown, easily cared for shrubs scattered about. These and a few of the hardy, easily grown climbers like the *Halliana* and *Monthly Fragrant honeysuckles* would make many a farm home fifty per cent more homelike and attractive than they now are. I have been in houses where parents rapturously listened to daughter thump a piano and sing about the "lovely little home where the climbing roses bloomed and sweet honeysuckles clambered," while their premises were as bare of climbing roses and honeysuckles as the Desert of Sahara. Why not plant a few of these little things and make home more homelike? Do it this spring.

FRED GRUNDY.

2.

A DOUBLE TRAGEDY

Down from a twig on a Northern Spy tree
A canker-worm swung in security;
He'd eaten all season since first he was hatched,
As a ravenous glutton he couldn't be matched.
He slipped inch by inch to the grass-covered ground,
Where he thought safe concealment might surely be found
In which he could pupate till autumn set in;
But a hen came that way and she gathered him in.
Gathered—gathered—gathered—she gathered him in.

She gathered him in, and his final rest
Was there, in there, in her well-filled chest;
And she strolled around in search for more,
For it tasted better than aught before.
But I thought of her end, her final act,
When the farmer'd slice with a carver's taet,
And remark, as each piece made him look less thin,
"I gather her in, I gather her in.
Gather—gather—gather—I gather her in."

M. G. KAINS.

OUR FARM

FARM THEORY AND PRACTICE

TRUSTING THE CROP REPORTS.—The farmers who have held their wheat and potatoes are puzzled to know when to push them upon the market.

It would seem that our government should be able to place such reports before the producer that he could form a safe estimate of the value of his products, as determined for the year by demand and supply, but the reports that are furnished do not inspire confidence. We were told of the probable foreign demand for our grain, the extent of foreign shortage, and also of the amount of our own crop. The statistics indicated a fair price for wheat. The market dulled down soon after these reports were given us, and midwinter saw lower prices than prevailed at threshing-time, despite the optimistic reports of the world's needs given us.

The farmer wonders what the matter is, and to whom he may trust for figures accurately stating the year's production and the deficiencies of foreign countries. Will wheat remain a drug upon the market, or will the demand soon be felt? No one can answer, and the government's reports become just so much waste paper in the eyes of most producers.

Then there is the potato market. We were told that the crop was large. Quite probably it was, but growers do not know. They lack confidence in the figures. I know of large amounts in storage in farmers' hands, and the holders are puzzled to decide whether to trust the government report and push their potatoes upon the market now, or wait until spring and take the chances. They regard it all as a lottery, past experience teaching that government figures do not afford a safe guide.

I would not be hypercritical. There are many practical difficulties in the way of getting accurate reports. Consumption is greater some years than others. But it is evident that the present system does not command the confidence of producers to an extent that is reasonable. The lack of confidence, due to past experience in trusting the government figures, should be a spur to some improvement in the system of gathering the statistics. A combination of a lot of politicians on big salaries and a big company of men working for nothing is not calculated to secure the accuracy needed by men having crops to sell. Good government crop reports are a necessity to the people. I think some good is done by the present system—the reports are not wholly misleading; they are one factor of many considered by the conservative farmer, but they are not the safe guide they should be. Improvement is demanded—improvement in the system. Present results are as good as the present system.

FEEDING WHEAT.—Again we hear talk of feeding wheat. It seems to me inadvisable. Even if wheat goes no higher—and many believe it should go higher—it is not so profitable a feeding-stuff as some other grains and by-products at present prices. The question is not whether wheat can be fed with profit at sixty or sixty-five cents a bushel, but whether it can be fed at those prices with as much profit as other foods. It surely cannot in the case of most farm animals. The grains—all grains—are made up in great degree of starchy material. It makes heat and fat. That is gotten in corn for much less a pound than in wheat. The muscle-making material—the costly portion—is in the hull and the germ of the grains. This can be gotten in the by-products upon the market—the bran, middlings, gluten-meal, etc.

A ton of these materials can be bought usually for less than a ton of wheat is worth, and contains far more of the costly muscle-making material. That is to say, a pound of the protein, or muscle-making material, in those by-products costs far less than a pound of it in wheat, and a pound of starch in corn costs far less than a pound of starch in wheat. The needed food comes much more cheaply in a combination of corn and some such by-product as has been mentioned than in wheat at present prices. For poultry the wheat may be best at times, but for stock using ground food, the cheaper grains, balanced by rich by-products upon the market for the purpose, make the more profitable ration.

SILAGE-TAINTED MILK.—Notwithstanding the fact that some of the fancy butter upon the market—the gilt-edged product that commands forty to fifty cents a pound

in special markets among the very wealthy—is made from cream coming from silage-fed dairies, we yet find some town boards of health forbidding the delivery of milk from dairies using silage. The choicest of butter and milk is made by dairymen using the silo, and yet silage is under the ban of some city authorities. What is the matter? In some instances gross ignorance and prejudice, doubtless, but in most instances the carelessness of some one or more producer of milk who uses tainted, moldy silage, or of one who dumps the silage before the cows while the milking is being done. Any odor in the stable at milking-time will affect the milk.

Silage or roots of any kind should always be given after the milking. If the silage is reasonably sweet, and is fed after the milk has been drawn, the purest and choicest milk may be made from it. It is the careless man who has tainted milk and creates a prejudice against one of the best feeds for the dairy-cow. There is no cheaper feed than corn, and for a cow there is nothing better than corn in a succulent condition balanced up with a proper grain ration. It is unfortunate that any dairyman should be prevented from using this feed because a careless neighbor has caused a city market to object to such feed.

TUBERCULOSIS.—Undue attention has been given to this disease in the dairy, not by the owners of cows, but by the public press. Some cows have the germs of consumption, and may transmit them to consumers of milk, and care should be given to the matter; but there are all manner of germs everywhere, and it is folly to center public attention upon one particular source when more prolific ones are every where practically unnoticed. The city papers like an excitement, and the condemnation of a herd of dairy-cows as tuberculous is always news with a capital "N," but at the same time the danger from disease germs in drinking-water and city filth may be tenfold greater every day. Germs are everywhere. Health is maintained largely by resistance of disease germs. We should do all we can to destroy the sources of them, it is true, but it is a safe guess that ninety-nine cases of disease out of every hundred due to germs are traceable to other sources than milk to one that is traceable to milk. Let the herds of dairy-cows be inspected quietly, and tuberculous cows condemned; but it is worse than folly to emphasize the danger from use of milk and injure a great industry when the fact is that the health-giving milk is needed to build up constitutions that can reject the disease germs that pervade the streets, homes and drinking-water of our cities.

DAVID.

COW-PEAS FOR THE NORTH

In spite of all that has been written in the agricultural press during the past few years about cow-peas there still appears to be a large number of readers who are unacquainted with one of the most useful and most easily grown of all restorative and fodder-producing plants. Many seem to suppose that cow-peas can be grown only in the South, and that they are not adapted to the needs of the Northern farmer. The fact is that cow-peas are a very easy crop to grow, and that a successful crop of cow-peas can be grown anywhere that the common field-beans will succeed, and that they require much the same conditions for success.

The fact that some Northern farmers have tried cow-peas and pronounced them a failure does not prove them worthless. I have taken some pains to ascertain the cause of failure in certain cases, and am convinced that the choice of unsuitable varieties, too early sowing and a misunderstanding of the nature of cow-peas—one or all of these causes are responsible for nearly or quite all failures. The very name cow-pea, is misleading to Northern farmers, who have been accustomed to the hardy garden-peas and the marrowfat and Canada field-peas. They very naturally get the idea that cow-peas, being peas, may be sown mixed with oats very early in the spring, the same as Canada peas.

Cow-peas are more like beans, and are susceptible to injury by freezing, and are often injured even by frosts. They must not be planted or sown before June 1st at the North. When it is safe to plant field-beans, then plant cow-peas.

If to be saved for seed they should be planted in rows far enough apart to admit of horse cultivation, and may stand four to six inches apart in the row. They should be kept free from weeds, and the soil mellow. Harvest and thresh same as beans. If sown

for hay, for soiling or for plowing under they may be drilled in well-prepared soil with a wheat-drill, using all the tubes and sowing one and one half bushels to the acre.

There are over a hundred distinct varieties of cow-peas, differing much in the habit of growth, time of ripening and quantity of forage produced. Many varieties like Wonderful and Clay make a heavy growth of vine, but are very late, requiring four to five months for maturing seed, and of little value at the North when other and much earlier varieties can be obtained.

The Large Early Black variety has proved to be one of the best varieties for the North among those which have been extensively tried. I have reports of great success with the Large Early Blacks from farmers in many parts of New York, Michigan, Connecticut, Ohio, Pennsylvania and Indiana. The Large Early Blacks mature seeds in about eighty to ninety days, and make a very bushy vine, often standing three feet high on fairly good soil, and producing such an immense burden that it is extremely difficult to plow them under even after rolling them down and using a rolling cutter on plow.

A new variety, the Mount Olive, is proving remarkably early, yet makes a strong vine, and bids fair to be the coming cow-pea for the North as soon as it becomes generally known. With me the past season the Mount Olive ripened its seeds perfectly in sixty-five days from planting, and grew bushy vines twenty-four inches high.

Cow-peas will grow on land too poor to grow clover, but will grow much stronger and more rank on good soil. Cow-peas, like clover, are a soil-improver, and by chemical analysis contain much the same properties as clover. Cow-peas are a quick-growing summer crop, and may be planted after removing early crops of potatoes, cabbage, etc. Cow-peas are a grand crop to plow under preparatory to sowing fall wheat. Some of the heaviest crops of wheat in this country are grown on soil so prepared. By plowing under the crops of cow-peas and crimson clover poor soil can be much improved, and good soil made better, at less expense than by any other method.

E. G. PACKARD.

TO PROTECT CULVERTS AND SMALL BRIDGES

The clogging of waterways under bridges and culverts at flood-time is the greatest danger that they are exposed to, and the greatest menace to near-by fields, that may



become flooded. All such trouble may be avoided by the plan illustrated.

As will be seen, protection consists in the placing of a well-braced post about six feet up-stream from the opening under the bridge, or, if the stream be wide, two or more. This will catch any driftwood, which if abundant will make a dam at a harmless place, the water flowing over, under and through the obstruction to the unobstructed mouth of the culvert. When the flood has subsided the rubbish may be more readily cleared away than if choked into the narrow waterway under the bridge.

M. G. KAINS.

FARM ANIMALS

I remember that over fifty years ago my father said to me: "My boy, driving a horse is business; to drive a horse well requires attention. Those reins are in your hands to communicate with the horse intelligently. Every movement means something to the horse. But if you do not mean anything at your end the horse will lose all intelligence at his end. The reins should encourage, assist, help to hold back, and every movement should be ready for some service. That is what they are for; not to lie on the dashboard nor to be slapped around heedlessly.

Remember, you cannot drive a horse decently unless you put your brains to it. Get all the pleasure you can, but don't imagine you are driving when you are not." I find that lesson necessary for my boys, and it has to be repeated. The amount of brainless driving is astonishing. Look for yourself and see. I tell my boys that reins ought to talk.

Then about whips. They ought to be abolished. In nine cases out of ten the lash when applied should be about the driver's legs. I saw a chap the other day lashing his horses furiously. Around the corner they flew and whirled the man out on his head. He was picked up and carried into a drug-store. Whether it killed him or not I do not care. I did not go to see. If a horse is rightly broken a whip is never necessary. It will not subdue a fractious beast; it will surely spoil a good one. I bought a five-year-old and forbade a whip ever being touched to her; no, not even carried in the wagon. She responds absolutely to every word or sign that she understands. So with any horse that is not already spoiled. A whip is more barbarous in driving than in a school-room, and it is less necessary.

With the whip should go the blinders. Have a barn museum, and hang up these tortures as relics. A horse likes to look about as much as we do. Lead one to water and see her raise her head to look about occasionally. I learned a lesson by having noticed that in my barn-yard (which lies on a slope overlooking a lovely valley) my cows always laid down facing the landscape. Going out of a moonlight night it was plain enough that they enjoyed the world. I had a Morgan mare that saw everything along the streets as surely as I did; and I found that she had sentiments that went beyond fear. She was interested in what was occurring along the street. I took off the blinders and encouraged her to take an intelligent interest. She became as watchful as myself of the whole turnout. On one occasion my shaft broke while climbing a steep hill, and she helped me as intelligently as a human being. What are blinders for, anyway? Who ever devised them? They do not prevent a fractious horse from becoming alarmed. Everybody knows that the safest way with a timid animal is to let him see that which he fears.

The check-rein may not be entirely dispensed with, but its use to draw an animal's head up into the air is an outrage. This is especially true with a draft-animal. The natural position of a horse's head when pulling is nearly on a level with his body. But it is also true that for light draft and traveling the endurance of the horse is much greater with a loose check-rein.

I am inclined to think that where we have made our blunder is in not trying to humanize our animals; perhaps I should say in not letting them humanize us. There is an effort to get speed or strength or fat and almost everything else except intelligence. I went to buy a horse one day, and asked a remarkably good judge of horses to go with me. The owner offered to show off the animal. "Lead her out," said my friend. He then stood in front of her and looked in her eyes; spoke to her; asked questions of her; scratched her poll, and gave her an apple. The owner volunteered information. "Oh, you shut up," said my friend; "I will find out about her." Then he felt her over and went back to her head again. Turning to me, he said, "Buy the animal. She knows enough to be a friend. She will never play mean tricks on you if you don't on her." That horse is now twenty-seven years old, and White Lady is still doing me good service. She was safe, honest and intelligent. What more could I ask?

What I say about horses applies to cows and all other stock. They should be treated as companions and as if they knew something. It is astonishing what a sensible boy can do in a barn-yard. When I lived in the West I left at my Clinton home a boy in charge of the animals. He was but sixteen years of age, but he had good sense and a good heart. It was not long before he had made a pet of every sort of creature. I found that even the hens were trained. He rode the cows to water, and the horses were as playful as kittens.

E. P. POWELL.

NOTES FROM GARDEN AND FIELD

SEEDS AND PLANTS.—Without a supply of good seeds and plants even a good gardener can do but little. The market-gardener is well aware of that fact, and shuns no effort or expense in order to secure just exactly what seeds he needs. A good many home gardeners, however, still depend on luck and chance for their supply of garden-seeds. They plant any old seeds they may have on hand, or that some friend or neighbor in mistaken kindness may hand them over as a free offering. A gift of this kind is often a regular Pandora's box, scattering the seeds of disappointment and discontent. And so it is often with the plants obtained in the same way. At best this cheap method of obtaining garden seeds and plants has too many elements of uncertainty. I always wish to be sure of what I am doing, what I am planting and what I can expect to harvest. Even in the home garden we have too much at stake to allow us to leave it all to chance and luck. If we want something that is worth having, something that will be a source of much gratification and enjoyment in this line, we must see to it that we have the right kind of safe foundation; and the only one, so far as I can see, is the greatest care and foresight in the selection of the seeds and plants we use. First of all we must start right, and then we can go ahead with confidence.

Evidently my friends all over the country expect me to use such care in the selection of what I plant, and some of them wish to profit by it. Here is, for instance, a letter from Kansas, in which two ladies ask me to send them "a few sample packages of good celery-seed (Giant Pascal, Large Red-Ribbed, etc.), some Florida Winter tomato (whatever variety that may be), and some winter lettuce-seed; also full directions in regard to sowing and planting all of these things." My friends (including the public at large) are entirely welcome to all the information I am able to give them, both in the selection of seeds or the sources from which they may be obtained, and in the planting and general management of the crops. But there it must stop. I cannot engage to give such information in private letters; nor am I in the trade. I cannot furnish seeds and plants, nor grafts, such as of Gravenstein and Pease apples, for which I have recently been repeatedly asked. In short, I am not prepared to send out such things, and do not wish to engage in it. My friends must go to the regular seedsmen and nurserymen of the country, and there are many of them who will treat you kindly and give you what you ask for at a reasonable cost. They are prepared to do business and willing to serve you. If you make the proper selection of seeds and plants which you order from them the investment of a few dollars will surely prove profitable to you.

CATALOGUE SUGGESTIONS.—In my last communication I gave some suggestions called up by a perusal of the catalogues that had then come to hand. I intended to continue on this line, but the catalogues have been slow in coming, and I have but little to offer this time. Our large seed-houses send their catalogues without solicitation only to their regular customers. They cannot afford to send them broadcast all over, for they are expensive, even without considering the postage. But all dealers gladly forward a copy on request merely, or in some cases on payment of a portion of the postage required to mail it. I shall at once send out a lot of requests in order to get the missing ones. I have a catalogue from Harry N. Hammond, of Michigan. The very first thing he offers is his new extra early potato, "Admiral Dewey." I think if I were a popular hero I would ask the public at large to abstain from the overfree use of my name. Least of all, I would not want it connected with a vegetable, fruit or flower sent out with a description so overdrawn that it cannot possibly meet all the expectations aroused in those who plant it on the strength of that description. The "Admiral Dewey" potato may take time by the forelock, as Dewey did at Manila, and it may prove to be a first-class early potato in every respect, but I feel safe in saying that it will not give us potatoes fit for marketing five weeks from planting, and that very few, if any, of our readers will be able to grow from six hundred to eight hundred bushels of it in field culture. Mr. Hammond expects that all the potatoes his

customers can raise of this variety for the next two years will find sale among their neighbors at from three to five dollars a bushel. I have before this been sadly left in such calculations, and this with really good potatoes, too. Among many other seed-potatoes this catalogue offers an Improved Early Ohio. I will say that the Ohio is yet my main early market potato. I saved a good big bin-full last fall (summer rather), and am going to plant every one of them, too. I would not sell a bushel of them for twice the amount that I could get for them. I can see more money in them for planting, as I expect to put the new crop on the market when I can sell them at a dollar or more a bushel.

The same catalogue offers the Mammoth French artichoke. I am not yet convinced that this is materially different from the ordinary Jerusalem artichoke, but fully believe that either has great value for growing as hog food in some places and conditions. People who wish to buy large quantities for planting, at reasonable prices, can get them here. I would not advise planting these artichokes on first-class tillable soil, or for soil wanted for general cropping. Better plant on waste lands, or where the hogs can be allowed to do the digging. Among the flower-seeds I notice "Mrs. Hammond's Giant Prize Mixed" pansies. I would always have particular confidence in anything to which a man can give the name of his wife or mother. It takes a mean man to connect the name of a dear friend to a worthless novelty. Some wag might run in a joke on mother-in-laws in this connection. My own experience with the dear old ladies forbids me to be guilty of such a thing.

STRAWBERRIES.—A catalogue of small fruits has come to hand from L. J. Farmer, of New York. He introduces a strawberry under the name of "Rough Rider." I will abstain from criticizing the name, well knowing that in our times it is not so dead easy to find a good name that somebody at some time or other has not already used for some fruit novelty. (And, by the way, I find the same difficulty in naming garden-books.) Some years ago Mr. Farmer, in filling an order for strawberry-plants for me, put in a lot of Splendid, of which I had never heard before, and which I had not expressly ordered. I have a warm spot in my heart for Mr. Farmer ever since, for the Splendid has given me splendid results indeed. It is a berry that will produce a big crop of fruit even under very ordinary management and in the hands of unskilled people. If the "Rough Rider" will prove to be as good a late berry as the Splendid has proved to be for an earlier one and for general crop I would not wish to miss it under any consideration. I have to try it, anyway; but I know that many new varieties have inspired me with as much faith as does this "Rough Rider," and yet I have thrown them aside again for better ones. The M. Crawford Company, of Ohio, also sends out a modest strawberry catalogue. It offers a whole lot of novelties, among them the Rough Rider already mentioned, then a Senator Dunlap, an Emperor, an Empress, McKinley, and even W. J. Bryan. And they are all perfect, too, at least in flower. Surely we must plant a larger trial-patch than for some years.

INQUIRIES ANSWERED

Strawberries to Fertilize Warfield.—W. A. W., New Richmond, Ind. Try Splendid or Bederwood for a pollinizer. Mix them in the rows, or have every third or fourth row of these. They are free bloomers, and furnish blossoms both early and late.

Canning-plant.—S. F. W., Allentown, N. J. The canning industry is not always a safe thing for the novice to engage in. To make it pay it must be conducted with a view of economizing in every way possible and to turn everything to best account. A plant is necessarily expensive, and must be run with skill and shrewdness. Many of the details of the business are kept secret, and the only safe way for an outsider to begin is by engaging a manager who is thoroughly posted in every detail of the work.

Hog-pasture—Beans.—H. L. W., Maysville, Wis., writes: "Please tell me what you think is best for a hog-fattening pasture. Some seed merchants praise soya-beans; another has Earth almonds; others have teosinte and vetch, and others cow-peas. I want it for summer pasture.—Do you think the tree-bean more prolific or better than the Navy or Burlingame?"

REPLY:—I know of nothing better for hog-pasture than clover, or for an annual, oats and peas. On waste land artichokes are good.—I like medium, pea and kidney beans as well as any other sort for a field crop.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN
INQUIRIES ANSWERED

Book on Pear Culture.—E. M., Princeville, Ill. I do not know of any really satisfactory book on pear-growing. The best chapter on this subject is in "Thomas' Fruit Culturist." This book costs \$2.50. It is published by William Wood & Co., New York.

Insects in Dried Apples.—F. A. D., Centralia, Wash. Dried apples that are infested with insects can be greatly improved if they are sulphured and then run over a vibrating sieve to remove any small pieces of dirt and insects. This can also be accomplished by winnowing them through a fanning-mill in a small way.

Grafting Pears on the Apple.—J. A. E., Sussex, Wis. Some of the strong-growing pears like Bessenianka can be successfully root-grafted on the apple, but I do not think the union a very permanent one; but it lasts until the scion gets a good root system of its own. Other varieties of pears can be root-grafted on pear-stocks.

Unsuitable Varieties of Grapes.—J. D. K., Mayger, Oregon, writes: "Seven years ago I planted several grape-vines—Isabella and Concord. They sucker every year, and start as soon as I cut them off. They bear very little fruit. What can I do for them? Can I start new vines from cuttings?"

REPLY:—It seems to me that Isabella and Concord grape-vines are evidently not adapted to your location. You had better use varieties that are succeeding more generally in your section. The sorts can be grown from layers or from cuttings. I think, as a rule, where only a few vines are wanted, that it is best to grow them from layers. This is easily done by hurrying a portion of the cane early in the spring, when it will be found rooted by autumn.

Ben Davis Apple.—C. B. E., Sewickley, Pa. The Ben Davis apple is large and beautifully striped with red on a yellow ground. It is one of the most beautiful apples in appearance, and one of the best keeping apples known. The tree is a regular and abundant bearer in sections adapted to it. It does not do well at the North or in the northeastern states. The quality of the fruit is inferior, yet not so had but what it sells readily, especially in late winter. I am inclined to think that is the most profitable apple to grow in many parts of the West, and this notwithstanding the fact that I never buy them for my own use. If they do well in your vicinity you may find them profitable, though if you can raise better kinds at a profit do so. I think other varieties, however, better adapted to your section.

Sulphur and Lard on Fruit-trees.—N. S. C., Wahaunsee, Kan., writes: "Two years ago last fall I greased my young apple-trees with sulphur and lard, which still remain on the trees. No borers or rabbits have ever hothered any of the trees, nor can I see that it has injured the trees in any way, as they have grown nicely ever since. Should I let it remain on the trees? Do you think such a mixture would keep borers out of peach-trees? Will it injure the trees?"

REPLY:—I think it perfectly safe to let the sulphur and lard remain on your apple-trees, and add more if you think it desirable. I do not think it would be a sure preventive for borers in apple or peach trees, but it is a good deterrent, and will help keep them out. It is very excellent to prevent rabbits from gnawing the trees.

Apple-trees Not Bearing.—C. A. P., Medley, Va., writes: "I have an orchard of forty or fifty apple-trees. All are five bearers except two, which are thrifty trees about twelve years old. They bloom every year, but never bear more than a peck. They stand in the middle of the orchard side by side. They are late fall Pippins. I would like to know the cause."

REPLY:—It is very hard indeed to explain why it is that a few trees in your orchard are unproductive, or when productive bear very poor fruit; but it is probably due to the fact that they are tardy or shy bearers, and that at the time when this fruit is ripening it is especially sought after by the curculio or some other insect, which causes it to become very rough. It is probable, too, that if you had an orchard of fifty of these trees, so that the injury of this insect was distributed over a larger number of trees, it would not appear to be such a serious matter. I think the best way to do would be to top-graft these trees with some more profitable variety.

Bartlett Pear Orchard.—W. McG., Tomahawk, Wis. It is probably true that there may be some sections of this country where ten acres of Bartlett pears, if set out and cared for, would provide a man with a good living in his old age, but there is nothing absolutely certain about this in any section of this country. Bartlett pears can be raised to good advantage, and generally at a profit, but there is no section where they can be depended upon to produce for a long time without their being carefully looked after, and without good management on the part of the owner, both in raising the fruit and the marketing of it. Bartlett pear-trees may be bought through almost any of the nurserymen of the Eastern or Southern states at very reasonable prices. I have seen so many people disappointed upon following the advice of interested parties as to the certainty of profit from plantations of trees, etc., that I have come to regard almost all such statements with much caution, and to feel that success in any line is a very personal matter, and that where one would succeed a great many others would fail.

Apple Shade-trees—Ashes.—G. A. H., Van Wert, Ohio, writes: "What kind of late apple trees would you recommend planting for shade?—Are coal and wood ashes mixed good for fertilizing garden and orchard?"

REPLY:—If the Northern Spy does well in your vicinity it would answer your purpose very well, as it is a good upright grower.—Coal ashes are of no value as a manure, but may be beneficial on heavy land in improving its physical condition. Wood ashes are valuable, but those from hard wood are much better than those from the soft woods, because they contain more potash. Pine-wood ashes are practically of no value. Leached ashes are of no value as a fertilizer. If wood and coal ashes are mixed the value of the mixture is simply the value of the wood ashes it contains. Good wood ashes are a good fertilizer for potato-land.

Water-cored Apples.—N. B., Sunnydale, Wash. The reason why apples become water-cored is not known. It affects some varieties much more than others, and the only way to avoid it seems to be by judicious selection of those sorts that are not susceptible to it. The little dry spots which you say run through the fruit of your apples are due to a sort of ripe-rot, which, like the trouble just referred to, is more injurious with some varieties than with others, and as a rule it does not pay to grow those kinds that are very susceptible to these weaknesses, and you had probably better re-graft your trees with varieties that are better adapted to your location. The ripe-rot, however, may be prevented by spraying with Bordeaux mixture, but the chances are that it will not pay you to go to the trouble of so doing; at least only where the apples are very high in price.

Scurfy Scale.—G. P. S., Carrel, W. Va. The fruit-tree twig that you send is infested with what is known as scurfy scale. It is not a specially injurious insect, although I should not buy trees that are infested with it. It can early be destroyed by washing with strong kerosene emulsion. I think, however, that if you have not yet planted your trees you would find the hot-water treatment as satisfactory as anything you could use. To use it satisfactorily the water should be heated to a temperature of about one hundred and fifty degrees, and the tops of the trees just dipped in and slowly taken out again. This is generally sufficient to kill this insect. Another satisfactory remedy is a strong alkali solution, into which the tops and the trunks of the trees may be placed without serious injury. This latter remedy may be easily applied, even to trees that are now planted out, providing they are not in leaf when the application is made.

Injured Pear-trees.—J. F. W., York, Pa., writes: "Two years ago last fall I planted six Bartlett and Duchess pear-trees. Four out of the six have not grown an inch. The other two threw out twenty-four inches of new wood last summer. The bark is clean and the foliage was nice. Can you tell me the cause?"

REPLY:—The trees that you planted and have not grown at all I am inclined to think must be seriously injured in some way. This might have occurred from a variety of causes. If they are infested with insect pests at the root, or if the roots had been so severely pruned that they have not yet started, it would have about the same results. But I am inclined to think that these trees have not started for the reason that they were obtained from some nursery where the stock was kept in a cellar and not exposed to frost during the winter. I have repeatedly had the same trouble with trees that I have set out. They remain fresh and green, and perhaps do not start in growth until the first of August, when they make a weak growth, while trees from the same lot that have been kept out of doors during the winter, or severely frozen, will start vigorously early in the spring. I think that the best way would be to examine the trees carefully for insect pests, and if you find none on the tops or on the root, then you would better let them stand for another year and see what the outcome will be. If they come through the winter in good condition the chances are that they will grow well the following season.

Transplanting Fruit-trees.—J. M. B., Woodberry, Md. The best way to transplant fruit-trees can hardly be given satisfactorily in the columns of a paper, for the reason that there is much detail in regard to it that can only be learned by experience. In a general way, however, among the important things in transplanting trees are to prune off the broken portions of the root, and if the roots have been shortened in the process prune the top to correspond, taking pains to leave the tree in good form. In setting the tree it should be set about two inches lower than it grew in the nursery. In digging the holes for them it is desirable to put the subsoil and top soil separately, and in covering the roots put in the dark soil first. It is very important, also, to thoroughly firm the soil about the roots, so that the tree will be well anchored. This should be done by tamping in the soil around the roots as the hole is being filled up. Do not wait until the hole is filled before doing so, but do it every six inches as the hole is filled. Dig the hole large enough to receive the roots without crowding. Where a large number of trees are to be set out a good way to do is to stake out the land carefully, and then plow straight, deep furrows where the rows are to go. Mark the land the other way, putting stakes at the ends of the rows. It is then quite easy, by sighting along the rows both ways, to get the trees in position. If the rows are very long it is desirable to put up several stakes in the course of the row. But the most important of all directions is to start with vigorous, healthy trees with a good root system.



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BORROWING

IN THE FARM AND FIRESIDE of December 1st appeared an article on the borrowing habit that brings to memory some of my own experience in that line. Betsy Jane (that is my wife) once complained to me about her neighbors, Mrs. A and Mrs. B, sending nearly every day to borrow tea or coffee or soda, or something of that sort, and that the kind sent home was usually of poorer quality than what she lent. I told her to lay by the packages when they came home, and save herself all the trouble of putting up more. She did so, and always had a package of tea and another of soda on the shelf ready to hand out when the children came to borrow. The packages kept growing smaller till finally the neighbors got offended at the little parcels and wouldn't borrow of Betsy Jane any more.

But I think the men are as bad as the women for borrowing. For the last fifty years I have been lending my hammers, saws, axes, wagons, harness, scythes and everything that is loose on the farm. They come to borrow the bolts from my plow and the burs from my mowing-machine. One neighbor came to borrow a beehive, and another sent to borrow a hen's nest; but that one was a woman. I told her that I was just out of hens' nests, so she would have to go somewhere else.

Now, I don't want any one to think that I am stingy and don't like to lend my things. That would grieve me, and Betsy Jane would feel bad about it, too. In fact, there is nothing that delights me so much as the privilege of lending anything I have to spare. But it is sometimes rather troublesome. For instance, when they borrow things and keep them so long that I forget where they are, and when I want to use them I may perhaps hunt half a day for them in every possible and impossible place about the farm, and then go the round of the neighbors till I find them. I have lent my fanning-mill to a neighbor, and he to another, and it would go all around the neighborhood for ten miles, and when I wanted to use it I would have to hunt the whole ten miles over to find it.

I once lent my mowing-machine to a neighbor, and he ran it into the gravel and knocked the blade out of place, so that when he brought it home I found he had been running it with the blade on top of two of the guards. He said he couldn't make the thing work and guessed it was no good. I say these things are sometimes a little troublesome, but I like to lend, nevertheless, notwithstanding. EZEKIEL.

CORRESPONDENCE

FROM MISSOURI.—This state is a leader in fruits and poultry. I am trying a little of both. The past year my poultry has been very profitable, and I expect my fruit to begin to pay me this year. I have been here only a year. We all enjoy reading the FARM AND FIRESIDE very much, and feel that we derive a benefit from many of the articles found in it. D. W. S. Centralia, Mo.

FROM WASHINGTON.—Farm-hands here get good wages, but otherwise they have it rough. The most of them have their own blankets and do their own washing, but get \$30 a month. Sometimes we do not care to hire by the month; then we get \$1 a day. We get out early, and unhitch a little before sundown, the season round. When we haul our wheat away we have to work early and late. HOE HANDLE. Spokane, Washington.

FROM ILLINOIS.—Hoopestown, Vermilion county, Ill., is a beautiful city of 3,000 or 4,000 population. It has no saloons, but has two miles of paved streets, many fine residences, two large school-buildings, a high-school, a college, nine churches and two of the largest canning-factories in the United States. One factory in one day put up 100,000 cans of sweet-corn. A tin-can factory here makes millions of cans a year. Our soil is rich and fertile. Land is worth \$75 to \$100 an acre. Twenty-eight years ago deer and wolves roamed this country. D. B. Hoopestown, Ill.

FROM MONTANA.—Stock are doing well. The range is mostly bare on the hillsides, so stock get to grass. Red Lodge is still improving. It has a population of between 2,500 and 3,000. Its coal-mines produce from 800 to 900 tons a day. Most of the ranchmen are making improvements or preparing to do so. Lumber is very costly here, as it has all to be shipped in from Washington. There is some small timber in the mountains here, but no saw-timber. Nearly all the ranchmen are taking an interest in poultry; turkeys, ducks and chickens especially do well here. The country is very hilly. We have well-graded roads. The principal crops raised are hay (tame and wild), barley, oats, potatoes and wheat, all yielding well. Red Lodge, Montana. S. L. R.

McCORMICK MACHINES are built in the largest works in the world manufacturing harvesting machines and binder twine. McCORMICK holds the world's record 213,629 machines built and sold last season. This enormous output has been created by building the BEST IN THE WORLD. McCORMICK MACHINES ARE SO EASY TO HANDLE THAT YOUR BOY CAN OPERATE THEM SUCCESSFULLY IN THE FIELD. Mccormick Right Hand Binder, Daisy Reaper, Vertical Corn Binder, New 4 Mower, Hay Rake.

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FORD'S SOUND SEEDS Send 10c. and addresses of 7 men or women seed-buyers and we will send 1 pkt. each Advance Tomato, Broadstone Turnip, Black Diamond Watermelon, Jap. Imp. Morning-Glory, Allegheny Hollyhock and Choicest Sweet-Peas. Without names 25 cents; 5 for \$1. For 50c. and 7 names we send prepaid 1 nice vine each 10 choicest varieties Grapes covering entire season, and 2 Miller Red Raspberry plants. CATALOGUE FREE. FORD SEED CO., Department E, Ravenna, Ohio.

HENS LAY double the eggs when fed on Green Cut Bone-MANN'S NEW BONE CUTTERS prepare bones in the best and cheapest way. Cut fast, nice, turn easy. Mann's Clover Cutters, newest, fastest, \$5. & \$10. Mann's Swinging Feed Tray and Granite Crystal Grit make the business profitable. Catalog free. F. W. MANN CO., Box 32 Milford, Mass.

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THE POULTRY-YARD

Conducted by P.H. JACOBS
HAMMONTON, NEW JERSEY

FLOCKS AND YARDS

THE maximum number of fowls allowed for a flock is fifty, but unless the poultry-house is very large a flock of twenty-five hens will lay more eggs than fifty, as they will be better cared for and have better accommodations. Double runs avoid filth to a certain extent, and also permit of growing green food in one yard while the hens occupy the other. When large numbers of fowls are desired, they will thrive better if kept in flocks of twenty-five, and will give good results if well cared for; but every one expects to give his fowls good care, hence the term "well cared for" means something that will have to be learned. If each hen in the flock gives a profit of one dollar a year it will be more than the average. Do not forget that in a flock of several hundred there will be sick hens, fat hens, poor hens, old hens, pullets, and hens that will eat twice as much as the others. There is also the labor and food. The ground required for twenty-five hens should not be less than fifty by two hundred feet, which may be divided into two yards, each twenty-five by one hundred feet. The number will be about equal to one hundred hens on one acre, and if they give a profit of only fifty cents a hen in a year, or fifty dollars from fifty hens on one acre, it will be more profit than can be made on an acre from some crops. If one can clear a profit of fifty cents a hen (which means after paying all expenses), and no labor is hired, there is not only the profit, but the pay for the time employed.

DETAILS OF MANAGEMENT

The periods of feeding should be regular, certain hours being fixed upon for that purpose; but there are very few who thus systematically feed their fowls. Water should be kept in the presence of poultry at all times, and it should not only be clean and pure, but fresh; yet this important matter is overlooked by many. Warmth in winter and a cool location in summer are essential to laying, being as important as a full supply of feed; but every poultry-house is not comfortable. The prevention of dampness in the house avoids roup, which is a terrible scourge in a flock, but the small leaks here and there are not regarded as dangerous matters by the average poultryman. Even the height of the roost and the construction of the nests have more or less tendency to affect the profit from poultry than many suppose, for high roosts cause deformed feet, and poor nests will not be occupied by the hens if they can get better places in which to lay. These things are seemingly small matters, which are usually overlooked, but they are important to success. Poultry should not be expected to prove profitable without care more than other stock, and the fact that a profit is often derived from a flock that has been overlooked is a strong proof that poultry-raising can be made to pay well when conducted by thoughtful, attentive persons. It is the small matters that should receive the most careful attention, as the observance of method and system is sure to prove beneficial at all times.

SWELLED HEADS AND SORE EYES

This season there has been more complaints of these difficulties than is usual, but the cause may be traced to unusually damp weather and cracks in the poultry-house, with drafts of air from the ventilator's at the top. A little crack in the poultry-house, if near where the fowl roosts, will cause inflammation sooner than if the bird is outside. A bird can endure one side of the poultry-house open, but there must be no drafts. When hens are thus affected they sometimes become entirely blind, and soon are too weak and debilitated to stand up. The best remedy is to add ten drops of carbolic acid to a gill of water, bathe the head with a soft sponge and then anoint with vaseline. Feed the bird on nourishing food, giving an allowance of meat, and if the bird is unable to eat force the food down the throat. When the hens show signs of this trouble the first thing to do is to examine the poultry-house for cracks. They may be so small and insignificant as to escape observation, but they

will surely be found upon careful search, and no time should be lost in closing them. The roof also should not be overlooked, as dryness is very important.

FARMERS AND BREEDERS

One reason why farmers get eggs in winter when careful breeders do not is because the latter get their stock out of condition by overfeeding. The farmer's hen is usually compelled to work, and if she gets any food at all she has a good appetite for it. There is always something to pick up around the barn, and when the hens are exposed and work hard corn is the best food for them. But as a rule the farmer's hens do not lay as many eggs as the hens that are well cared for. The reason the farmer's hens lay in March and not in January is that they are nearer the natural period of the year for laying, and the pullets are nearer the adult age.

CHICKS AND WARMTH

Whenever chickens droop always look closely for the large body-lice on the heads and necks; but supposing there are no lice, the cause may be lack of warmth in the brooder. Young chicks are as tender as babies, and must never get chilled. Whenever you notice that they crowd, and some are found dead under the brooder in the morning, it indicates that there was not enough heat. The floor should be only lukewarm, as the heat should come over the chicks. Of course, the food is important, and should be varied. Uncooked oatmeal, hard-boiled eggs and too much meat will cause bowel disease.

INQUIRIES ANSWERED

Cut Bone.—W. H. F., Adair, Ill., writes: "Is it good to give chickens all the green cut bone they will eat?"
REPLY:—Too much is injurious. About one ounce a day for each fowl is considered sufficient.
Green Rye.—N. B., Sunnydale, Wash., writes: "Is green rye good for laying hens?"
REPLY:—It is excellent, but fowls should not be allowed it too freely at first, as it is watery and laxative, causing looseness of the bowels.
Color of Yolks.—R. J. R., East Rome, Ga., writes: "What must I feed my hens to make the yolk of eggs yellow, as it is almost a cream? My chickens seem to be in a healthy condition."
REPLY:—Clover hay, cooked carrots, lean meat and animal-meal will deepen the color. The color of the yolk does not indicate its quality.
Turkeys.—S. L. C., Indian Creek, Va., writes: "How many turkeys can I keep with one gobbler? Is a two-year-old gobbler as good as a young one?"
REPLY:—As many as ten hens are frequently with one gobbler. A two-year-old gobbler should always be used in preference to a yearling, provided the elder bird is strong and vigorous.
Distinguishing the Sex.—L. T., Chanute, Kan., writes: "Will you please inform me, if possible, how to distinguish a goose of the Toulouse species from a gander of the same species?"
REPLY:—The goose has loud, harsh voice; the gander's is fine and squeakish. The gander has a thicker neck and a more masculine appearance.
Plymouth Rocks.—M. A. M., May, Mo., writes: "Do thoroughbred Plymouth Rocks ever have rose-combs? Do they have top-knots, and do they have feathers on their legs? Do they have white feathers in their wings?"
REPLY:—Some that are not good specimens have considerable white. Your birds are not Plymouth Rocks.
Poultry as Depredators.—A. J. K., Johnsonville, Ill., writes: "What protection has one against the depredations of another's poultry?"
REPLY:—The laws in the several states differ. It is usual in some states to impound them, and sometimes a suit for damages may be brought. It is not lawful to kill them as trespassers.
Lice.—I. A. S., Mt. Hope, N. Y., writes: "My hens are troubled with the large body-lice, and when I kill, pick and scald them I find them alive on the body. Please tell me how to get rid of them, as I think they are a great drawback."
REPLY:—The advertised lice-killers are sure remedies and should be tried; if not, rub the fowls well with insect-powder frequently.
Rattling in the Throat.—J. H. H., Gibbon, Ill., writes: "I have a flock of sixty fowls, some having rattling in the throat, and occasionally one will have sore or swollen eyes."
REPLY:—Probably the conditions are unfavorable, such as drafts in the poultry-house from some source. Give a few drops of camphorated oil, and inject a drop in each nostril. Examine the poultry-house for openings which admit drafts.
Swelling on Foot.—F. S., Chevy Chase, Md., writes: "I have a two-year-old White Plymouth Rock rooster that has a swelling on the ball of one of his feet as large as a bird's egg. It is red and inflamed. It has been there about two weeks, and his former owner thinks it came from fighting."
REPLY:—Roosts should be about one foot from the floor, as high roosts may be the cause. Keep him on straw at night. If necessary, lance the inflamed foot.

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should contain at least 20 per cent. of green cut bone—not dried—to insure the greatest egg production. The Webster & Hanum Bone Cutters are the best in every way and won the only medal at World's Fair, Chicago. Cuts meat, gristle and vegetables without clogging. Stearns Clover Cutters and Grit Crushers are a necessity to all poultrymen. Booklet free. Send your address. **E. C. STEARNS & CO., Box 30, Syracuse, New York.**

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by old methods of dusting and dipping poultry and stock is expensive and too slow. With our process, the hen or the hog sleeps at night on boards painted or sprinkled with **LEE'S LICE KILLER**. That's all there is to it. No handling of fowls or animals, yet perfect freedom from vermin. Special prices. Sample free from Omaha with booklet. **GEO. H. LEE CO., Omaha, Neb., or 68 Murray St., N. Y.**

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VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose 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. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Swine-plague.—G. T., Pond Creek, Okla. The disease of your hogs is swine-plague, or so-called hog-cholera.

Probably Ulcerating Conjunctivitis.—J. N. B., Tuckerton, N. J. Your dog will probably be cured if you send him to a veterinarian who has a regular dog-hospital. Otherwise the prospect is a slim one.

Blackleg.—C. J., Burden, Kansas. There is practically no cure for so-called blackleg. For means of prevention apply to your state veterinarian, Dr. Paul Fischer, at the Kansas State Agricultural College, Manhattan, Kansas.

Worms in Horses.—G. H. W., South Greenfield, N. Y. If you will look over a few past numbers of this paper you will find answers to nearly all kinds of "worm" questions; and if you will take the trouble of describing the worms I will answer your question.

A Very Lame Mare.—W. E. S. F., Sussex, N. B., Canada. Your description, meager as it is, decidedly points to a broken bone, probably in the upper part of the leg, possibly femur or pelvis. More I cannot tell you from your description, neither can I make a prognosis without any additional information.

Fits.—F. E. B., Gelatt, Pa. Your pig is suffering from epileptoid fits, caused, very likely, by some morbid condition in, or pressure upon, certain parts of the brain. The prospect of a cure is exceedingly slim. Therefore, as the pig has good appetite, the best you can do is to fatten the same as rapidly as possible and convert it into pork.

Discharge from the Nose.—H. E. B., Denver, Col. If there are no other symptoms, a discharge from the nose, at first clear and now a little cloudy, is no evidence of your cow being tuberculous. If you have any apprehension have her examined, and if deemed necessary subjected to the tuberculin test by your state veterinarian, who, I believe, has his office in the state house.

Cause of Death.—L. A. W., Tyro, Kan. Your mare very likely died of so-called chest-plague, or infectious pleuropneumonia of horses; at least the symptoms communicated decidedly point that way. Of course, if a post-mortem examination had been made I could have given you a more definite answer. She undoubtedly was sick the last day or even days she was at work, although the symptoms of the disease may have remained unobserved.

Habitual Luxation of the Patella.—O. P. B., Massena, N. Y. What you describe is an habitual luxation of the patella (knee-pan slipping out of its place). Since the animal is a cow, and cannot be kept standing for several weeks, like a horse, any attempt at a permanent cure will be in vain. Whenever the leg is "straightened backward" a little push or a touch with a whip will, as a rule, at once bring the knee-pan into its proper position.

Poll-evil—A Lame Mare.—M. B., West Elizabeth, Pa. The poll-evil of your horse, being already of two years' standing, will never be cured unless you employ a competent veterinarian (easily found in your state) to conduct the treatment and to perform the necessary surgical operations.—He may at the same time examine and treat your lame mare. The simple statement that she is lame, improves when resting, and gets worse when worked, does not enable me to make a diagnosis.

So-called Scratches.—W. I. J., Jewell City, Kan. What you describe appears to be a case of so-called scratches. Make two or three times a day to all the sores and cracks a liberal application of a mixture composed of liquid subacetate of lead, one part, and olive-oil, three parts. Keep the horse on a dry and clean floor, out of mud, manure and water, and unless the case is too old or inveterate a healing will be effected in a short time. After that see to it that the lower extremities of the animal are properly cleaned every day.

So-called Proud Flesh.—J. H. K. One or more applications of finely powdered sulphate of copper will reduce, or rather destroy, so-called proud flesh, but after the same has been destroyed the sore or wound must be protected. If the sore, as you state, is on a leg, and of long standing, dress it, after the so-called proud flesh has been destroyed, with iodoform and absorbent cotton, and then protect it by means of a well-applied bandage—the bandaging to be begun at the hoof—and renew the dressing and bandage once a day.

Millet Hay and Abortion.—J. W. M., Hanover, Ill. It is not known to me that millet hay that has been cut and harvested at the proper time, and is sound and not spoiled or contaminated by fungous spores or fungi, will cause abortion in cows. It is different if it is spoiled, or if it is fed in large quantities before it is properly cured or yet too new, for then it may cause bloating and thus indirectly abortion. Other hay that is spoiled or fed in large quantities while too new, or before it is properly cured, may have the same effect. In your case the abortions very likely had other causes.

A Morbid Growth.—C. G. W., Pendennis, Kan. According to your description there seems to be a morbid growth on the eye of your cow which requires either a careful application of suitable caustics or a surgical operation. If there is no veterinarian available I cannot help you unless you can induce your family physician to perform the necessary operation, because it is out of the question to describe a surgical operation, particularly if it is to be performed on an eye, in such a way as will enable any one to perform it who is not familiar with the anatomy of the parts in question and has never handled a surgical knife.

Periodical Ophthalmia.—G. H. K., Winthrop, Minn. Your horse, according to your description, suffers from periodical ophthalmia, a disease which almost invariably, treatment or no treatment, terminates in blindness. All you can possibly do is to preserve to a certain extent the appearance of the diseased eye by applying as an eye-water, when an attack is on, a one-fourth-percent solution of atropin in distilled water. A so-called dropper is perhaps the best instrument to apply it with. There is always danger that either before or immediately after the eyesight of the affected eye is destroyed the other eye will be likewise attacked.

Diseased Swine.—J. F. B., Dorchester, Mo. The symptoms you describe—namely, the peculiar affection of the eyes and the diarrhea—are symptoms not seldom observed in swine-plague (so-called hog-cholera), especially if the morbid process is but slightly developed in interior organs. If, in addition to the fact that all of the twenty head of swine have become affected in the same way within four days, the diseased eyelids are decaying or are becoming coated with a layer of decayed matter, and if also a similar process should be developing in the gums or in the nose, there will not be much doubt that the disease is swine-plague. It might have done some good to wash the diseased eyelids with a one-per-mille solution of corrosive sublimate; but when this reaches you probably no more treatment will be needed.

A Lateral Hole in a Cow's Teat.—Tendon Severed.—W. T. R., Patsley, Oregon. Concerning your cow you will have to wait until she is dry, and then you may succeed in bringing the lateral hole to healing—that is, in permanently closing it—if you cauterize it with a stick of lunar caustic, and use good judgment when so doing.—As to your horse, one or both of the flexor tendons were severed when the cut was made, and you neglected to keep the ends together by properly applied bandages, and thus allowed the healing to proceed while the severed ends of the tendon or tendons were not in contact with each other. It may be possible yet to bring the leg into a normal position by a skillful surgical operation, provided the leg immediately after the operation has been performed is forced into a proper shape and kept in that shape by judiciously applied bandages and such other means as may be required by the condition of the case until the healing process is completed, which will not be less than eight weeks.

Paresis in the Hind Quarters.—B. E. S., Odessa, Mo. I have quite often explained in these columns that paresis, or partial paralysis, in swine may be produced by a variety of widely different causes. In your case, however, in which a sow became paralytic in the hind quarters after she had farrowed and while nursing a litter of pigs, there cannot be much doubt that a very defective diet constitutes at least the principal cause. The treatment in such cases consists in removing the cause. Therefore, if it is not yet too late, and the damage already done irreparable, I advise you to feed more food rich in nitrogenous compounds and in phosphates and lime salts, and avoid feeding anything that is acid—sour slop, for instance. Further, if the pigs are old enough to be weaned, weaning them will have a good effect on the sow, and as soon as the sow is able to stand she should be induced to take as much exercise as she is able to take. If it were summer, a good clover pasture might do her a great deal of good.

Probably Influenza.—B. P. S., Olex, Oreg. If the symptoms and morbid changes you mention are only the most conspicuous ones, and if others not perhaps so conspicuous escaped your notice, it is probable that the disease is nothing more nor less than a severe type of influenza, a very contagious disease of horses which principally affects the mucous membranes, particularly of the digestive apparatus, and not seldom causes more or less hemorrhage in the intestines. As it is a so-called germ disease it is apt to run its course in spite of medicinal treatment; therefore, I deem it advisable to dispense with any medicinal treatment in all such cases in which the same cannot be devised and be superintended by a competent veterinarian, and to restrict the whole treatment to good care and a suitable hygiene. The food must be sound and easy of digestion, and the water for drinking be pure and fresh. The stable in which the diseased animals are kept must be clean and well ventilated, but in such a way that the sick horses have pure air to breathe without being exposed to draft. Any overcrowding is very injurious. Bleeding and blanketing must be strictly avoided. Wherever the disease makes its appearance in a stable the yet healthy horses must be immediately removed to a non-infected place. After the last patient has recovered (the disease as a rule is not very fatal, provided no damage is done by ill-advised treatment) the premises must be thoroughly disinfected. Where no veterinarian is obtainable, small doses of sulphate of magnesia, in an aggregate not to exceed four ounces a day, and small doses of saltpeter, say about half an ounce a day, may be given in the water for drinking, but the latter must be offered fresh at least three or four times a day.

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THE GRANGE
 Conducted by MRS. MARY E. LEE, New
 Plymouth, Ohio

EDITORIAL NOTES

WE ARE glad to present a vigorous letter from our National Lecturer. His are earnest words gravely spoken. We hope every farmer, whether in or out of the order, will use every legitimate means to secure the passage of the proposed bills.

Free rural mail delivery is very popular, and a large appropriation can be secured for the same by earnest work now. Next year it may be too late. Opportunities do not wait. They pass on and seldom return. Write to-day to A. W. Machen, Superintendent Free Delivery, Post-office Department, Washington, D. C., for circulars of information how to proceed to establish a route. Also write your senators and representative urging a liberal appropriation.

Public sentiment is strong in favor of electing senators by popular vote. Urge this matter also. Others are important, but these two are especially timely. We commend the action of our lecturer, and would urge each member of the grange to fall in line and do his share of work.

The topic for March, sent out by National Lecturer, is "Postal Savings Banks." Question, "Is legislation providing for the establishment of postal savings banks by the United States government desirable?" Limited space forbids us giving excellent suggestions thereon.

What are you doing to secure better schools, better local, state and national government? Are you simply sitting on a dry-goods box, or plodding about your farm, grumbling at the state of affairs, or are you putting your shoulder to the wheel and pushing?

Which most excites your respect, the farmer who contends with adverse circumstances on his farm, and carves out a home for himself and family; or the one who grumbles at his poor situation, and will do nothing until he can secure a better location? Which is the greatest success in the world? "The first, of course," you say. Just so. Which farmer is most deserving of respect, the one who unites with the grange and helps to remove obnoxious legislative conditions, and creates a healthy social neighborhood, or he who grumbles at corruption in high places, condemns his own locality, and refuses to go into any organization and work?

COLUMBIAN GRANGE PROGRAM

We are in receipt of a splendid yearly program from Columbian Grange, Lexington, Ohio. This grange was organized in 1893, and to-day owns a two-story grange hall, furnished, worth \$1,000; has in cash on hand, \$50; credits, \$125; indebtedness, none. It has a membership of two hundred and twenty-six. Our W. O. of State Grange, T. E. Dunshee, is Master of this thriving grange. When we see the splendid program, and note the names of those prominent in agricultural life, it fills us with hope for the future. It is this kind of a grange that sends out college students and men and women prominent in all walks of life. The veriest pessimist must straightway come over to the ranks of those who believe that right will eventually triumph. It is just such organizations as T. E. Dunshee so ably presides over that are aiding in the regeneration of the world.

WISCONSIN INSTITUTE BULLETIN

We are in receipt of the Wisconsin Institute "Bulletin." It is full of helpful addresses: Two by our own J. E. Wing, one by Prof. W. A. Henry, who has gained an international reputation by his splendid work, "Feeds and Feeding;" one by Mrs. Nellie Kedzie, of Bradley Polytechnic Institute, and several by Miss Clarke, Superintendent of the Milwaukee Cooking-School. The last two are on domestic science. Every woman who has the best interests of her family at heart will be delighted with these helpful talks. They are a gateway into that great realm of activity where woman can find her truest work, and where there is vast opportunity for mental activity and scientific research. What Prof. Henry is doing for the

stockmen, these women, and many others, are doing for the human animal.

In view of our annual scourge of typhoid fever, diphtheria, scarlet fever and the dreaded small-pox, which is becoming one of the wide-spread contagious diseases, is it not essential that the most careful and painstaking attention be given to sanitation, ventilation and food? Where can a woman find a broader sphere than in the home? Where can she live nobler and serve humanity better than there?

Sixty thousand copies of the "Bulletin" are sent out to the farmers of Wisconsin. To others it is ten cents. The two talks on domestic science are alone worth many times that sum.

Apropos of domestic science, those mothers whose children use "Overton's Physiology" in the school-room will find in it a rich fund of hygienic lore. The work is very practical and filled with numerous experiments that may be worked out in the home with the materials at hand. Besides adding to her own knowledge, she will help the little ones to a better understanding of the subject in hand. Let the little ones help work out the experiments, and learn experimentally how blood, bone and tissue are formed; also, what tends to destroy these various organs. It is especially rich in its treatment of stimulants and narcotics. After leading the child step by step to the building up of tissue from food digested, it uses similar experiments to show how by the use of spirituous liquors and nicotine these tissues are burned out, and the nutritive value of foods destroyed by these chemical agents. By all means study this with the children, for your own good and theirs. After all, the mother's help is far more valuable than the teacher's possibly can be. We children received more instruction on school topics from our mother studying with us than we did in all the various terms of school.

NATIONAL LEGISLATION PROMOTED BY THE GRANGE

We have received a vast number of letters from all sections of the country inquiring about the legislative matters mentioned in the circular issued by the legislative committee of the National Grange, under date of January 11th, and are obliged to take this method of replying on account of the multiplicity of inquiries and the impossibility of replying to each singly. These letters seem to make three general inquiries: First, as to the scope and nature of each of the eight bills mentioned in the circular; second, the order of their prominence, and which should take precedence in discussion and in forwarding resolutions; third, the form of resolution that should be adopted by subordinate granges.

SCOPE AND NATURE OF BILLS

It will be possible to but briefly reply to the first inquiry. In a word, the scope and nature of the legislation, so far as determined, is as follows:

First, Extension of Free Rural Mail Delivery. Action upon this matter involves the fixing of the amount appropriated for free rural mail delivery in the post-office appropriation bill when being prepared. We have the assurance of many distinguished senators and representatives, as well as of the Post-office Department, that the sum appropriated for free rural mail delivery will be limited only by the demand made by the people and the ability of the department to judiciously expend it in the extension of the system. It is manifestly the duty of the grange, an organization that started the movement in a systematic way in 1891, and has kept the lead in the matter since, to use every honorable means to arouse an interest among the rural people in the advantages of the system, and to pass vigorous resolutions for a liberal appropriation by Congress for this purpose. Past experience has proven that the system is nearly or quite self-sustaining from the increased postal revenues wherever established.

Second, Anti-Trust Law. Several anti-trust bills have been introduced in Congress and were examined by the legislative committee. Sufficient investigation had not then been given to the matter, nor had the expression from the subordinate granges of the country been sufficiently full to warrant the committee in making a decision as to the specific provisions that should be contained in a bill of so important a nature. At the meeting of the committee next month the recommendations from the granges of the country will be considered, and a bill conforming to those recommendations promoted. Subordinate and Pomona granges acting upon this matter during the present month will aid materially.

Third, Establishment of Postal Savings Banks. The bill for this purpose will follow in a general way the provisions of laws in other countries where postal savings banks have been in successful operation for years, giving the common people great advantages for the safe and convenient deposit of small savings. The principle upon which this legislation is based can be discussed in the March meetings, as previously requested, without the specific details of the bill. These will be promulgated, if possible, during the present month.

Fourth, Pure-Food Legislation. The bill introduced upon this subject is House Bill No. 2561, and its general scope and nature is to prevent the adulteration, misbranding and imitation of foods, beverages, candies, drugs and condiments, and to regulate interstate traffic therein, placing the entire matter under the supervision and control of the Department of Agriculture. This bill does not prohibit the manufacture and sale of any article not deleterious to public health, but requires all imitation or adulterated products to be marked in such a manner as to advise the consumer that they are not genuine.

Fifth, Imitation Dairy Products. The bill upon this subject is House Bill No. 2717, and is a bill to make oleomargarine and other imitation dairy products subject to the laws of the state into which they are transported, and makes the tax on uncolored oleomargarine one fourth of a cent a pound. This bill practically covers the points urged by the agricultural and dairy organizations of the country, and should have vigorous support from the granges.

Sixth, Future Contracts in Agricultural Products. House Bill No. 2566 defines options and futures as understood in the bill, and prohibits the practice of selling agricultural products without actual intended delivery of the goods; or, in other words, prevents gambling in farm products, a practice that has resulted to the great disadvantage of the actual producer, and imposes heavy penalties for its violation. It is familiarly known as the anti-option bill.

Seventh, The Nicaragua Canal. This bill provides for the completion of the Nicaragua canal by the United States, the cost being provided for by the issuance of \$110,000,000 bonds. The completion of this waterway is expected to greatly enhance the commercial advantages of the United States and open up new and more accessible markets for our exports. The principal antagonism to this measure is expected from the great transcontinental railway companies, but the passage of the bill is predicted.

Eighth, Election of United States Senators by Popular Vote. This matter is to be forwarded by a bill providing for submitting a constitutional amendment to the people for ratification, providing for this very important change in our Constitution. This matter has made great headway among the people in recent years, and there are many worthy reasons for favoring it. For several years the grange has urged this action, with an annually increasing interest and support.

A more extended synopsis of each of these bills will be given in the next issue of the National Grange Quarterly Bulletin.

RELATIVE IMPORTANCE

Under the second inquiry we are able to make no intelligent reply, for it is impossible to say which of the eight measures is of the greatest importance or calls for the earliest consideration. In the absence of other suggestions for their order or precedence we suggest that they be taken up in the order named in this communication. Of course, it is generally understood that these matters have all been considered and ordered presented before Congress by the National Grange.

FORM OF RESOLUTION

In regard to the specific form of resolution or petition there are no definite instructions to be given. Each resolution or petition should name the measure it is in support of, and should be addressed to the Congress of the United States, unless sent in duplicate, in which case one should be addressed to the Senate and one to the House of Representatives, and should bear the name and number of the grange, and if a resolution, should be signed by the secretary, with seal of the grange attached. All should be forwarded to the legislative committee, 514 F Street, Washington, D. C., where they will be properly filed, indexed and presented in Congress. Individual members should not fail to write personal letters to the representative from their district, and to the senators from their state, upon these matters. It is very important that this be done promptly and vigorously. N. J. BACHELDER, Lecturer National Grange.



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DAINTY AND INEXPENSIVE PICTURE-FRAMING

IN THIS day of lavish illustration, when magazines abound with gems of art, and beautiful reproductions of the "Masters" may be obtained for a mere song, one comes across many pictures worthy of gracing a wall, yet perhaps scarcely warranting the expense of frames. In such cases the dainty passe-partout framing is "just the thing," and when once tried becomes the friend of the ingenious decorator who longs for artistic results with small financial outlay. The passe-partout binding, which can be obtained at any art-store, comes in rolls, in all the standard colors, is cut in strips and gummed ready for use, one roll being sufficient for framing three large or six small pictures. Where a black binding is desired, the lantern-slide binding, which any photographer will order for you if he hasn't it in stock, is very acceptable and much cheaper.

The materials required for framing a picture are the mount, a glass (which should be a hair's breadth wider than the mount), the binding, and cardboard, paste-board or, for large pictures, pulp-board, for backing. One often has old window-lights or broken pieces of large panes that can be cut down (at a hardware-store or picture-framer's) to fit small pictures. Camera-plates soaked in warm water to loosen the films can also be used.

As to mounts, for a lithograph or a large picture get a mat at a picture-framer's, and, as it is impossible for an amateur to do it well, have him cut it out to fit your picture. Very artistic results are obtained by having the mat and binding of the same color, using a red mat with a dark-red binding or a blue mat with a dark-blue binding. These are especially effective when intended for a room where some one color prevails in the furnishing. When a cut-out mat is used, paste the picture onto the back of it, then cut the backing to fit the mat. The backing should be furnished with hangers, one on each side half way between the top and bottom. They may be brass rings, with small strips of tin to fasten them into the backing, or where one has the rings, they may be fastened on by putting a narrow strip of cloth through each ring and gluing the ends of the cloth fast to the backing. Now, allowing the binding to lap one fourth of an inch, paste it to the top and bottom edges of the glass, taking care to get it smooth and even. Cut the ends of the other two strips on the diagonal, to insure neat-looking corners, then paste them onto the sides of the glass. Having allowed the binding to dry, and being assured there are no "smears" on the glass, lay the mat and picture over the backing, placing the glass over them, and firmly gum the loose edge of the binding fast to the backing. Lo! your passe-partout is completed, and if you have done your work carefully you cannot but be pleased with the result.

For woodcuts, engravings and small pictures the mat is not cut out, but the picture is pasted flat upon it. For these nothing is more effective than the ash-gray and moss-green mounts used by photographers, and which are much cheaper than the regular picture-matting. They come in eight-by-ten-inch cards, and used with the lantern-slide binding make most artistic and inexpensive pictures, especially when hung in groups.

Neat mounts for the table, bookcase or mantel may be made by gluing a strip of stiff cardboard to the back of the picture, so it will stand up. To do this, cut a strip four to six inches long, according to size of picture, three inches wide at the bottom and two inches at the top. Glue a piece of cloth two inches wide by one inch long to the top of the strip, allowing it to lap a half inch. Glue the other half inch fast to the back of the mounted picture. Over this half inch of cloth glue a piece of cardboard which is large enough to cover it, and against which the strip shall rest; then you have a "stander" for your picture that will last for years. Photographs framed with a cut-out mat and passe-partout binding and fixed to stand up are attractive.

A charming study may sometimes be made by artistically grouping a number of small pictures on one mat, then using the passe-partout framing. If you have four pictures of the same size which can be hung

together, have the glass and mats cut square, then have the mats cut out circular. Paste the pictures on so the mats will hang diamond-shape, then group them, two side by side, the third a little above and the fourth a little below these two.

MARIE IRISH.

UTILIZING HOME PRODUCTS

We often wander far afield in search of something rare to decorate home, and scorn what lies right at hand until some one else opens our eyes to the beauty of our own home products. House decoration is apt to be overdone, and year by year accumulations are allowed to remain. How much better to send sentiment to the winds and destroy by fire things that have become dust-soiled and useless. There are few houses now where the front room has in evidence the case of wax pond-lilies that used to be found on every parlor center-table, or the framed worsted flowers or hair-wreath. Reading-books, magazines and family papers have educated people along different lines, and the beautiful pictures of to-day have become possible to every one in their simple passe-partout frames.

There is a restfulness and sweet peace in a simply furnished room, where the walls are not overloaded with pictures of an incongruous nature to annoy one's sense of the fitness of things. All stages of furnishings have had their day, even to the enormously enlarged photograph of some member of the family upon an easel in one corner. The wise woman every year will weed out something that can be dispensed with, and introduce something else.

The branches of the different pine-trees, stripped of the needles and varnished, may be made into very attractive frames for photographs, and decorated with the cones which belong to them. They can be fastened



together with short pins or brads. The cones can also be used as a fringe upon a mantel lambrequin by touching them up with varnish and gilding if desired, and stringing them about two inches apart upon a doubled thread fastened to a strip of tape. This can then be attached to whatever material is used for the lambrequin.

There is something very home-looking about a room furnished with home-made articles that betoken thrift and economy, and many have it in their power to make many comforts and things of beauty out of that which lies at their own door. "Despise not the day of little things." B. K.

PINEAPPLE STAR

ABBREVIATIONS.—Ch, chain; d c, double crochet; t c, treble crochet.

In coarser thread one would make a pretty doily. Chain 10, and join.

First row—Ch 3, 25 d c in ring; join.

Second row—3 ch, 1 d c between each d c of last row; join.

Third row—3 ch, repeat; 3 d c, 1 ch, 3 d c between every other d c of last row; repeat until there are twelve of these shells.

Fourth row—3 ch, 1 shell in each shell of the last row.

Fifth row—3 ch, 11 t c in next shell, 3 d c, 1 ch, 3 d c in next shell; repeat around the circle. There should be six shells and six groups of 11 t c.

Sixth row—1 ch, repeat; 10 d c with 1 ch between, make the d c between each treble, then shell in shell; repeat around the work.

Seventh row—1 ch, repeat; 1 d c under every 1 ch between the d c of last row, 1 ch, repeat until there are 9 d c, 1 ch, shell in shell; repeat around the work.

Eighth row—Ch 2, 1 d c, 1 ch, making the d c under each 1 ch of last row, 2 ch, shell in shell; repeat around the circle.

Ninth row—Ch 3, repeat; 1 d c, 1 ch, making the d c under each 1 ch of last row, 3 ch, then under next shell 3 d c, 1 ch, 3 d c, 1 ch, 3 d c, 3 ch; repeat around the work. When the last double shell is done ch 4, 1 d c, 1 ch, making the d c under each 1 ch of last row, then 4 ch, 1 shell under the first of the double shells, ch 3; turn.

Tenth row—Shell in shell last made, ch 4, 1 d c, 1 ch under each 1 ch of last row, 4 ch, 1 shell under the first of the double shells of last row, ch 3; turn.

Eleventh row—Shell in shell, ch 4, 1 d c, 1 ch, making the d c under each 1 ch of last row, 4 ch, shell in shell, ch 3; turn.

Twelfth row—Shell in shell, ch 3, 1 d c, 1 ch, making the d c under each 1 ch of last row, 3 ch, shell in shell, ch 3; turn.

Thirteenth row—Shell in shell, ch 3, 1 d c, 1 ch, making the d c under each 1 ch of last row, 3 ch, shell in shell, ch 3; turn.

Fourteenth row—Shell in shell, ch 3, 1 d c in d c of last row, 3 ch, shell in shell, ch 3; turn.

Fifteenth row—Shell in shell, then a shell in the shell on the opposite side of the pineapple, ch 3; turn.

Sixteenth row—8 d c between the shells of last row; break off the thread, and fasten.

NAOMI.

WHEN COMPANY COMES

Not the invited guest, to whose coming you have looked forward to with pleasure, but the person who takes you unawares on wash-day, or when the baby has the measles, or when the pot of cabbage boiling away in the kitchen is manifested all too plainly to the visitor's olfactories.

A pot of cabbage does not offer many possibilities to the housewife's ingenuity, it must be confessed, but a plate of hot biscuits will go far toward lifting the dinner from the plane of commonness, and with pickles and coffee you can rest satisfied that the visitor will manage to extract some enjoyment from the meal.

On a certain day not long ago, while the kitchen was full of the appetizing odor of meat—remnants on a ham-bone—potatoes and onions, simmering away in a very plebeian stew, happening to glance out in the direction of the barn, I saw that there would be two strange men in to dinner. There wasn't much time for company touches, but the stew was quickly transformed into pot-pie by means of cold biscuits reheated and split open, and the stew—having been thickened with a batter of flour and water and one beaten egg—poured over them. A can of tomatoes and one of apples further helped me over my difficulty, and the guests were loud in their praise of the pot-pie.

"If I wasn't in a predicament this morning!" my neighbor exclaimed over the backyard fence later in the day. "There I was, with two sick children and no cook, and not a mouthful in the house except some scraps of roast beef and two eggs, when lo! in walks John's brother from Pennsylvania. Fortunately, I remembered he used to be very fond of all kinds of fritters, so I flew around and made up some batter out of the two eggs, and chopped up my fragments of beef and stirred them in. I fried them nice and brown, seasoned them highly, and introduced him to meat fritters for the first time in his life."

"Were they good?" I asked, doubtfully.

"Good! Well, you ought to have seen that man eat! They were fine!"

"Let me tell you how I got out of a scrape like that one time," said Cousin Rebecca, who was visiting me. "Henry had gone to town with a load of wood, and I thought we'd just have a bite for dinner; me and Henry's mother were all there was home. We'd had corned beef the day before, and some mashed potatoes were left. I chopped up the meat—it was mostly scraps, anyhow—and mixed it with the potatoes. After softening it with milk I spread it over the bottom of a hot, well-greased skillet, and put it on the back of the stove to fry slowly, and then sat down to my sewing. Bless you! when we were about ready to eat there came a knock at the door, and in walks the minister. You could have bought me for a cent, for his wife's number one housekeeper, and I hardly knew which way to turn. I poached some eggs, cut that hash in squares, and topped each square off with a poached egg, and put them before him. Ma had got out some preserves

and made tea while I was fixing the eggs. He did eat like he enjoyed it, too."

"Well, don't you know," said my neighbor, "I believe my mother was right, after all. She used to say, 'What's good enough for my husband is good enough for anybody in the world.'"

"No doubt she was right," remarked Cousin Rebecca. "Only it takes a sight of philosophy to live up to it when you have no butter in the house, nor the chickens would not be caught, do what you will, while company's driving up the lane."

"I've determined to be a philosopher after this," my neighbor laughed, and the meeting adjourned.

MARY M. WILLARD.

HOW TO MAKE A FASHIONABLE COLLAR

Very pretty collars may be made at home with but little expense. To make a white one you will need a piece of collar-stiffening, one and one half rolls of white silk seam-binding, and two pieces one foot long and eight inches wide, and another piece one foot long and four inches wide, of chiffon or mousseline-de-soie.

To make the foundation, cut a collar of the stiffening to fit the neck, allowing it to lap half an inch at the back, and cover both



sides smoothly with white muslin, turning all the seams inside. Now gather the seam-binding through the middle with white thread until it is half as long as at first. Begin with the top row to sew on. Fasten the end of the gathered binding to the right end of the collar at the top, and sew very lightly through the gathering of the binding along the top edge, so that half of the seam-binding is above the collar; this is to hide the edge of the foundation. When the other end is reached cut off the binding and knot the gathering-thread, and sew the end down neatly. Then begin the next row, and continue the same way, only allowing these rows to touch each other.

When the collar is full, take the two large pieces of chiffon and turn two sides and an end, and hem; then sew the gathered binding over the end and fold each piece so it makes a bow and an end, and sew together in the middle. Crumple up the other piece of chiffon short ways, and put it around the middle of the bow, making it look as though it was tied. Then fasten on the middle of the collar in front at the lower edge, and put three small hooks and eyes on the back to hook together with, and it is finished.

These are very pretty and dainty made of white, but they may be made of any color one prefers; or two colors may be used, in which case cover the foundation with one color silk and have the seam-binding the other color; leave the rows one fourth of an inch apart, so the silk shows between. Then the bows should be one color, and the binding on them should match the silk.

M. H. BALDWIN.

FURNISHING THE KITCHEN

It is too often the custom to scrimp the kitchen furnishings that more may be expended on other rooms in the house; but this is a mistake. If the housewife is to do her own kitchen-work, she certainly needs all the help that the best of kitchen furnishings can give; and if the work there is to be done by a maid, much better service will be given if things are made pleasant and convenient. To begin with the kitchen itself, one of the first requisites is plenty of light. The walls should be wainscoted, and the ceiling and walls above the wainscoting painted. A light green is a good color. A painted wall will not absorb odors or moisture as unpainted walls will do. A bare floor takes a great deal of scrubbing to keep it clean, and besides the labor this constant scrubbing will soon cause almost any floor to splinter and become rough. If a floor is kept painted it can be easily kept clean, but

many prefer to have their kitchen floors covered with oil-cloth. Never put a carpet on a kitchen floor, as it absorbs odors, accumulates grease-spots, and becomes filled with dust which every sweeping sends through the air to settle on everything else in the room.

If possible have a separate room, with stationary tubs, for laundry-work; but if you cannot have this, have stationary tubs in the kitchen, with a cover hinged at the back, which can be hooked up against the wall when the tubs are in use, and when closed will serve for an ironing-table.

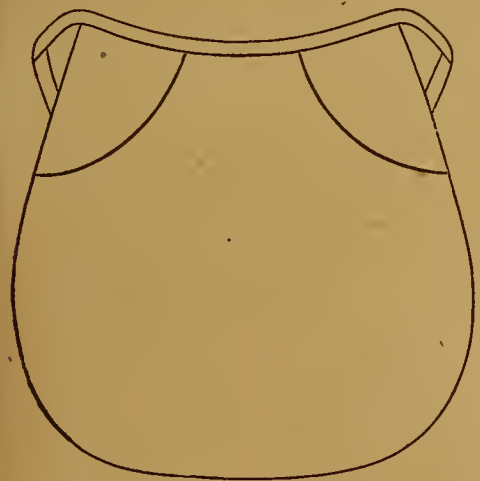
Of course, a good range with hot-water tank is a necessity, and in addition to this there should be a summer stove—oil or gas-olene. If possible have the range brick-set, with a ventilator opening into the chimney. If one cannot have running water in the house, it will save many steps to have a rubber hose which can be attached to the pump and convey the water into the tank on the stove or wherever wanted.

There should be a sink with waste-pipe, and at one end of the sink a draining-rack for dishes.

If the kitchen is of a good size a cooking-table is most convenient set about the center of the room. A wide shelf hinged to the wainscoting at the back, and with legs in front and hinged so as to drop against it when the shelf is hooked up against the wall, will make a very convenient side-table. The top of all tables should be covered with either zinc or oil-cloth, and if the closet shelves are covered with oil-cloth they can more easily be kept sweet and clean.

There should be two plain wooden chairs and a small low rocker, with a footstool, where the tired cook can rest, if only for a few minutes at a time, while watching some baking or other cooking. A board, either painted or oiled to match the woodwork of the room, if hung in a convenient place and small hooks screwed into it will make a good place on which to hang spoons, forks and small articles of tinware. It is well if a kitchen has two or three closets, so that one may be devoted to ironing-board, irons, etc., another to all baking-utensils, and the other to stew-pans, kettles, and all the utensils for common work.

I saw not long ago a most convenient contrivance upon which to hang out the washing. A pulley was fastened to the side of the house on the back porch, and another to a post set at a convenient distance in the yard. An endless rope ran around these pulleys. All that was necessary was to stand on the porch, hang one garment on the lower rope, then pull on the upper one until there was room enough to hang another garment. This was continued until the first garment hung reached the post or all the clothes were up. In taking the clothes down the operation was reversed, and there was no wading through snow or making paths, simply standing on the porch to do it all. Of course, if the washings were large more than one of these lines would be needed, but two pulleys could be fastened to one post



by putting those on the porch some distance apart. It is a good plan to take a strip of muslin of convenient length and sew buttons on it, that the collars, cuffs, etc., may be fastened to it in the house and the whole be quickly pinned to the line at once, which will save aching fingers on a cold day.

An apron made for the purpose is the best holder for clothes-pins that I know of. I described mine several years ago, but I will give it again for the benefit of new readers. Make an apron of denim or ticking like the one illustrated, which is double; the upper corners of the front side are cut away, making a pocket of the whole apron, with two openings. When not in use the apron is hung in the closet with the pins in it, and when wanted for use is tied or buttoned around the waist, and the pins are ready at hand. When taking clothes down from the line it is no trouble to drop them into this pocket-apron.

MAIDA McL.

BUTTERMILK

As an article of the human dietary buttermilk is well worthy of more careful attention than it generally receives. Its chemical composition, according to Dr. Pavy, is as follows: Nitrogenous matter, 4.1 per cent; fatty matter, .7 per cent; lactine, 6.4 per cent; saline matter, .8 per cent; water, 88 per cent. This plainly shows that the nitrogenous matter, sugar, mineral matter and the small portion of fatty matter form no insignificant article of nourishment, especially when mixed with other food. It is more easily digested than entire milk, and is especially refreshing in warm weather.

Buttermilk may be put in a linen bag, and when the whey has dropped through the thick portion will be found excellent if eaten with sugar and cream. The whey contains the sugar and mineral matter, and a very little casein and fat, and is still of some value from an alimentary point of view. It is of advantage as a drink in cases of febrile and inflammatory diseases, and possesses sudorific and diuretic properties.

In malarial districts the people long ago discovered the advantage of using buttermilk freely. Indeed, in cases of biliousness buttermilk has come to be almost regarded as a specific. In such an attack fruit should be avoided at a meal when buttermilk is taken, so that the lactic acid may accomplish its good work; in fact, only a small amount of any plain food should be used for a few days. Buttermilk when fresh should be placed in glass jars and kept on ice or in a cool place until used.

Here are a few of many appetizing dishes which can be prepared with buttermilk:

BUTTERMILK SOUP.—This is a favorite German dish, and is made by thickening each pint of buttermilk with one tablespoonful of flour and one tablespoonful of butter rubbed together; then add a pinch of salt. The buttermilk is brought gradually to the boiling-point, being stirred constantly to prevent curdling. It is then poured over fried bread, and served. It is sometimes flavored with cinnamon or thickened with a beaten-up egg.

BUTTERMILK SOUP WITH RAISINS.—Take two quarts of fresh buttermilk, one tablespoonful of flour, two eggs beaten up with one heaping tablespoonful of sugar, a pinch of salt, six or eight crushed crackers, and one cupful of raisins. Mix all with part of the buttermilk, then add the rest of the milk; place over the fire, and stir constantly until it boils.

BUTTERMILK JELLY.—Boil one quart of fresh buttermilk in a granite kettle, stirring occasionally to avoid curdling in lumps, and mix in enough rice-flour (about two ounces), previously moistened, to make a soft mush. Beat in the yolk of one egg and two tablespoonfuls of sugar while hot, and turn into a mold. When cold serve with cream.

BUTTERMILK JELLY WITH ALMONDS.—Take one quart of fresh buttermilk, four tablespoonfuls of rice-flour, one teaspoonful of lemon extract, two ounces of sugar and one fourth of a cupful of chopped almonds. Make and serve as above.

CRUST FOR PIE.—Use one cupful of flour, one third of a cupful of butter, and two thirds of a cupful of buttermilk for moistening. Mix as usual, and bake in a quick oven.

BUTTERMILK PIE No. 1.—Take one pint of buttermilk, two heaping teaspoonfuls of corn-starch, one egg, one tablespoonful of sugar; flavor with nutmeg. Bake like a custard, with one crust.

BUTTERMILK PIE No. 2.—Yolks of three eggs, one and one half cupfuls of sugar, one and one half cupfuls of buttermilk, two tablespoonfuls of flour, one tablespoonful of butter, one teaspoonful of vanilla extract. Bake with an under crust. This is enough for two pies.

BUTTERMILK PIE No. 3.—One scant cupful of buttermilk, one cupful of sugar, one egg, one tablespoonful of flour, one teaspoonful of lemon extract and one even teaspoonful of butter. Beat the egg and sugar together, then after rubbing the flour into the butter mix all, adding the lemon extract last. Bake with one crust. This pie is best when cold.

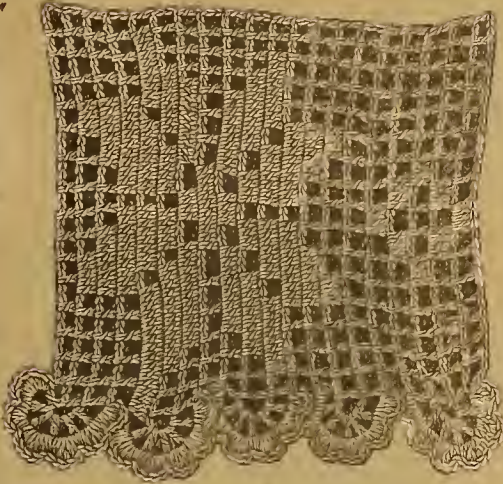
BUTTERMILK BREAD.—Heat one quart of buttermilk to the boiling-point, stirring often to prevent curdling; add one tablespoonful of sugar, pour into a bowl, sift in one quart of flour, and beat until smooth. Cover, and let stand over night. Next morning add to the batter one teaspoonful of baking-soda dissolved in one fourth of a cupful of hot water, two tablespoonfuls of melted butter and one scant tablespoonful of salt. Beat well, then sift in gradually enough flour to mix to a soft dough. Turn out on a well-floured board, and knead until smooth and velvety to the touch. Divide into three loaves, mold, place in greased pans, and bake at once in a moderate oven.

BUTTERMILK SCONES.—Take one pint of sifted flour, one and one half tablespoonfuls of butter, one half teaspoonful of salt one teaspoonful of soda, and mix to a soft dough with buttermilk. Roll out about one fourth of an inch thick, and bake in a quick oven. When cold split and toast for breakfast.

All quick breads and cakes are more tender or delicate if made with buttermilk and soda than when baking-powder is employed. The general rule is to use one level teaspoonful of soda to each pint of fresh buttermilk. The best results, however, are obtained when the soda and salt are sifted with the flour two or three times before being used. The uncertainty as to the degree of acidity of the milk and the strength of the soda is without doubt the reason why buttermilk is not more frequently used when it is obtainable. In towns and cities are many people awaiting the advent of some enterprising person who is willing to sell fresh buttermilk put up in glass jars.

Buttermilk is useful in other ways, among which are the following:

To remove sunburns, wash the face at night in buttermilk, and in the morning wash with weak bran-tea and a little eau de



cologne. This will soften the skin and remove the redness, and make it less liable to burn again from exposure to the sunshine.

Salt and sour buttermilk will brighten brass or copper. Have the article to be scoured warmed a little, dip a cloth in the buttermilk and then in the salt, and apply to the copper. Let it stand a couple of minutes, then wash it off. If very dirty a second application may be required.

VIRGINIA REED.

STAR LACE PATTERN

Make a chain of 52 stitches.
 First row—Make 1 tr in sixth st of ch, ch 2 (this makes a space), repeat until you have 16 spaces, ch 6; turn.
 Second row—1 tr in top of first tr in last row, ch 2, 1 tr in top of next tr (this forms a space), 3 spaces, 1 space of trs, ch 2, 5 spaces, 1 space of trs, ch 2, 5 spaces, ch 5; turn.
 Third row—5 spaces, 2 spaces of trs, 2 spaces, 2 spaces of trs, 4 spaces (repeat), 1 tr under ch 6 at end, ch 2, repeat five times; turn.
 Fourth row—(Repeat), 1 d c under ch 2 between tr, 2 tr under same ch, 1 d c under same ch, repeat five times, ch 5, 1 tr in top of first row, 4 spaces, 3 spaces of trs, 1 space, 3 spaces of trs, 5 spaces, ch 5; turn.
 Fifth row—2 spaces, 3 spaces of trs, 1 space, 2 spaces of trs, 1 space, 2 spaces of trs, 1 space, 3 spaces of trs, 1 space, ch 6; turn.
 Sixth row—1 tr in top of first tr in last row, 2 spaces, 3 spaces of trs, 1 space, 1 space of trs, 1 space, 1 space of trs, 1 space, 3 spaces of trs, 3 spaces, ch 5; turn.
 Seventh row—4 spaces, 3 spaces of trs, 1 space, 1 space of trs, 1 space, 3 spaces of trs, 3 spaces; make scallop same as before.
 Eighth row—6 spaces, 3 spaces of trs, 7 spaces, ch 5; turn.
 Ninth row—4 spaces, 3 spaces of trs, 1 space, 1 space of trs, 1 space, 3 spaces of trs, 3 spaces, ch 6; turn.
 Tenth row—1 tr in top of first tr in last row, 2 spaces, 3 spaces of trs, 1 space, 1 space of trs, 1 space, 1 space of trs, 1 space, 3 spaces of trs, 3 spaces, ch 5; turn.
 Eleventh row—2 spaces, 3 spaces of trs, 1 space, 2 spaces of trs, 1 space, 2 spaces of trs, 1 space, 2 spaces of trs, 1 space; make scallop.
 Twelfth row—1 tr in top of first tr, 4 spaces, 3 spaces of trs, 1 space, 3 spaces of trs, 5 spaces, ch 5; turn.
 Thirteenth row—5 spaces, 2 spaces of trs, 3 spaces, 2 spaces of trs, 4 spaces, ch 6; turn.
 Fourteenth row—1 tr in top of first tr, 4 spaces, 1 space of trs, 5 spaces, 1 space of trs, 5 spaces, ch 5; turn.
 Fifteenth row—16 spaces; make scallop as before.

Sixteenth row—1 tr in top of first tr, 7 spaces, 1 space of trs, 8 spaces, ch 5; turn.
 Seventeenth row—7 spaces, 1 space of trs, 1 space, 1 space of trs, 6 spaces, ch 6; turn.
 Eighteenth row—1 tr in top of first tr, 5 spaces, 1 space of trs, 3 spaces, 1 space of trs, 6 spaces, ch 5; turn.
 Nineteenth row—Same as seventeenth row, only make scallop.
 Twentieth row—Same as sixteenth row. Repeat from first row.

NAOMI MATTISON.

UP-TO-DATE CHEESE DISHES

Domestic cheese is now served in a score or more of attractive made dishes, and no fine dinner, luncheon or supper is considered complete without some of them, such as cheese and wafers (crackers), or crouton sticks; cheese straws or any of the different cheese sandwiches may accompany salads; or a hot cheese preparation may follow a salad or be substituted for the latter.

When cheese is served plain with salad a bed of shredded lettuce-leaves or a garnish of parsley or cress heightens its attractiveness. Served with wafers after the dessert omit greens and use a low glass dish. If the wafers are stale heat them in the oven, or spread one side thinly with butter, and toast in the oven before serving with salad. The latter are delicious if a little grated cheese is spread on the toasted side and they are returned to the oven just long enough for it to melt. Serve hot.

There is almost no limit to the variety of cheese fillings that make delicious sandwiches. Lemon-juice, flavored vinegars, made and dry mustard, olives, capers, walnuts, Worcestershire sauce, catchup, French and other salad dressings, etc., are utilized to give distinctive flavors.

CHEESE SANDWICHES—WHITE BREAD.—Rub to a paste three tablespoonfuls of grated fresh cheese, one fourth of a teaspoonful of salt and a pinch of cayenne. Moisten with cream or lemon-juice, and spread on thin buttered slices of bread. Press another slice on top, and cut in triangles. Serve with salad or at afternoon tea. Sandwiches should be wrapped in paraffin-paper or a damp cloth until ready to serve.

CHEESE SANDWICHES—GRAHAM BREAD.—Rub four tablespoonfuls of fresh grated cheese and two tablespoonfuls of tomato catchup to a smooth paste, spread on buttered slices of bread. Cut in oblong pieces.

CHEESE SANDWICHES.—Cut entire-wheat bread one day old in slices nearly an inch thick, then in three-inch squares; with a sharp knife cut around a little less than half an inch inside the edge, but not quite through the slice, and carefully scoop out the center to form a case. Grate cream cheese fine, season with dry mustard, salt and a dash of cayenne. Fill the cases half full with the mixture, fit a thin piece of bread over the top, brush all over the outside with white of egg, and brown quickly in hot butter. Serve as a luncheon course.

CHEESE AND HAM.—Put one tablespoonful of butter over the fire with one salt-spoonful of salt and a pinch of cayenne. When it melts stir in one tablespoonful of flour and by degrees one cupful of hot milk. When it boils add one cupful of finely chopped cold ham and one half cupful of grated cheese. Stir well, spread on hot buttered slices of toast, and serve at once.

CHEESE FONDUE.—Boil one third of a cupful of stale bread-crumbs in one cupful of milk until soft; add two tablespoonfuls of butter, one fourth of a teaspoonful of salt and half as much white pepper; then stir in the well-beaten yolks of three eggs and two thirds of a cupful of grated cheese. When the latter melts fold in the stiffly beaten whites of the eggs, and spread over buttered slices of toast.

CHEESE SCALLOP WITH EGGS.—Make a white sauce with one tablespoonful each of butter and flour and one cupful of hot milk; season with one half teaspoonful of dry mustard, half as much salt and a dash of cayenne. Put a layer of grated cheese in the bottom of a buttered baking-dish, then a layer of cold boiled eggs sliced, and cover with the sauce; continue in the same way, sprinkle buttered bread-crumbs and a little cheese over the top, and bake a golden brown. Serve hot.

CHEESE RABBIT WITH TOMATO.—Heat two tablespoonfuls of butter, add salt and cayenne, three fourths of a cupful of milk and one fourth of a cupful of strained tomato-pulp. Cut two cupfuls of cheese in dice, add one eighth of a teaspoonful of soda to the hot mixture, stir well, add the cheese, and when this melts add two well-beaten eggs, and pour over slices of toast. Serve at once.

ELIZABETH MORETON.

[HOUSEHOLD CONCLUDED ON PAGE 19]



GEORGE COLLINS' ATONEMENT

By Hope Daring

CHAPTER I.

TWO OUTLOOKS UPON LIFE



"Come, old fellow, I hope you are not too tired for a stroll; I've so much to ask you about."

The scene was one of the fraternal halls of Andrus college. There had been a banquet, and both the students and the alumni were beginning

to depart. The speaker, Stanley Hart, was a graduate of two years before. He had addressed George Collins, one of the most promising members of the class who would on the morrow receive their diplomas.

Collins was a fine specimen of young manhood, tall, broad-shouldered and active. His dark face was thoughtful, and there was a dreamy look in his large black eyes. Notwithstanding this, his silky, black mustache did not conceal the firm lines of his mouth, and his voice had a quick, incisive ring.

He turned a smiling face to his friend. "Tired! Why, Stanley, I feel to-night as if I should never be tired, as if all life was a delight."

Stanley Hart laughed mockingly. He was older than George, a heavily built man with a blonde face and a close-cut chestnut beard. A lawyer by profession, he had recently commenced practice with his father in his native town.

The two young men linked arms and passed out of the hall. As they emerged from the building the contrast between the gas-lighted rooms and the beauty of the early summer night impressed them both. A full moon sailed regally through the unclouded sky, lighting up the carefully kept camps with brilliancy.

Still arm in arm they began pacing back and forth in the gravelled path which crossed the grounds. Now in the full light of the moon, now in the shadow of the great maples and oaks, the two walked on, talking over the events of the years which had passed since the graduation of Hart.

"So you are a full-fledged lawyer now," George said, as they paused for Stanley to light a cigar. "No, thank you; I don't smoke. Tell me something of your prospects. Do you think success lies in the near future?"

Again Hart laughed, that half-mocking laugh that somehow irritated his companion. "That depends upon what you call success. I remember you used to have quixotic ideas concerning the uplifting of the masses, doing one's duty, and such like impractical things. As for my future, I am satisfied with my outlook. You know my father has practised law in Lamont for twenty years. He has a fair share of patronage, and as his son and partner I look for a goodly amount of the same. Lamont is a fine little town socially. I shall find life there easy if it is a trifle humdrum."

A quick sigh broke from the lips of Collins. "It must mean so much, Stanley, to be able to say that you are satisfied with your outlook upon life. For myself, I—well, I am not sure, after all, that I crave satisfaction as much as action."

"What about yourself?" Hart asked suddenly. "Do you still retain the old farm home where you once entertained half a dozen of us boys so pleasantly?"

"Yes. You remember it was the home of my parents. I shall always keep it, and may make it my permanent residence."

"Humph! Candidly, Collins, I think you were foolish to worry along through college as you did and delay your graduation by a year's teaching so that you might keep the farm free from debt. If I were you I would sell it and start myself in business. How much land is there?"

"Two hundred acres. This may be one of what you call my quixotic ideas, Stanley, but I shall never sell the farm. More than that, I hope for a few years to spend the income it brings me in improvements upon it."

"What makes you so foolish about it, George? You need the money, have needed it before."

There was a moment's silence. The two had been warm friends for years, but never until that moment had George Collins realized the difference between their inner natures. Was it possible, even by laying bare his heart, to make himself understood?

"You see," he began, hesitatingly, "I am alone in the world, not a single relative nearer than consins. The home-life of my parents was an ideally happy one, and to part with the place where that life was spent is impossible to me. Then my future work—"

He paused irresolutely. Stanley was silent for a moment. Before the mental vision of hoth rose a picture of the spacious white farm-house. It stood upon a slight eminence, and was surrounded by a velvety, tree-dotted lawn. To George, who lacked all the sacred ties of kinship, it was a sacred spot—his home. To his companion it represented a fair sum of money.

"Well, what of your future work?" Hart asked, after a little. "I don't think you were meant for a professional man, and I understand you've gone in for research along general literary lines. Do you aspire to a professorship?"

"No; I do not like teaching."

"What then?" And Stanley took much the same tone he would have used toward an obtuse client. "Surely you have not allowed yourself to finish

college without some well-defined plan for the future?"

"My plan is well enough defined in my own mind. Stanley, I shall devote myself to literary work. I think I shall enter journalism next winter, although that will only be a means toward an end. I have had some little encouragement in magazine work, and I—well, I know that time and labor will win."

"Win what? No great amount of money unless you prove that rare thing, a genius. As for the bubble called literary prestige, I hope you are not enough of a dreamer to look for happiness from that?"

George smiled. "How different are our points of view, Stanley. I shall be a writer because I must. Thoughts are things, and mine must be expressed. Then I hope to help in making the world brighter. I may be as Carlyle says, 'If not a heroic bringer of the light, a heroic seeker for it.'"

"Pray, don't bring about such an exalted state of affairs that there will be no use for my profession."

Collins was in so happy a mood that he let the sneer pass unheeded. "You so-called practical men cannot always see the force of our arguments," he said, gravely. "I may be a dreamer, but I would not exchange my dreams for a king's



"THAT IS A STRANGE SONG FOR YOU TO SELECT"

"A POWERFUL BLOW FROM GEORGE'S STRONG RIGHT ARM"

ransom. I shall go out to the farm and spend the summer with Nature. You know that some one has said that Nature's highest reward to an aspiring soul is that it gets to be a part of herself. Next winter I shall study mankind, and sometime—"

"You'll actually write a poem," Stanley interrupted. "It isn't what I looked for from you, but I suppose you have a right to decide for yourself. Experience will knock those absurd ideas about goodness and nobility out of your mind. The experience will come; no doubt about that. This world's no poem; you'll find that out. Before you settle for the winter come to us at Lamont for a few weeks. Come the first of October. Our little city is at its best then."

"Thank you, Hart; I will come."

"Oh, by the way, I think you have met my sister, Lillian. She will be here to-morrow, and will be anxious to renew her acquaintance with the hero of the day."

A look of pleasure shone out from George's dark eyes. He had always remembered Lillian Hart's beryl-blue eyes and innocent face. It gratified him to learn that she would be present and witness his hard-won triumph on the morrow.

For half an hour longer the friends talked of old times. Then they separated for the night.

The conferring of diplomas took place on the following afternoon. It was not until the exercises of the day were over and groups were scattered on the campus for an informal hour before the college president's reception to the members of the graduating class and the visiting alumni that George caught sight of Stanley Hart and his sister. He made his way to where they stood under the wide-spreading branches of a maple.

"See, the conquering hero comes," hummed Stanley. "First in his class, first in the hearts of his countrywomen, and—I've forgotten the rest. Now, Lillian, child, don't spoil the blushing youth by a too obvious hero-worship."

"Do hush, Stanley! I am glad to congratulate you, Mr. Collins, on your triumph of to-day. Notwithstanding his attempted witticisms, Stanley has been assuring us that he considers this but the beginning of the honors years will bring you."

George thanked her, his eyes meanwhile scanning her face. Lillian Hart was tall and slender, with a dimpled blonde face and sunny hair. Her dress was of soft white muslin, and she wore a large white hat with nodding plumes. The only bit of color that was visible about her costume was the cluster of pink roses in her belt. As he lingered at her side she spoke of his coming visit to Lamont.

"We will have a delightful time," she ran on. "Stanley has told me how alone in the world you are, so I am anxious to have you share our home with us for a few weeks."

The look he gave her caused her golden lashes to veil her eyes. George knew nothing of flirtation, and wondered a little at his interest in this maiden.

The next morning he called at the house where the Harts were staying. He knew they were to take the ten-o'clock train, and concluded it would be only polite to see them off. He was shown into the parlor, and in a few moments Lillian came down. She was dressed in a severely plain traveling-suit of dark blue. Every detail was in perfect taste, from her neat sailor-hat to her gloves of heavy maddressed kid. George thought her even more lovely than the day before.

They chatted easily while waiting the coming of Stanley. George was not naturally communicative regarding his own affairs, and he hardly

cordially, led the way to the commodious square house which stood in the midst of fine grounds.

The Hart family consisted of the parents, the son and daughter. Mr. Hart, Sr., was exactly such a man as Stanley would develop into, a trifle arbitrary and self-important, but a keen man of business and a pleasant companion. Mrs. Hart was worldly and devoted to society.

Time sped by. There was riding, driving, boating, picnics and parties. Then, as it was a year when presidential, state and county elections occurred, there was much political excitement. The elder Hart was a candidate for the office of prosecuting attorney in the county where Lamont was situated. George was well read regarding the issues of the day, as well as interested in them. He often accompanied the Harts to political meetings, and as their party happened to be the one to which he had vowed allegiance, began to make short addresses. His readiness as a speaker no less than the fairness and weight of his arguments directed much attention to him.

The election drew near, and it was plain that the contest would be a spirited one. George saw the great anxiety of his host. He shrewdly concluded that should Jerome Hart be defeated financial trouble would result, for the firm of Hart & Son had put considerable money into the campaign.

Lillian pouted a little over the time spent by George in attendance upon political meetings. Her companionship was very pleasant to the young man, her interest in him most flattering. He began to find her pretty face forming a part of his dreams of the future. Yet no word of love had passed between them. George was content that things should take their own course.

One dull, rainy evening there was to be a meeting held at Lamont, and it had been arranged that George should be one of the speakers. While waiting for the time to start he sought Lillian in the parlor.

There was a bright fire in the open grate, and the lights were turned low. Lillian was sitting at the piano.

"Do not rise," he said, as she started up. "Sing me something to give me strength for the fray to-night."

Without an instant's hesitation she struck a few low chords and began to sing:

"When you and I are asleep, my love,
Under the carven stone,
Who will there be to weep, my love,
Of all whom we have known?
It's oh, for the long and lasting sleep
Where the wildwood honeysuckles creep,
Under the violets to lie,
And let the weary world go by."

George stood before the fire intently watching the singer. He thought her pale, and her dress of somber gray gave her a new dignity. Then there was something tender, a new note of passion and pain in her sweet voice.

"That is a strange song for you to select," he said, half questioningly.

She shrugged her shoulders impatiently. "Not so strange, after all. Even my life is not all sunshine; I find this a 'weary' world at times, and surely sleep 'under the carven stone' with one you love is far better than life alone."

"Do you really think that, Lillian?" and he crossed to her side. "Does love mean that to you?"

She looked up into his face. What he saw in her eyes sent the blood leaping through his veins. "Lillian—" he began; but Stanley's voice rang out from the hall, "I say, Collins, where are you? It is time we were off."

As George hastened up-stairs after his overcoat and umbrella he asked himself whether it was well or ill that the interruption had come. Did he love Lillian Hart?

The rain was still falling. The three men hastened along to the hall where the meeting was to be held. This was on the second floor of a business block.

The meeting was much like all such gatherings. As the speaking was all done by the members of one party only one side of the questions was presented. George's speech was the longest of the evening, and it was during its delivery that a significant interruption occurred.

He had made some statement regarding working-men's wages when a half-drunken fellow near the door cried out, "Hear the bloke! What does he know about work?"

"More than yourself, I judge," George replied, readily. "I was born and brought up on a farm, and—beg pardon, did you ever do a day's work?"

This elicited shouts of coarse laughter and so angered the man that he became noisy. Some of his friends were obliged to lead him from the room.

There was a large proportion of the roughest element of the town present. After the meeting was dismissed there was much loud talking. George had made his way to the door, his arm in that of Stanley Hart, when the man who had interrupted him addressed him in an abusive manner.

"Come, now, no more of that," George called out, good-humoredly.

"I guess there will be more of it than you care for," the man replied, with an oath. "I'm going to wring your neck, you puppy, you!"

He pushed his way forward. George retreated a step.

"Humph! 'Fraid, be you? Take that," and he struck out, George dodging the blow.

"Trash him, Collins!" some one called out; while others urged the assailant on.

"See here, you will get hurt!" George exclaimed, in a voice not at all like his usual one. "I warn you!"

But the infuriated man rushed on, to be met by a blow from George's strong right arm, a blow so

powerful that it caused the recipient of it to stagger back a step. He approached too near the open stairway, lost his footing and fell heavily to the landing below.

There was a moment's excitement, then a voice cried out:

"He's dead; his neck is broken!"

It was true. The miserable man had struck upon his head and had been in a single instant hurled into eternity.

A strange hush fell upon the crowd assembled on the upper landing. Before a word was said George had made his way down and was hending over the inanimate form.

"There must be some mistake," he murmured; "he can't be dead."

"Oh, Bill's dead all right enough," a companion of the poor wretch cried out. "Dead, and you killed him!"

George shrank back. The words were false. He had struck in self-defense and surely was not to blame that the man had fallen down the stairs. And yet—he was dead.

"Who is he?" George asked of Stanley, who had followed him.

"Bill Kennedy, a poor drunken devil who lives a couple of miles out of town. He's no great loss to the community, but I wish you had taken almost any other time to do it. I am afraid it will muddle the election."

George started. "How can you think of that when death is here, and brought by my hand, too?" he cried, the sweat standing in great drops on his forehead.

Just then the elder Hart joined them. He was much disturbed.

"I am afraid you are in a bad box, Collins," he said, coldly. "You'd better get out of the back door and go up to the house. Of course, Larkins," turning to a large, coarse-looking man who had edged his way close to George's side, "you understand that Mr. Collins will be at your disposal whenever you want him."

Larkins shifted his enormous chew of tobacco from one cheek to the other. "Yes, sir, I understand that, 'cause I shall see to it as how he is." Something in the tone made George redder. "What do you mean?" he asked, haughtily.

Larkins was the sheriff of the county, and a candidate for re-election. As his political party was the one against whose interests George had been working it was not difficult to understand the officer's eagerness to make the most of the trouble.

His eyes wavered and fell before the steady gaze of George. However, he said, insolently, "Don't know how you look at it, but murder is considered a serious thing in these parts."

"Murder! My God! does any one think I murdered Kennedy?"

"Hush!" and Stanley Hart laid a warning hand upon the arm of the other. "You'd better keep still. I'll attend to this for you."

George leaned back against the wall and gasped for breath. The scene before him was photographed on his brain, and many times in the years to come he had only to close his eyes and it all rose up before him.

The room in which they were was a lower hall, large and unfurnished. The body of the dead man was stretched upon the floor, the gas-light falling on the unshaven face and ragged clothing. All around were eager, gesticulating men, some talking angrily and others more quietly. Outside a window near he could hear the rain beating, and the monotonous drip seemed to echo and re-echo the one word, "murder."

An angry murmur began to rise from the crowd. Wily politicians who were present did not scruple to use the tragedy to further their own ends. When Judge Harmon, a venerable man of great influence, proposed that George go home with the Harts and appear for examination when wanted, hoarse cries of rage broke forth.

The face of Jerome Hart darkened. He was thinking neither of the dead man nor of the position of his young guest, but of his own political prospects.

Judge Harmon approached George, laying one hand kindly on the young man's shoulder. "My boy, I know that you are not really responsible for this poor fellow's death, neither do I think any jury would find you so. But many of these men are infuriated with drink. For your own sake and for the good of the town I urge you to go quietly out of the back door with Larkins. It may be humiliating for you to be locked up for the night, but I see no other way."

At that moment a loud voice cried out, "String him up; that's the way to serve murderers!"

George understood. Without an instant's hesitation he sprang upon a chair and held up his hand for silence. The gesture was instantly obeyed. No one moved or spoke.

"Men," and George's voice rang out clear and firm, "while I am innocent of all save self-defense, God knows I would give my strong right arm to bring back life to the dead. It has been proposed that I sneak out of the back door to the shelter of the jail. I refuse to do this. As some of you may doubt me, I will consent to being locked up until your own authorities can fully investigate the matter. But I go out of yonder door and in the sight of you all."

His words struck the right chord. Men are never too infuriated and passion-swayed to recognize fearlessness. Something like a cheer broke from the crowd.

"We will see you in the morning," Judge Harmon said, and Stanley Hart nodded a careless assent to his words.

A wave of bitterness swept over George's soul. The grasp of his friend's hand would have meant much to him then.

The distance from the hall to the jail was not great. It was traversed in silence. Larkins led his prisoner into a narrow corridor and unlocked a door.

"I don't know as it's quite what you've been used to up to Hart's," he said, with a taunting laugh, "but maybe you'll have plenty of time to get used to it."

His words fell almost unheeded upon George's ear. He stood just inside the door until Larkins, after lingering a moment, stalked off down the passage.

[TO BE CONTINUED]

"MATILDY'S BEAU"

I hain't no great detective like you read about—the kind That solves a whole blame murder case by footmarks left behind; But then, again, on t'other hand, my eyes hain't shut so tight But I can add up two and two and get the answer right; So when prayer-meet'n's Friday nights got keepin' awful late, And fer an hour er so I'd hear 'low voices at the gate, And when that gate got saggin' down 'bout ha'f a foot er so, I says ter mother, "Ma," says I, "Matildy's got a beau."

We oughter have expected it, she's most eighteen, yer see; But, sakes alive! she's always seemed a baby like ter me; And so a feller after her, why, that jest did beat all! But t'other Sunday, bless yer soul, he come around ter call; And when I see him all dressed up as dandy as yer please, But sorter lookin' 's if he had the shivers in his knees, I kinder realized it then, yer might say, like a blow, Thinks I, "No use! I'm gittin' old; Matildy's got a beau."

Jest twenty-four short years gone by—it don't seem five, I vow!— I fust called on Matildy—that's Matildy's mother now; I recollect I spent an hour a-tyin' my cravat, And I'd sent up ter town and bought a bang-up shiny hat; And, my! oh, my! them new plaid pants; well, wa'n't I somethin' grand When I come up the walk with some fresh postes in my hand? And didn't I feel like a fool when her young brother, Joe, Sang out, "Gee crickets! Looky here! Here comes Matildy's beau!"

And now another feller comes up my walk, jest as gay, And here's Matildy blushin' red in jest ber mother's way; And when she says she's got ter go an errand to the store, We know he's waitin' round the bend, jest as I've done afore; Or when they're in the parlor and I knock, why, bless yer heart! I have ter smile ter hear how quick their chairs are shoved apart. They think us old folks don't catch on a single mite; but, sho! I reckon they forgit I was Matildy's mother's beau. —Joe Lincoln, in Puck.

FAMOUS EUROPEAN TRAINS

In this country you can get aboard a train on the Atlantic coast and you need never leave it until you get to the Pacific if you don't want to. Even this continuous 36,000-mile journey is regarded as no great wonder. In Europe, however, things are different. There distances are comparatively short, and the longest continuous journey is less than 2,000 miles, and this carries you through several countries. The most famous long-distance train in Europe is the Orient express, which goes from Paris to Constantinople twice a week by way of Munich, Bavaria; Vienna, Austria; Budapest, Hungary; Belgrade, Serbia; and Sofia, Bulgaria. This covers 1,921 miles in 64 hours, an average rate of 30 miles an hour. The Ostend-Vienna-Costanza express covers 1,690 miles in 53½ hours, and connects at either end with London and Constantinople, 73½ hours being the time for the 2,052 miles between these places. The North express takes 43 hours for the 1,597 miles between St. Petersburg and Ostend, while London is six hours further off. The St. Petersburg-Vienna-Cannes express runs only in winter, and travels 1,916 miles in 65 hours. The best known of the trains to the south is the Peninsular between Calais and Brindisi, 1,353 miles in 39½ hours and four hours more to London. This is the train that London passengers take as a short cut to India. They save the long sea trip round by Gibraltar, and go aboard the steamer at Brindisi, Italy. The South express goes from Paris to Madrid, 900 miles, in 26 hours, and from Paris to Lisbon, 1,176 miles, in 36½ hours. Germany's long-distance train is the North and South express from Berlin to Veromo, 687 miles, in 19½ hours; it will soon run to Naples, 1,336 miles. On all these trains extra fares are charged, the rates being exorbitant in comparison with American rates for even better service.—Selected.

THE OCEAN GRAVEYARD

"Sable Island belongs to Nova Scotia, is 145 miles from Halifax and 85 miles east of Cape Canso," writes Gustav Kobbe in "Ainslee's." "It is a treeless, shrubless waste, seamed by wind and wave and of ever-changing aspect. A cone-shaped hill near the east end, once a mere undulation of sand, is now over one hundred feet high, and is still growing. Other hillocks are gradually being mowed away by storms. The hillocks are liable to be undermined so swiftly and swept out of existence that they are carefully watched from the various stations on the island, there being no certainty how far an inroad of the sea will ex-

tend after each successful attack. Even the coarse grass of the island grows in a different manner from that of the mainland. It does not bear seed, but shoots up from roots which run along under the sand. During the winter the sand is blown over the grass, and buries it sometimes three or four feet deep. But the hardy blades grow up next season as if the island sands had protected them from the cold of winter in order to make them all the stronger.

"The island itself is fighting for self-preservation. It seems as if it drew ships into its fatal embrace as rallying-points for its loose and shifting sand, thus to protect itself by a bulwark of wrecks against annihilation by the sea. Tradition says that when Sable Island was discovered by Cabot, in 1497, it was eighty miles long and ten miles wide. In 1802, when a rescue-station was established there, it was only forty miles long. Since then it has shrunk to but little more than twenty miles in length, and in width it is only a mile at its widest. Within twenty-eight years the western end lost seven miles. Shoals over which the ocean now surges are pointed out as former sites of light-houses. One of these was so swiftly undermined by the sea that it had to be abandoned with the greatest precipitation. The spot where once stood the superintendent's house is now under two fathoms of water.

"The island, rapidly diminishing at its western end, is slightly gaining at its eastern. Slowly, like a ship dragging its anchor, it is moving eastward. Will it ever reach the edge of the shoals, stand tottering on the brink of the abyss till it receives its coup de grace, and plunge over the submarine bank forever into the depths? Unfortunately, its end will probably be less dramatic. There is good ground for believing that this gray sand-bar will slowly wear away until it becomes another submerged shoal added to an ambuscade already some sixty miles in length—for a line of breakers extends sixteen miles from one end of the island and twenty-eight miles from the other."

THE COST OF A DINING-CAR

A modern dining-car of the most approved pattern costs \$15,000 to build. Next come the kitchen utensils, the table furniture, the silverware and linen—averaging about \$3,000 to a car. Each car must have a steward, who usually gets \$100 a month, and a head cook, who values himself at \$75 a month. There must also be one or two assistant cooks and three or four waiters. Three hundred dollars a month is the smallest outlay for wages, while the cost of raw-food material, breakage of dishes, and the board of employees is about \$3,000 a month additional. An average five-days' run costs nearly \$600 for food and service, so that it would take forty persons at every meal on the run to pay the daily expenses, without allowing anything for interest on the investment or wear and tear on the furnishings.—Boston Transcript.

OUR JEWELRY

The terms "solid gold," "solid 18-K gold," "solid rolled gold," "solid gold filled," "14-K rolled filled," "solid 14-K rolled gold plate," etc., as set forth in the thousands of advertisements daily under the eyes of the masses of our people, prompt the first question, What is solid gold?

Strictly speaking, the only solid gold that should be so recognized is the pure metal, or gold of twenty-four carats fine, which is the "fine gold" of the jewelry trade. Trade usage as well as general custom calls any alloy or melted mixture of metals containing gold "solid gold." The varying quantity of gold in proportion to the other metals mixed with it determines the "quality," "carat" or "fineness" of the mixture; thus, a mixture of eighteen parts of fine gold and six parts of "alloy" is known and recognized as solid eighteen-carat gold. Fourteen parts of fine gold and ten parts of alloying metal give us fourteen-carat solid gold, and so on. In every case there are enough parts of alloy added to the presupposed carat quality to reach the twenty-four carats equivalent to fine gold. This gives us the manner of preparation of the many grades of solid gold in the gold jewelry of the trade. The various qualities run from eighteen carats down through the medium and lower grades even to the poorest, which in its wearing quality is no better than so much brass. In mixing the metals the alloy used in reducing the fine gold to the required quality is largely copper and silver, in a general proportion of two and a fraction to one, respectively. Other metals are often used in small proportions with copper and silver for many and varied technical reasons.

A standing joke on many of the old-time jewelers who used the old-fashioned large copper cents for their alloys was that in weighing up the metals they would not stick at a cent in giving good weight, but would throw in an extra one for good measure. The value of that great copper disk before and after melting can be appreciated even by the uninitiated.

The average quality of the gold jewelry worn has, in one sense, materially and steadily dropped for many years. Where, twenty-five years ago, fourteen-carat metal was considered poor enough, the same line is now drawn at ten carats. The great quantities of goods at even lower quality that, placed on the market, find a ready sale as substitutes for better goods, make it a matter of extreme doubt if the average of quality used will even reach the standard of ten carats fine. The impunity with which ten-carat gold is stamped as of fourteen-carat quality, and the reckless manner in which all sorts of misleading stamps are used upon brass, plated and low-grade gold goods, were it but half understood by the general public thus abused, would speedily secure by legislation the national stamping laws that certainly are badly needed.—From Self-Culture Magazine for December.

"PASSING THE CUSTOMS"

The great liner crunches its slow way into dock. The decks are palpitant with excitement. Stewards and deck-hands are rushing hither and thither; passengers, bemused with hurry and scurry, are dragging bundles, boxes, wraps—those personal or treasured precious things that may not be entrusted to the rough handling of porters—to the upper deck. Over all is the hysterical note—the eagerness of home-coming or the doubting excitement of a venture into a new world. There is a little catch in the throat that will not down, but back of it all lies the dread of the hours of waiting that covers the ordeal of search for smuggling.

It is all so different—and necessarily so—from the way they do things abroad. There, dutiable articles being so few and so little likely to be smuggled in small quantities, the examination is nearly always perfunctory, frequently but a casual glance is necessary to satisfy the inspector that the trunk or valise is innocent of contraband. The ordeal rarely takes but a fraction of an hour. In the long bare sheds of the New York docks the incoming voyager has frequently to wait two or three hours before he is free to go his way.

But remember, the unpleasantness is not all on the side of the traveler; the poor searcher for smuggled goods is frequently more exasperated than exasperating. It is more a surprise than otherwise that he has some good-humor and some politeness left.

The temptation to smuggle is very great. It seems such an innocent little sin even in the eyes of those whose moral rectitude is staunch against any other assault. The state is to most people so impersonal, and trifling smuggling is to them only the evasion of paying twice for one article. That is the great difficulty of the customs inspector. That is why surging crowds circulate in the long, lean sheds of the docks with trunks and boxes as storm-centers.

Americans are notorious as venial smugglers, but that is because of the greater temptations where nearly everything is dutiable. Tobacco and tea and spirits are not enticing as objects of contraband to the private person.—Collier's Weekly.

FACTS ABOUT EX-PRESIDENTS

Two ex-presidents of the United States are living, Cleveland and Harrison.

Before the expiration of John Adams' term, 1801, there was no ex-president living, Washington having died in December, 1799.

During Jefferson's administration Adams was the ex-president. Both died on the same day, July 4, 1826. Both were ex-presidents during the administration of Madison and Monroe and a part of the administration of J. Q. Adams.

When Monroe was president the three ex-presidents were Adams, Jefferson and Madison.

J. Q. Adams became president in 1825. At that time Adams, Jefferson, Madison and Monroe were living. But before the expiration of J. Q. Adams' term, 1829, only Madison and Monroe were living.

During Jackson's first administration Madison, Monroe and J. Q. Adams were the living ex-presidents. Before the expiration of Jackson's second administration only J. Q. Adams remained as former president.

When Van Buren was president J. Q. Adams and Jackson were the living ex-presidents.

During William Henry Harrison's term of one month J. Q. Adams, Jackson and Van Buren were the living ex-presidents.

John Tyler, as vice-president, succeeded Harrison, and was in office from 1841 to 1845. The ex-presidents living during his term were J. Q. Adams, Jackson and Van Buren.

While Polk was president the living ex-presidents were J. Q. Adams, Jackson, Van Buren and Tyler. But before the expiration of Polk's term Van Buren and Tyler only remained.

Taylor's term lasted less than five months. In that time Van Buren, Tyler and Polk were living, although Polk died twenty-five days before Taylor, thereby leaving Van Buren and Tyler living ex-presidents.

When Fillmore was president Van Buren and Tyler were still living.

With Pierce as president there were three living ex-presidents, Van Buren, Tyler and Fillmore.

When Buchanan was president Van Buren, Tyler, Fillmore and Pierce were living.

During Lincoln's term of office Fillmore, Pierce and Buchanan were living.

In the administration of Johnson Buchanan died, leaving Fillmore and Pierce.

During Grant's first term Fillmore and Johnson were living. Before the expiration of his second term there was no living ex-president.

Grant was the only living ex-president while Hayes was at the White House.

During Garfield's short term Grant and Hayes were living.

In the administration of Arthur Grant and Hayes were still living.

During Cleveland's first term Grant, Hayes and Arthur were living. Before the expiration of that term only Hayes remained.

With Benjamin Harrison as president, Hayes and Cleveland were living, but before the expiration of Harrison's term only Cleveland remained as a living ex-president.

In Cleveland's second term there was but one ex-president living, Harrison.

During McKinley's term the two living ex-presidents are Cleveland and Harrison.

Three times in the history of the country have four ex-presidents been living at the same time. Frequently three; once there was one ex-president living during the incumbency of his predecessor; twice none.—Chicago Inter-Ocean.

FRIED ONIONS

Indirectly Caused the Death of the World's Greatest General

It is a matter of history that Napoleon was a gourmand, an inordinate lover of the good things of the table, and history further records that his favorite dish was fried onions; his death from cancer of the stomach, it is claimed, also was probably caused from his excessive indulgence of this fondness for the odorous vegetable.

The onion is undoubtedly a wholesome article of food, in fact, has many medicinal qualities of value, but it would be difficult to find a more indigestible article than fried onions, and to many people they are simply poison; but the onion does not stand alone in this respect. Any article of food that is not thoroughly digested becomes a source of disease and discomfort, whether it be fried onions or beefsteak.

The reason why any wholesome food is not promptly digested is because the stomach lacks some important element of digestion, some stomachs lack pepsin, others are deficient in gastric juice, still others lack hydrochloric acid.

The one thing necessary to do in any case of poor digestion is to supply those elements of digestion which the stomach lacks, and nothing does this so thoroughly and safely as Stuart's Dyspepsia Tablets.

Dr. Richardson in writing a thesis on treatment of dyspepsia and indigestion, closes his remarks by saying, "for those suffering from acid dyspepsia, shown by sour, watery risings, or of flatulent dyspepsia, shown by gas on stomach, causing heart trouble and difficult breathing, as well as for all other forms of stomach trouble, the safest treatment is to take one or two of Stuart's Dyspepsia Tablets after each meal. I advise them because they contain no harmful drugs, but are composed of valuable digestives, which act promptly upon the food eaten. I never knew a case of indigestion or even chronic dyspepsia which Stuart's Tablets would not reach."

Cheap cathartic medicines claiming to cure dyspepsia and indigestion can have no effect whatever in actively digesting the food, and to call any cathartic medicine a cure for indigestion is a misnomer.

Every druggist in the United States and Canada sells Stuart's Dyspepsia Tablets, and they are not only the safest and most successful, but the most scientific of any treatment for indigestion and stomach troubles.

SEEKING HIDDEN TREASURES

Another treasure has just been brought to light, not in Spain this time, but in Tunis. It is said to be composed of valuable objects, such as ingots of gold, jewels set with diamonds, and other precious articles. It was discovered in the Temple of Eschmoun, one of the gods whom the Carthaginians venerated, and is therefore no ordinary treasure. Eschmoun had his temple in Byrsa, the citadel of Carthage. Pilgrims were wont to assemble there to pray for the protection of the god. The Romans were on the point of taking Byrsa when a prudent citizen removed the treasure and hid it at the bottom of a grotto, which was closed up with large stones. There it was found the other day by a couple of natives. Desiring to be on good terms with the law, they laid the matter before a Frenchman, who in his turn informed the Residency of the event. An agreement was come to, according to which the state gave half of the treasure to the Frenchman and the two natives, and the other half to the Beaux-Arts.

True or false, the history of this treasure must not be forgotten. At all times human credulity has had a weakness for hidden treasures. The reader may remember the stir that was made by the reported treasure which was believed to be hidden in the ground surrounding the cathedral of St. Denis. The authorities ordered a search to be made, but nothing was found. But it was especially after the Revolution that the stories of hidden treasure turned the heads of the people. In some cases there appeared to be foundation for the reports. Many noble families, it is said, at the moment of leaving for exile, afraid of taking their jewels with them, preferred to bury them secretly in the hope of finding them again on their return. The fear of domiciliary visits led others to secure their valuables in the same way. Now, as many of the nobility who are said to have hidden their property were either executed or never came back from exile, it results that their treasures were lost or stolen. In connection with this subject a strange adventure is stated to have happened to a tradesman in Paris named Pauvert, who in the year 1793 was placed by an individual who signed himself Saut-Firmin in the secret of the researches which he was making for the recovery of a small casket containing the sum of four thousand crowns. It is not said if the treasure was ever discovered.

Very different was the old Comte Villiers de l'Isle-Adam, father of the well-known writer, and one of the most original figures of the Restoration. Persuaded, and not without an appearance of reason, that the discovery of his family, one of the oldest in Brittany, was dependent on the existence of a treasure hidden under the ruins of one of the numerous castles which he formerly possessed, he began by making explorations of his own account in different parts of the country. They were not successful, but the decrease of his little fortune did not discourage him, and he hit upon the idea of extending his researches not only upon his own account, but also on that of others who were believed to have treasures. He established himself in a little, broken-down house at Saint-Brieuc, and styled himself the "Discoverer of Treasures." Being learned in armorial bearings, he showered his circulars on all sides, not only on the noble families whom the Revolution had plundered, but also on those families who were still in possession of their fortune, but who desired to increase it.

Everybody knew that Villiers was a perfectly honest man; it was not surprising, therefore, that he soon found customers. Numerous families of the nobility took great interest in his enterprise. His strange "Cabinet d'affaires" worked well during the whole of the Restoration, but it then gradually died out without any practical result being obtained from the researches. It must be confessed that the seekers of treasure are rarely happy in their explorations. Some say it is owing to a want of method, others to a lack of documents; but perhaps we shall be nearer the mark if we attribute it to the scarcity of treasures, which are all more or less imaginary. Most of the treasures are brought to light by accident. For example, a laborer in the fields may come across a vase containing more gold coins and medals than were ever discovered by the seekers. Among the latter may be found believers who have reduced themselves to misery and ruin in their pursuit of treasures.

Villiers still believed in the existence of treasures, but this delusion was not shared by the swindlers of Barcelona, who although well known never failed to make dupes among all classes in France. At one moment it was a letter from a fictitious jailer, in which an ex-Carlist officer, condemned to several years' imprisonment, secretly informed one that before his arrest he was able to cross the frontier with the funds of his regiment; that the funds were hidden in France in a place known only to himself, and that he was willing to disclose the spot on the receipt of three thousand or four thousand francs. On another occasion, instead of a jailer, it was a daughter of the Carlist officer, who, not having sufficient money to take her to France, solicited one to help her make the journey and bring back the treasure, which would be divided among them. Of course, nothing more was heard of the affair.

The natives of Tunis who pretend that they have found the treasure of Eschmoun have better titles to public confidence. They did not address themselves to private persons in order to share the fruit of their researches, but they addressed themselves to the state. A functionary of the Beaux-Arts, delegated by the Resideucy, will be present at the next exploration, which will soon take place. Let us hope that they will get better results than those of St. Denis, which, instead of treasure, produced nothing but bones, dust and ridicule.—London Globe.

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When you do the rag-time dance When you ain't got no money you needn't come around When a Nigger makes 100 Mammy's Little Pumpkin 99 goes on his back Colored Coons The home of the girl I love She was bred in old Ken-I love you in the same old How I love my Lu (tucky) Because I love you (way) On the banks of the Wabash Get your money's worth Just one girl Our new song books contain all the above songs; also many others. We will send sample song book with one piece sheet music, catalogue of 1600 songs, and our 16 page magazine 3 months, all for 10 cents. We will also send you a \$1.00 Due Bill which entitles you to \$1.00 worth of goods free from our list. This firm is reliable. Song Supply Co. 373 Dearborn St., Chicago, Ill.

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OUR SUNDAY AFTERNOON

THE HARD-WORK PLAN

From the lowest depths of poverty
To the highest heights of fame,
From obscurity of position
To a bright and shining name,
From the mass of human beings
Who compose the common clan,
You can earn your way to greatness
By the hard-work plan.

'Twas the key to Lincoln's progress,
'Twas the route to Webster's fame;
And Garfield by this method
To distinction laid his claim;
And all earth's noblest heroes,
Since this old world first began,
Have earned their way to honor
By the hard-work plan.

I knew a rich old banker's son
Who had no aim in view
But just to sit around and loaf;
'Twas all he had to do.
"The 'old man,'" he said, "will keep me,"
And "I don't have to pay."
He earns his bread and butter now
At fifty cents a day.

And then I knew another lad;
His folks had money, too;
He didn't sit around and "loaf,"
But found some work to do.
The neighbors all were proud of him;
Said they, "He'll make a man."
He earned his way to greatness
By the hard-work plan.

Go read the lives of men of note,
Consider their success;
What gave them wealth and eminence?
Did luck or genius bless?
Biography will tell us that
The race through which they ran
Was the contest known to history
As the hard-work plan.

Don't worry over genius;
Don't say you have no brain;
Don't sit and watch the stars of hope
Till the clouds bring up a rain;
But up and toil along the road,
And travel with the van,
And earn your way to greatness
By the hard-work plan.

—Jonathan Jones, in Success.

THE WORLD BEAUTIFUL

THE period that is somewhat heartlessly designated by conventional fashion as being "in mourning" represents a true feeling distorted from its finer place. No one can see a friend pass that mystic change called death, and experience the silence and absence of the visible presence, without entering into deep and sacred experiences which instinctively demand solitude and seclusion. Probably those who are nearest to the one departed share very largely in the experience on which the departed one enters. Only if we came into a truer perception of the nature of death we should find this period to be one not of mourning, but of exaltation; of being lifted into sacred joy; into a glorious consciousness of unspeakable beauty; of being caught up with rapt gaze to the mount of vision.

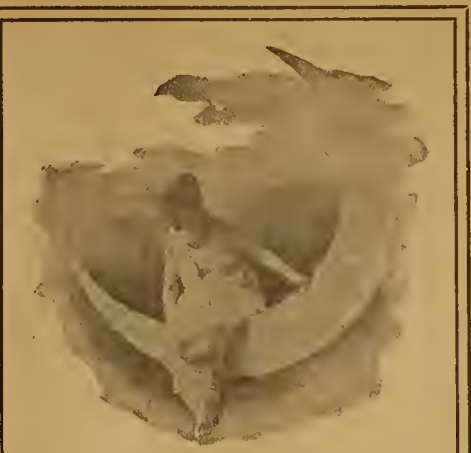
It is curious that into the Christian faith has crept and persisted the pagan trace that continually speaks of death as "the end" of life, the end of the work in which the person is engaged, and of the one who has gone on as "at rest in the grave." The immortal spirit has nothing in common with the body that it has left. He is not dead; he has simply emerged from the physical form that he tenanted, and which was the temporary instrument through which he worked. We talk of "spiritual beings" as of a race apart from and different from ourselves; but we are spiritual beings or we are nothing.—Lilian Whiting, in Boston Budget.

THE PRINCESS' GIFT

Many stories have been told of the gracious manner and kindness of the future queen of England, the "dear princess," as she is lovingly called by the people of England, but perhaps none is more touching than this little incident in connection with the marriage of one of her daughters.

When the bride returned to Marlborough House after the marriage ceremony her mother asked for her bouquet. In the afternoon, when the last farewell had been said, and the last guest had departed, the Princess of Wales summoned her carriage, and drove to one of the great London hospitals, where her face was well known. She passed immediately to the children's ward, and going from bed to bed, gave each little sufferer a flower from the bride's bouquet.

The small, wan faces lighted up with joy at the sight of the princess and the beautiful flowers, and it would be hard to say who derived the most pleasure from the kind act—the sick babies who received the gift or the royal lady who bestowed it.—Success.



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Mrs. Hitchcock, \$222, besides housekeeping. Lida Kennedy, \$34.00 while teaching.
LET US START YOU—No experience needed. Our agents made over \$47,000.00 last month supplying the enormous demand for our famous Quaker Bath Cabinet, and appointing agents. Wonderful Seller. Every body buys—business men, families and physicians. No scheme, fraud or fake methods. **WRITE TODAY** for Our Proposition, New Plan, etc. FREE. Address, **World Mfg. Co., 47 World Bldg., Cincinnati, O.**

EVERY WOMAN Can buy a **WORLD'S WASHER** on trial and no money paid until it is perfectly satisfactory. Washes easy. Clothes clean, sweet and white as snow. Child can use it. I pay freight. Circulars free. **C. E. ROSS, 10 Clean St., Lincoln, Ill.**

You Dye in 30 minutes
Soiled and faded carpets, dresses and clothing of all kinds to look like new. No experience necessary to get beautiful colors that won't fade. Boil or Wash Out with TONK'S FRENCH DYES. To introduce them give name of your dealer and we will send you 6 packages for 40c or 1 for 10c. Say whether for wool or cotton. Address **FRENCH DYE CO., Box 464, VASSAR, MICH.**

GET AWAY WITH GLASSES. **WALTON'S EYE FOOD** CURES WHITE FOR DESCRIPTION. NOURISHES, STRENGTHENS, IMPROVES VISION.

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...A Royal Mount...

For Pleasure For Health
For Vacation For Exercise
For Business For Young
and For Old

Roadster, \$30.00
Light Roadster, \$40.00
Racer, \$50.00
Bevel Gear Chainless, \$60.00

Send for 1900 Monarch Catalogue—Free Upon Request

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MONARCH SALES DEPARTMENT
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CRAWFORD BICYCLES

THERE IS NOTHING BETTER FOR THE OVERWORKED COLLEGE GIRL OR SCHOOL TEACHER THAN A DAILY SPIN ON A CRAWFORD BICYCLE

1900 Crawford's, \$30 and \$40
Juvenile Crawford's, \$20 and \$25

Send for 1900 Catalogue. The American Bicycle Co. Spaulding Sales Dept. 88 Chambers St., N. Y.

IMPERIAL WHEELS

Have assembled all that capital, skill and integrity offer. A wheel within the reach of all, and which makes a short vacation a daily possibility.

Send for Imperial Catalogue SHOWING OUR 1900 MODELS FOR \$25, \$30, \$40 and \$45

AMERICAN BICYCLE COMPANY
Eastern Office: SPAULDING SALES DEPT. 88 Chambers Street, NEW YORK
Western Office: AMES & FROST SALES DEPT. Blackhawk St. and Cherry Ave., CHICAGO, ILL.

\$2.98 HUNTING CASE

WALTHAM GOLD Filled Watches are the best. Read our great bargain: Cut this out and send it to us with your address and we will send you C. O. D. for examination before paying one cent. One beautiful 14 K gold plated, double hunting case watch, stem wind and set, Ladies' or Gentle's size, fitted with fine jeweled works; a guaranteed time-keeper, equal in appearance to a \$50.00 gold filled watch warranted for 20 years. If satisfactory pay express agent \$2.98 and charges. Address **W. HILL MFG. CO., 94 STATE ST., CHICAGO.**

WE PAY \$18 A WEEK AND EXPENSES to men with rigs to introduce our Poultry Compound. Send stamp. **JAYELLE MFG. CO., Dept. 58, Parsons, Kan.**



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is awarded by all judges of mechanical excellence to

ELGIN

Ruby Jeweled Watches.

They are made to endure and tell time accurately. All jewelers sell them in cases to suit. Ask your jeweler why the Elgin is the best watch.

An Elgin watch always has the word "Elgin" engraved on the works—fully guaranteed.

"The Ways of a Watch"—our new booklet—sent anyone on request.

ELGIN NATIONAL WATCH CO., Elgin, Ill.



SMILES

MEN AND OWLS

(A rhyme for small people.)

The owl sits on its perch all day
And winks its solemn eyes;
And people look at it, and say,
The owl is very wise.

To man is given the gift of speech,
Likewise the power to think;
While lordly man can loudly preach,
The owl can only blink.

If owls that never, day or night,
Say more than just "Too-woo,"
Could talk as men can talk, they might
Sometimes seem foolish, too.

—S. E. Kiser, in Chicago Times-Herald.

A MARKET FOR OLD HATS

THE group of islands known as the Nicobars, about one hundred and fifty miles south of the Andamans, has been but little explored, though the manners and customs of the inhabitants offer very interesting peculiarities to the ethnologist.

One of the most noticeable of these, and one which seriously affects the trade of the islands, is the passion for old hats, which, without exception, pervades the whole framework of society. No one is exempt from it. Young and old, chief and subject alike, endeavor to outvie one another in the singularity of shape, no less than in the number of old hats they can acquire during their lifetime.

On a fine morning at the Nicobars it is no unusual thing to see the surface of the ocean in the vicinity of the islands dotted over with canoes, in each of which the noble savage, with nothing on but the conventional slip of cloth and a tall white hat with a black band, may be watched catching fish for his daily meal. Second-hand hats are in most request, new ones being looked upon with suspicion and disfavor.

This curious passion is so well known that traders from Calcutta make annual excursions to the Nicobars with cargoes of old hats, which they barter for coconuts, the only product of these islands. A good tall white hat with a black band brings from fifty-five to sixty-five good coconuts. Intense excitement pervades the islands while the trade is going on, and fancy prices are often asked and obtained. It seems curious that in these far-away regions so good a market should be found for cast-off articles of civilized wearing apparel.—The Golden Rule.

THE OBLIGING CLERK

She sailed into the telegraph-office and rapped on the counter. The clerk remembered that she had been there about ten minutes before as he came forward to meet her. He wondered what she wanted this time.

"Oh," she said, "let me have that telegram I wrote just now; I forgot something very important. I wanted to underscore the words 'perfectly lovely' in acknowledging the receipt of that bracelet. Will it cost anything extra?"

"No, ma'am," said the clerk, as he handed her the message.

The young lady drew two heavy lines beneath the words, and said:

"It's awfully good of you to let me do that. It will please Charley so much."

"Don't mention it," said the clerk. "If you would like it I will drop a few drops of violet extract on the telegram at the same rates."

"Oh, thank you, sir. You don't know how much I would appreciate it. I'm going to send all my telegrams through this office, you are so obliging."

And the smile she gave him would have done any one good, with the possible exception of Charley.—Collier's Weekly.

TRITE TRUTHS

Many of us are willing to work in the Lord's vineyard as long as the Lord works in ours.—Puck.

Mrs. Youngwife—"The baby talks incessantly. I think he will grow up to be a congressman."

Mr. Oldbach—"I wouldn't worry about it if I were you. Maybe he'll be a barber."—Philadelphia Record.

"I would lay down my life for you, darling," he whispered, passionately.

"Would you lay down a carpet?" she asked; for she was a practical girl, who viewed life seriously.—Philadelphia Record.

One should try to be satisfied with his own lot, whether it is a corner lot or not.

I don't see why men want to dye their own whiskers; they never fool but one person.

Some men are counting upon getting to heaven because they have never been in jail.—Arkansas Thomas Cat.

"George Billson, why didn't you wipe your muddy feet?"

"I'm showing my deep sympathy for the Boers, mother."

"In what way?"

"Making treks."—Cleveland Plain Dealer.

"What does this mean?" said old Mr. Snooter, who was poking around in the grocery. "I see you have this labeled 'Agnualdo syrup.' Do you mean to tell me that we are getting unapple-syrup from the Philippines?"

"Oh, no," the clerk replied; "it runs well, that's all."—Chicago Times-Herald.

LOTS OF MAIL ..FREE..

THIS IS A BIG OFFER READ IT.

Put your name and address in our guaranteed Agents Directory which goes whirling all over America to firms, who will send you free samples of papers, magazines, pictures, cards, medicines, etc., etc. You will receive lots of mail. We must have 50,000 new names at once for our Directory, no matter how great the cost will be to us; we must have the names, and in order to obtain them quickly, we will send you by return mail, **Free of Cost**, all of the following named goods: One fine Map of the U. S., 36 New Songs, Pictures of all the Presidents, 25 Pictures of Actresses, 12 Comic Pictures, One Coin Value Guide, One Stamp Value Guide, 6 Best Agents' Articles, (worth \$1.50) One large Catalogue (rare goods) and a One Dollar One Bill, which entitles you to \$1.00 worth of goods, absolutely free from our list. **HOW CAN WE DO IT?** This Grand Offer is made to introduce our goods. We want you to trade with us regularly, and recommend us to your friends. We know you will surely do it when you get these goods. Send your name and address today and enclose 10 cents (coin or stamps) to pay postage, packing, etc. Just as soon as we receive your letter we will send all of the above mentioned goods to you. This is a tremendous offer. Don't wait, write today. Address your letter to **AGENTS' DIRECTORY CO., 878 Dearborn Street, Dept. M-44 CHICAGO, ILL.**

FREE

Ladies' or Gents' size WATCHES, RINGS, WATCH-CHAINS AND CHARMS, &c. As a grand premium, any one can earn this Beautiful Gold Plated Hunting Case Stem Winder Watch, Charm and Chain, a perfect time-keeper, by selling our **ELECTRIC LAMP WICKS.** They can be sold in a few hours. They are practically indestructible. No trimming; no smoke; no smell.

OUR SPECIAL 90-DAY OFFER, which is apart from the above: Send us your name and address (no money); we will send you 20 wicks, postpaid; sell them at 5 cts. each and remit us \$1. and we will mail to your address, **free**, a Beautiful Gold Plated WATCH-CHAIN AND CHARM, also a Handsome Gold Finished Ring. **ELECTRICAL WICK CO., Dept. T, Orange, N. J.**

DEALERS CUT IN TWO

Musical Instruments of all Kinds fine toned and of beautiful construction, workmanship and finish. Shipped direct from factory at wholesale prices C. O. D. with privilege of examination. We have the best for the least money.

A sweet toned Mandolin, finely finished in mahogany and maple, 9 ribs, \$4.00, dealers ask \$8.00; high grade Guitar \$2.90, worth \$6.00; Stradivarius Model Violin, case and full outfit, \$8.15 equal to any sold at \$6.50; Banjos \$1.25 and up; Graphophones \$5 and up.

PIANOS and ORGANS sent on 30 days **FREE TRIAL.** A \$350 high grade Kenwood Piano \$155. A \$75 Organ \$32.50. Pianos now as low as \$29. All instruments guaranteed. Send for large illustrated Catalogue **FREE.** Address: **CASH BUYERS' UNION, 160 W. Van Buren St., B. 7, Chicago**

SOLD FREE

Solid GOLD or SILVER free to any one for selling 50 sets of our **LADIES' or GENTS' Solid Gold or Silver Bracelet** sent for 25c. a set (each pin jewel). Simply send we will send you the money. The chain is the lock opens with a dainty little key. We trust you & will take back all the pins you cannot sell. Write to-day.

THE MAXWELL CO., Dept. 555, St. Louis, Mo.

\$1,000 YEARLY SALARY PAYABLE WEEKLY WITH EXPENSES

MEN or WOMEN to represent us in their own state. Your duties to take charge of solicitors and attend to collections. **NO INVESTMENT REQUIRED.** Send stamp for Application Blank. **CO-OPERATIVE CO., 208 Star Bldg., Chicago.**

SONGS Latest and Popular.—"Break the News to Mother," "Hello Ma Baby," "Just One Old," "She Was Happy 'Till She Met You," "She Was Bred in Old Kentucky," "Just as the Sun Went Down," "There's Where My Heart is Tonight," and many 200 others, and our new "Guide to Marriage," all for **10 CENTS.** Too good to miss. **WALKER PUBLISHING CO., (D), CHICAGO.**

WATCH PROTECTOR

Mailed for 15 cents, stamps or coin. Secures your watch from pickpockets.

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ONE YEAR FOR 10 CENTS

We send our large 16-page, 64-col. monthly paper devoted to Stories, Home Destinations, Fashion, Household, Garden, Cards, Poultry, etc., one year for 10 cents. If you also send names and addresses of six lady friends. **WOMAN'S FARM JOURNAL, 4306 Easton Ave., Saint Louis, Mo.**

FAMILY RECORD A beautiful picture; rich colors; background solid gold. Tremendous seller. Agents delighted. Sample free for 12 cents to pay postage and advertising, nine for \$1, post-paid. **HOME ART PICTURE CO., Chicago, Ill.**

"THE NICKEL SPEAKER" 50 cts. A YEAR 5 cts. A COPY.

50 new pieces each month, for all grades. **Toledo, Iowa.**

These Four Preparations Free To You.

Step By Step the Slocum Treatment Cures Consumption

Dr. Slocum, the famous scientist, whose lectures and demonstrations in New York and London this winter have astounded medical circles, has at last perfected his new system of treatment for the absolute cure of tuberculosis and all pulmonary diseases.

This triumphant victory over the deadly bacilli is far-reaching in its effects, for there is no longer room for doubt that the gifted specialist has given to the world a boon that will save millions of precious lives.

Dr. Slocum's System of Treatment is both scientific and progressive, going as it does to the very source of the disease and performing the cure step by step.

First Step—Killing the life-destroying germs which invest the lungs.

Second Step—Healing the raw, inflamed mucous surfaces which are favorable to germ growth.

Third Step—Toning the entire system and strengthening the nerves—filling the veins with tingling new life.

Fourth Step—Building healthy flesh and fortifying against future attacks.

The Slocum Treatment is revolutionary because it provides a new application for every stage of the disease. The failures of inoculation by Paris scientists are overcome by Slocum through progressive drug force. The diseases leading to consumption are also mastered so that once the bacilli are removed from the lungs there remains no other germ-breeding menace.

The Slocum System cures grip and its baneful after-effects, dangerous coughs and colds, catarrh, bronchitis, and every known form of pulmonary disease.

It makes weak lungs sound, strengthens them against any ordeal, and gives endurance to those who have inherited hollow chests, with their long train of attending dangers.

To enable despairing sufferers everywhere to obtain speedy help before too late, Dr. Slocum offers

FULL FREE TREATMENT

to every reader of the FARM AND FIRESIDE.

Simply send your post-office and express address to **Dr. T. A. Slocum, 98 Pine Street, New York,** and from the great laboratories will be sent without delay a **FREE** course of the famous four preparations comprising the Slocum System of Treatment.

Let no previous discouragements prevent your taking advantage of this splendid free offer before too late.

\$500.00 IN GOLD FREE.

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| E | O | W | A |
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| C | Y | O | G |
| O | N | C | A |

HERE is a chance to use your Brains and Win \$500.00 in Gold. We want you to try and arrange these 20 jumbled letters printed in the block square to the left which properly arranged will spell the names of 3 large cities in the World, two of these cities being in the United States, the other one being a Mexican City. In making the 3 names the letters can only be used as many times as they appear and no letter can be used which does not appear. After you have found the 3 correct names you will have used every letter in the 20 exactly as many times as it appears. If you cannot find the 3 correct names but only find 2, you will receive a special prize for your trouble worth \$1. If you answer this puzzle at once you will not be disappointed. Someone is going to win the money and it may be you. Anyway it does not cost you any money to try. All we ask is that should you be a successful contestant and win a prize that you will secure for us one yearly subscriber to our Handsome Illustrated Monthly Magazine. This we can truthfully say is the very best puzzle ever advertised, so get out your Geography and look for these 3 cities. The correct names are only known to the President of this Company. The envelope containing the three names has been sealed and deposited with a leading Banking Co. in Boston, and will only be opened up the day after the contest closes, April 28th. This we believe is the only honest way of conducting a contest, as everyone has an equal chance. In case more than one person succeeds in finding the three correct names we will divide the money equally. In addition to the \$500.00 in gold we will give you an opportunity to Win

\$5.00 A WEEK FOR LIFE FREE

WITHOUT ANY LABOR OR EXPENSE.

We are going to give to some one who has entered this contest and who complies with the conditions as stated above an opportunity to win and secure from us without any labor or expense on their part \$5 every week during their natural life. We mean just what we say. There is no deception and no trickery about this offer. If you are the lucky one, and we hope you are, for some one will get it, we will send the winner every week during their natural life \$5, or else \$250 every year in advance for life, whichever way they prefer. Do not throw this contest aside and say, Oh, pshaw I have answered puzzles before and never got anything, or else only secured a few cents for my trouble, for if you do this you will regret it as long as you live. Some one is going to win the money, and it may be you. No one can tell, anyway it does not cost you one cent, as we do not want any money from you. Are the prizes worth trying for? We think they are, for \$5 a week paid to you for life will keep one from the Poorhouse, and to those who have a small income, it will supply them with many a necessity which one has to do without in these hard times. Of course we are strangers to you, and you have no assurance except our word that we are financially able to carry out the promises we make. If you have the least doubt, we would be pleased to have you write to the Federal Trust Co., of Boston, one of the largest banking houses here, to whom we refer by permission of their honorable President. We are a responsible company, with a paid-up capital of one hundred thousand dollars, composed of honorable and well known business men of Boston. We want to secure a large list of subscribers to our Magazine, and will leave no stone unturned to accomplish by honest methods only, our object. Every one entering this contest will receive honest treatment, and you will have the same chance whether you live in California or Massachusetts. Distance makes no difference. After you have carefully arranged the twenty jumbled letters into the three cities which you think are right, send your answer to us at once, enclosing a two-cent stamp for reply and you will immediately receive an answer telling you whether you will be entitled to a prize, and also send you full particulars how you can win \$5 a week for life. Don't delay. Address

The Bernard-Richards Co., Ltd., 100L Broad St., Boston, Mass.

BIG COMMISSIONS TO LADY AGENTS
Lady agents for McCabe corsets and fine undershirts get generous commissions and make big money because the goods sell on sight—varying styles for different figures—prices within reach of all. Write for particulars.
ST. LOUIS CORSET COMPANY, ST. LOUIS, MO.

WANTED AGENTS In every county to sell "FAMILY MEMORIALS;" good profits and steady work. Address **CAMPBELL & CO., 165 Plum St., Elgin, Ill.**

DEW OF EDEN the Egyptian Perfume. Sample by mail 10 cents. **E. SMITH, Box 229, Savannah, Ga.**

CARPETS, Rugs and Draperies

From the Famous Maryland Mill at 40 to 60 per cent. below retail prices



IT IS your own fault if your Carpets, Rugs and Draperies are not prettier, more stylish and cheaper than your neighbor's. The way to accomplish this is to drop us a Postal for our 16-color lithographed catalogue, which shows every color, flower and figure of a carpet as plainly as though you were looking at the goods—this also applies to our Rugs, Art Squares, Portieres, Lace Curtains and Bed Sets.

184 different patterns of goods are shown in this exquisite book, so that there will be no difficulty of your not having a large assortment from which to choose. With this book in your possession you will know in advance exactly how a Carpet will look on your floor or a Curtain at your window or doorway.

Our Carpets range from 32c. to \$1.17 per yard. Here are a few specimen bargains:

- Victoria Wilton Velvet Carpet, \$1.10 per yard
- Baltimore Brussels Carpet, .56 per yard
- J. H. & Son's Woolen Ingrain Carpet, .47 per yard
- Maryland Smyrna Carpets, 12x9 ft., 15.75 each
- Sultan Tapestry Portieres, 2.95 per pair
- Irish Point Lace Curtains, 2.10 per pair

A quality sample of each grade of carpet is mailed for a 2-cent stamp. Price of samples may be deducted from your carpet order.

We Prepay Freight, Furnish Wadded Lining Without Charge, Cut and Sew all Carpets Free

We also issue a 304-page catalogue of everything to eat, use and wear, which contains some exceptional Furniture bargains. Our catalogue of Men's Made-to-Order Clothing, with large cloth samples attached, is now ready. Which book do you want? Address this way:

JULIUS HINES & SON

Department 312 BALTIMORE, MD.



This Neat Little Garment is a Combined

Bust and Skirt Supporter

It comes quite to the waist line, is self adjusting and fits beautifully. In ordering give bust and waist measure. Price in drab, white, black or netting, \$1.00 postpaid.

We Want Agents for this fast selling Waist, and to any lady who sends us, with her order, the name and address of one good agent, we will allow a reduction of 30 cts. in the price, making the cost 70 cts. instead of \$1.00.

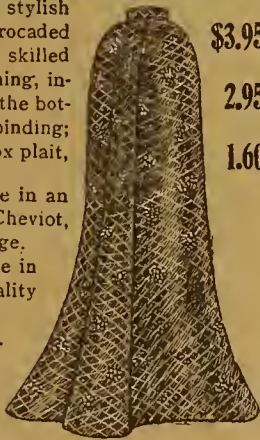
The Crescent Works, Manufacturers of High Grade Custom Corsets, Waists and Skirts, 21 Main Street, Ann Arbor, Mich. General Agents Wanted.

TAILOR-MADE SKIRTS

\$3.95 For this stylish black, brocaded Satin Skirt, made by skilled tailors. Percale lining, interlined, stiffening at the bottom, fine velveteen binding; latest design; new box plait, like cut. **\$3.95**

\$2.95 Same style in an all-wool Cheviot, or all-wool Storm Serge. **2.95**

\$1.60 Same style in a fine quality black, silk finished, brocaded Brilliantine. Give waist and length measure. Money refunded if not satisfactory. Write for Catalogue. **1.60**



Crescent Cloak Co., Dept. B, 177 Adams St., Chicago.

Reversible LINENE Collars and Cuffs.

Stylish, convenient, economical. Made of fine cloth, finished in pure starch, and exactly resemble fashionable linen goods. **No Laundry Work** When soiled discard. Ten Collars or five pairs of Cuffs, 25cts. By mail, 30cts. Send 6 cts. in stamps for sample collar or pair of cuffs. Name size and style.

REVERSIBLE COLLAR CO., Dept. C, Boston, Mass.

The ROCKER WASHER

WARRANTED to do the family washing, 100 PIECES IN 1 HOUR. No need for washboard; no wear on clothing. Write for special prices and description. **ROCKER WASHER CO.** 200000 in Use. Clinton St., Ft. Wayne, Ind. Liberal inducements to live agents.

WE SHIP ON BICYCLE \$1.00 DEPOSIT

\$11.75 Buys a Bicycle Complete. Unwarranted.

\$16.50 Buys an Up-To-Date Model. Fully warranted.

\$22.50 Buys a Full Racing Model. Shop-worn Bicycles from \$10 up. 2nd Hand Wheels from \$5.00 up. We want agents everywhere. We want agents everywhere. We want agents everywhere. Write for catalogue and see how you can get a Bicycle free by helping us advertise. Address Dept. B43, VICTOR MANFG. CO., 161-167 Plymouth Pl., Chicago, Ill.

DYE WITH NEW PERFECTION DYES AND GET Bright, Even Colors. FAST to Light, Air, Soap and Acids. Strong! Simple! Sure! A large pkg., any color, mailed for 10 cents; 3 for 25 cents; 6 for 40 cents. Agents wanted. New dye book FREE. CUSHINO & CO., FOXCROFT, MAINE.

HOUSEHOLD

[CONTINUED FROM PAGE 13]

CROCHETED POWDER-HORNS

ABBREVIATIONS.—Ch, chain; st, stitch; s c, single crochet.

This wheel is very pretty for tidies, mats, doilies, etc. Make fifteen chains, and join to form a ring.

First round—Make 10 ch, and catch in fourth st from joining with a s c, 10 ch, skip 3, and catch in the next st with a s c, 10 ch, skip 3, and catch in next st, 10 ch, and catch in st next to first ch.

Second round—10 ch, catch with a slip st in the fifth st of the first 10 ch, 5 s c over the remainder of the ch; repeat in this manner for each of the 3 remaining 10 ch.

Third round—10 ch, and catch with a slip st in the fifth st of the last 10 ch of the second round, 5 singles over the remainder of the ch, and 1 over each of the first 3 singles underneath; repeat as before for the entire round.

Fourth round—10 ch, catch in sixth st of next ch, 5 singles over last ch of last round, single in each of the 6 singles underneath; repeat for the round.

Fifth round—10 ch, catch in sixth st of next ch in last round, 5 singles over the remainder of the ch, 1 single in each of the 9 singles underneath; repeat for the entire round.

Sixth round—10 ch, and catch in sixth st of next ch, 5 singles over the remainder of the ch, 1 s c in each of the 12 singles underneath; repeat for the entire round.

Seventh round—10 ch, catch sixth st of next ch, 5 singles over the remainder of the ch, 1 single in each of the next 15 st; repeat for the entire round.

Eighth round—10 ch, catch in sixth st of next ch, 5 singles over the remainder of the ch, 1 single in each of the next 18 st; repeat for the entire round.

Ninth round—10 ch, and catch in next ch with a s c, 10 ch, 1 single over each of the next 20 singles underneath; repeat for the entire round.

Tenth round—10 ch, catch with a single in the next ch, repeat once more 10 ch, skip 1 single, 1 single in each of the next 17 singles; repeat for the entire round.

Eleventh round—10 ch, catch in middle of next ch, and repeat twice more, 10 ch, skip 1, 1 single in each of the next 14 singles; repeat for the round.

Twelfth round—10 ch, catch in middle of next ch, and repeat three times more, 10 ch, skip 1, 1 single in each of the next 11 singles; repeat for the entire round.

Thirteenth round—10 ch, catch in middle of next ch, and repeat four times more, 10 ch, skip 1, 1 single in each of the next 8 singles; repeat for the entire round.

Fourteenth round—10 ch, catch in middle of next ch, and repeat five times more, 10 ch, skip 1, 1 single in each of the next 5 singles; repeat for the entire round.

Fifteenth round—9 ch, catch in middle of next ch, repeat 10 ch, catch in middle of next ch, and repeat five times more from repeat, 9 ch, skip 1, 1 single in each of the next 3 singles; repeat for the entire round.

NAOMI S. MATTISON.

WHEN INVITED TO DINNER

If possible accept or reject the invitation within a few hours after it is received, and never in a vague way. Having accepted an invitation, remember that you are socially under an obligation to help make the dinner a success. Be sure to be prompt, and not arrive when the dinner is on the table.

Open the napkin full size, and do not fold it at the conclusion of the meal.

Do not chatter, so that it would be impossible to ask a blessing.

Never seem in a hurry to commence eating, nor ask for a second helping of any course.

Always dip the spoon from you in taking up soup. Do not break crackers or bread in it; use that in your left hand to bite off between sups. At an informal dinner the hostess serves the soup, salad, dessert and coffee.

Separate plates are no longer used for vegetables; they are cooked dry enough to be put on the plates with the roast.

Only vegetable salads should be served at dinner.

It is decidedly ill bred to parade one's dislike of a dish. If it is especially objectionable decline by a glance, or motion it may be.

Use forks with frozen puddings or creams.

Black coffee is served as an aid to digestion, and should not be accompanied by cream.

LAURA CARPENTER.

WELL, THEY DON'T GET AHEAD OF COLUMBIAS AND HARTFORDS!

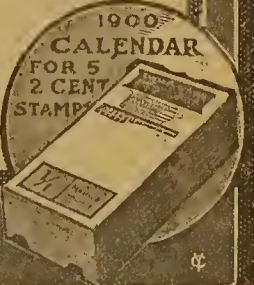
THE Columbia Chainless, by reason of its cleanliness and the small care necessary to its maintenance in perfect order, is rapidly adding new recruits to cycling, and inspiring thousands of old riders with renewed enthusiasm for the healthful pastime and sport.

Our new coaster brake, applicable to both chainless and chain machines, is another feature for 1900 that will please old riders and make new ones. \$5.00 extra.

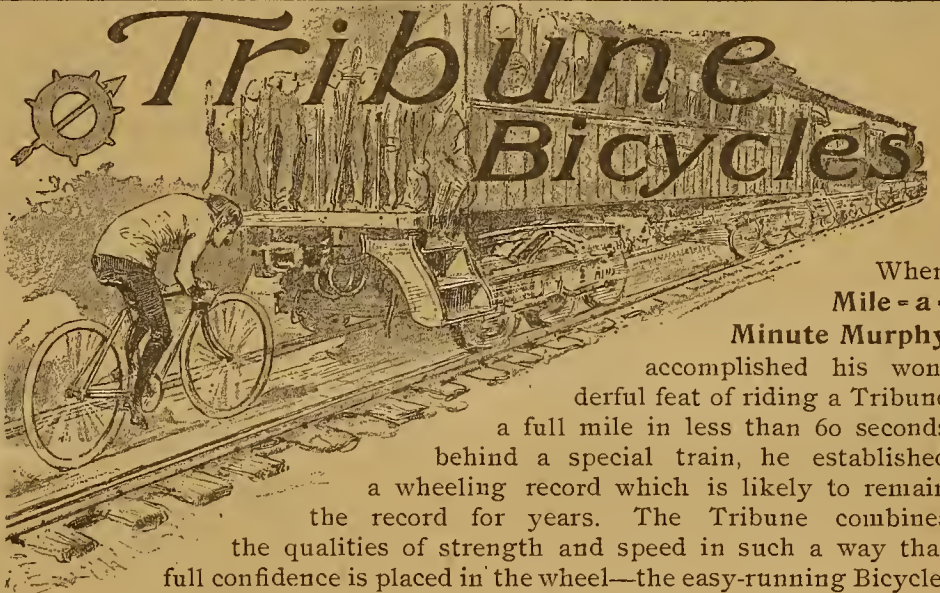
COLUMBIA, HARTFORD, STORMER and PENNANT chain wheels for 1900 contain many new and exclusive features.

Prices: \$75, \$60, \$50, \$35, \$30, \$25

Columbia and Stormer catalogues free of any Columbia or Stormer dealer, or by mail for two cents each.



AMERICAN BICYCLE COMPANY
POPE SALES DEPARTMENT
HARTFORD CONN



When Mile-a-Minute Murphy

accomplished his wonderful feat of riding a Tribune

a full mile in less than 60 seconds

behind a special train, he established

a wheeling record which is likely to remain

the record for years. The Tribune combines

the qualities of strength and speed in such a way that

full confidence is placed in the wheel—the easy-running Bicycle.

Send for TRIBUNE CATALOGUE.

Roadsters, \$25 and \$35 30-inch Wheels, \$40

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FARM SELECTIONS

LAWN-MAKING

ONE of the greatest problems in general gardening is the production of a good turf and maintaining it. Yet it is easy to solve, too, if carefully attended to. The chief thing is to start right. There should be a good, rich, loamy top soil six inches in depth, at least, in which the seed should be sown. Unless for some very good reason, which would seldom be the case, one kind of grass only should be sown, which will make an even, regular growth if cared for. Dishonest contractors are occasionally to be met with who do not hesitate to "skimp" with the top soil, and a weak, stunted and tufted growth of grass is the result.

Kentucky blue-grass is the most popular and best for more northern states, being very hardy and close-growing. It is a famous pasture-grass, and thrives in almost all soils. For excessively dry soils, where it has been found difficult to establish ordinary grass, sheep fescue, a very fine, "silky" grass, will be found admirable. Around the base of large trees where it is not also shady it will grow right up to their trunks. This is also recommended for sowing in sod which is troubled with annual grass or weeds, as it may be cut very close and the annuals prevented from seeding. While telling what to do it is well to add what to avoid. Whatever kind of grass is employed to seed with, it should be of a slightly creeping and not of a tufty character. It is impossible to make a close, even carpet with a tufty grass.—Meehan's Monthly.

AIR-CHURNS

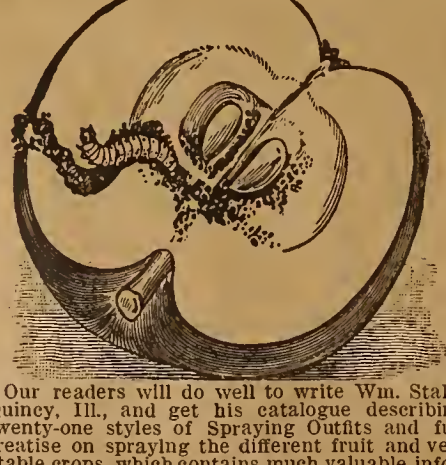
Answering a query about air-blast churns "Hoard's Dairyman" says: "We have several times made reference to this class of dairy implements in the columns of the 'Dairyman,' and always adversely. We have seen no reason to change our opinion. There is nothing in any churn of this class that makes it superior or as good as the common box or barrel churn in yield of butter, nor is it any advantage to bring the butter in one or five minutes. It may be taken as a rule that any butter that comes in less than thirty minutes will not have a fine grain, and is liable to be slushy or salvey. "The forcing air through cream is nothing new; it has been tried and given up many times. We note that the circular claims that after the butter has been removed by this churn the remaining cream (?) can be used for coffee. We should suppose that sweet cream with the butter fat removed would be skim-milk, hardly a valuable addition to a cup of coffee."

SKUNK-FARMS

Not a week passes without our receiving several letters from persons who wish to breed skunks for their fur. Several years ago, in an unlucky farm, we printed an account of a skunk-farm in Livingston county, New York. That article surely had strength, for its memory is still vigorous. This farm was closed out shortly after our article was printed. It was declared a nuisance by the neighbors. Skunks will not thrive in captivity, and we regard the scheme of breeding them successfully in colonies as out of the question. We have but one word of advice about skunk-farming—Don't! We wish we could make noise enough with that word to stop some of the people who are evidently bent on throwing their money away.—Rural New-Yorker.

SPRAYING FRUIT-TREES

The question of spraying fruit-trees to prevent the depredations of insect pests and fungus diseases is no longer an experiment but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

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Instead of scouring and rubbing each piece of silver separately, the whole service can be as effectively cleaned in a few minutes. After each meal the silver should be put into a pan (kept especially for the purpose) and cover with lukewarm water, to which a teaspoonful of

Gold Dust Washing Powder

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SELECTIONS

KILLING SOLDIERS

THE fact that most of the artillery practice in the Transvaal war has appeared so ineffective on both sides need surprise no one. It is a well-known fact that on an average only one bullet out of five hundred fired in battle strikes home.

During the Franco-German war the German artillery fired 340,000 shots, and the infantry 20,000,000. This terrible hail of shot and bullets resulted in a loss of 45,000 men to the French. Thus, every Frenchman killed involved an expenditure of bullets sufficient to kill a regiment.

Of the 45,000,000 bullets fired by the Russians during the Crimean war, 44,952,000 failed to fulfill their errand of death. The remaining 48,000 alone, which could have easily been fired by a single regiment within the space of an hour, found their billet. This means that 910 bullets were fired before a single soldier of the allied troops was killed.

The British in the same war were more fortunate in their aim. Of 15,000,000 bullets fired, 21,000 were fatal; one bullet out of every 700 fired thus accounting for one Russian.

The French soldiers, it is estimated, fired 29,000,000 bullets, which resulted in the death of 51,000 Russians, or at the rate of one fatal bullet to every 590 shots fired.

This would make it appear that the Frenchmen are better shots than Englishmen; but as a matter of fact, the French total of hits was brought up so high only by one or two of the last actions at close range.—Collier's Weekly.

A HINT TO PROSPECTIVE TOURISTS

Some people are eager to commission you, when you go on a voyage, to make purchases for them, but they forget to give you the money to buy with. Artolo, an Italian vicar celebrated for his witticisms and pleasantries, embarked for a voyage, and was desired by many of his friends to make purchases for them in the countries to which he was going. Some of them gave him memoranda, but there was only one who had the sense to add the necessary money to pay for the merchandise sent for. The vicar expended his money in accordance with the memorandum, and gave no thought for the commissions of the others. On his return home each one came to inquire if he had made his purchase. "Gentlemen," said Artolo, "when I had gone on board I laid out all the memoranda on the deck of the ship, with the design of putting them in order; but there came a wind which took them all overboard. Being unable to recollect what they contained, it was impossible for me to perform your commissions."

"Yet," answered one of them, "you made a purchase for such a one."

"That is true," replied the vicar, "but the reason was because he put into his memorandum the money needful to pay the price, and the weight thereof prevented the memorandum from becoming the sport of the winds, and that put me into condition to make the purchase desired."—Exchange.

COMPRESSED CORK AND ITS USES

Cork, as every one knows, is one of the best non-conductors of heat and sound. That it has not been more widely used in building is due chiefly to the difficulty of obtaining it in an unadulterated form. A product called cork tiling has recently been placed upon the market, which is made of what is known to the trade as "virgin cork," ground, compressed, and otherwise treated by patented process, and which is free from the cement and glue usually employed to hold the particles together. We are informed that these tiles made of this pure compressed cork form an admirable flooring, which, besides being noiseless, water-proof, warm and germ-proof, is capable of withstanding hard usage. By varying the degree of compression, and modifying the manufacturing process slightly, sheets of cork different in color and density are obtained, which, when sawed and finished in the form of panels, can be used for wainscoting alone or in connection with cork-tile floors. Cork compressed into sheets and sawed to the size and thickness desired constitutes a very efficient pulley covering. It is said that a pulley covered or lagged with compressed cork will transmit from fifty to sixty per cent more power than one having only a smooth iron surface.—Scientific American.

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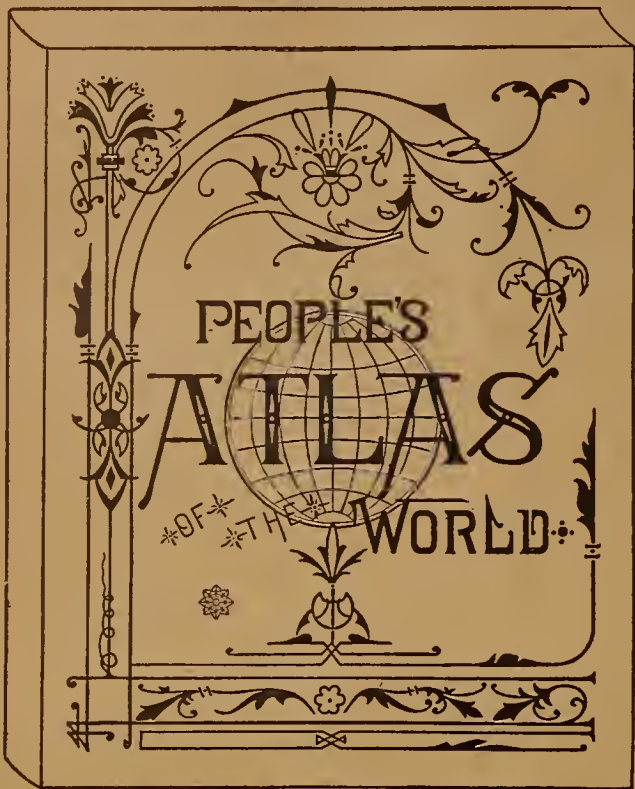
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SEEDS 10 full packets CHOICE VEGETABLE Seed 10 cts. 20 pkts. (500 varieties) RARE FLOWER SEEDS 10 cts. 17 pkts. NEW SWEET PEAS 10 cts. All 42 pkts. 25 cts. J. J. BELL, DEPOSIT, N. Y.

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Size 19x12 1/2 inches. Showing the entire theater of military operations and garrisoned points. Exhibits the exact boundaries of the Philippines as defined in the Treaty of Peace with Spain.

CHINA AND THE FAR EAST

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The New People's Atlas Contains 250 Maps and Illustrations

It contains 143 pages (each page is 11 inches wide and 14 inches long), and should be in every home and school-room. **IT IS UP TO DATE; IT IS COMPLETE; IT IS EDUCATIONAL; IT IS CHEAP.** It gives the population of each state and territory, of all counties in the United States, of American cities, by the last census. The excellent maps of all the states and territories in the Union are all large, full-page, and a number of double-page maps to represent the most important states of our country.

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All countries on the face of the earth are shown. Rivers and lakes are accurately located. All the large cities of the world, the important towns and most of the villages of the United States are given on the maps. It gives a classified list of all nations, with forms of government, geographical location, size and population.

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Or Either Collection, and the Farm and Fireside One Year, for 50 Cents.

By ordering many months ahead and having 25,000 of each of these collections grown especially for our use we were enabled to get them at practically the cost of production. To induce subscriptions and clubs we now offer these plants as premiums in connection with the FARM AND FIRESIDE at just what they cost us. *All of the plants will be large, healthy and well rooted,* and will bloom the coming season. We guarantee them to be exactly as described, to arrive in perfect condition, and to give entire satisfaction or your money cheerfully refunded.

4 Beautiful Geraniums DOUBLE AND SINGLE FLOWERING

The Geranium has been wonderfully improved during the past few years. New colors, new styles and profusely blooming sorts have been developed. The collection here offered includes the latest and best varieties of this popular flower. They are unusually fine year-old plants. Order Geranium Collection by Premium No. 290.

FOUR DIFFERENT COLORS, AS FOLLOWS:

One pure snow-white, one splendid crimson-scarlet, one rich salmon, and one beautiful pink.

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Wonderful New Climbing Rose.. Empress of China This is a new Climbing Rose of the greatest excellence. It commences to bloom in May, and is loaded with its elegant blooms until December. The greatest objection to climbing Roses has been that they bloom once and then are done. But here we have a Rose that blooms continuously for over seven months of the year. It is simply wonderful. When it first opens the flower is a beautiful red, but soon turns to a lovely light pink, and it blooms so profusely as to almost hide the plant. Order Rose Collection by Premium No. 470.

THE COLLECTION OF 5 ROSES INCLUDES ALL OF THE FOLLOWING COLORS:

One Empress of China as described above, one clear, bright rosy red, one bright pink, one pure white, and one rich flesh-colored. All will bloom freely during the coming season.

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The collection here offered is made up of large, **double-flowering** Japanese Chrysanthemums, the direct offshoots of famous **prize-winning** varieties. This collection embraces *all colors known to the Chrysanthemum family*, and all shapes and forms, as incurved, recurved, twisted, whorled, ostrich-plumes, etc., also early and late bloomers. Order Chrysanthemum Collection by Prem. No. 558.

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ORDER NOW. It is almost certain that we will receive orders for more plants than the florists have agreed to furnish. Do not wait until you are ready to plant. If you do not want your plants until some later date, we will have them reserved and shipped when desired. When you order state the time you wish the plants sent. When the supply of plants is exhausted money will be refunded.

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(No more than one collection with one yearly subscription. When the above offer is accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

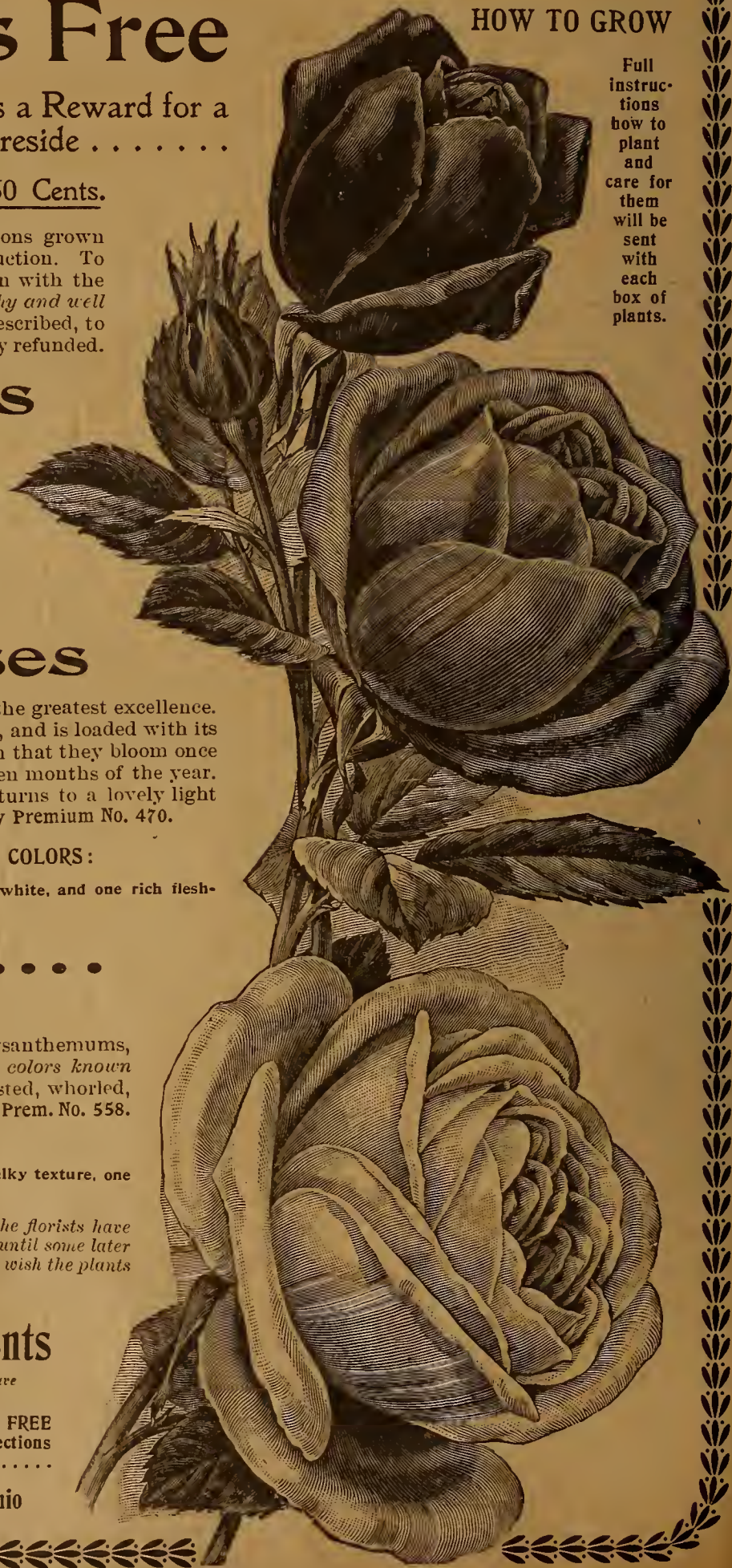
Free We will send either the collection of 4 Geraniums, or 5 Roses, or 6 Chrysanthemums FREE for a club of TWO yearly subscriptions to the Farm and Fireside; or any two collections for a club of FOUR; or any three collections for a club of SIX, and so on.

Postage on the plants paid by us in each case

Address FARM AND FIRESIDE, Springfield, Ohio

HOW TO GROW

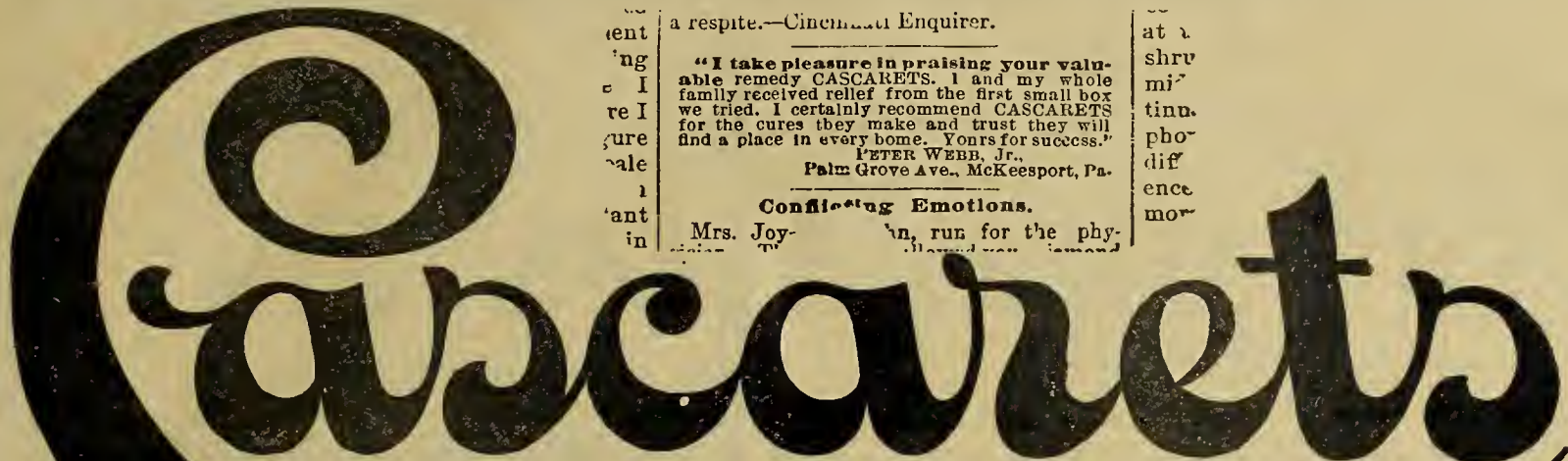
Full instructions how to plant and care for them will be sent with each box of plants.



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371

A Big Lot of Real Silk and Plush, also Stamped Satin

A Silken Shower from a Necktie Factory



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ART in needle work is on the advance. We know the ladies delight in odd pieces of silk and satin—"CRAZY QUILT" making is again VERY POPULAR. We are sure we have a bargain that all ladies will now delight in. Bright, handsome, odd-shaped, and pretty colored goods accumulate very fast at all NECKTIE FACTORIES; the styles were never so bright and pretty as they have been the past season and they are now burdened with remnants of many RICH GOODS. We have thousands of pieces of silk and satin on hand which we are going to give you a big trade on. People at a distance have hard times getting the right assortment to put into sofa-pillows, quilts, etc., and we can help you out now. We are going to dispose of this immense lot RIGHT OFF. Our packages contain from 99 to 168 pieces of the best quality assorted goods, and we want to get a lot introduced into every home; then you can order as you like for your friends, and MAKE MONEY doing our work and helping yourself also. Remember these pieces are carefully trimmed, and especially adapted to all sorts of fancy, art, and needle work. Many ladies sell tidies, fancy pillows, etc., at a great price made from these remnants. Order one sample lot now for only 25c. It would cost many dollars bought at a store. **Grand Offer:** If you order our great assorted lot AT ONCE, we will give you several rich, bright and beautiful stamped satin pieces; each piece contains nine square inches and being stamped by hand with a graceful design for embroidery, is a great bargain.

Five Skeins Embroidery Silks Free. In order to work your stamped satin and other pieces we also send absolutely FREE, five skeins of elegant embroidery silk, all different bright colors. This silk is worth nearly the price we ask for the remnants; but we know if you ORDER ONE lot we will sell many in your locality, so make this liberal offer besides giving you a large and elegant piece of Silk Plush containing 36 square inches.

BEST WAY. We send ONE of the above complete assorted lots FREE to all who send 25 cents for 6 months' subscription to "COMFORT" the best Home Monthly now published, and to your friends and neighbors we will send FREE with each lot. This is worth nearly the price we ask for the remnants; but we know if you ORDER ONE lot we will sell many in your locality, so make this liberal offer besides giving you a large and elegant piece of Silk Plush containing 36 square inches.

The book illustrates over one hundred and fifty of these besides directions for taking ART EMBROIDERY STITCHES, comprising the Outline and Kensington Stitch, Arrasene and Kensington Plaining.

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10 Weeks The biggest, brightest and best Western Weekly paper in existence. Grand views of scenery, stories of adventure and full mining reports weekly. Tenth year. Solely to introduce the paper it will be sent 10 weeks on trial for 10c.; clubs of six 50c.; 12 for \$1. Stamps taken. ILLUSTRATED WEEKLY, DENVER, COLO.

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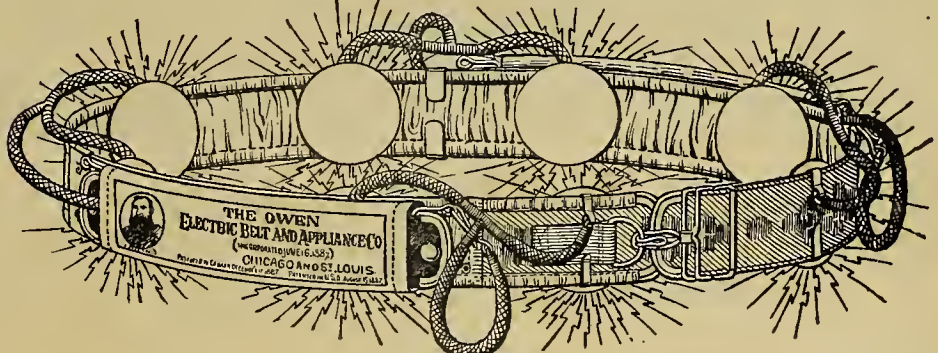
How to Reduce it Mrs. L. Lanier, Martin, Tenn., writes: "I reduced my weight 2 lbs. in 15 days without any unpleasant effects whatever." Purely vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 4 cents for postage, etc. HALS CHEMICAL CO., Dept. B, St. Louis, Mo.

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GRAY HAIR DARKENED Ozark Mountain Herbs for restoring Gray Hair to its Natural Color, Beauty and Softness. Prevents the Hair from falling out, cures and prevents Dandruff. Will not stain the scalp. Is superior to the many advertised preparations. Package makes one pint. Price 25 cents, by mail. Address K. DUBY DRUG CO., ROLLA, MISSOURI.

BED-WETTING CURED. Sample FREE. Dr. F. E. May, Bloomington, Ill.

Coe's Eczema Cure \$1 at druggists. 25c. box of us. COE CHEM. CO., Cleveland, O.

RECENT PUBLICATIONS

BOOKS NOTICED

THE SKIM-MILK CALF. By Henry Wallace. Price 35 cents. Published by the Wallace Publishing Company, Des Moines, Iowa.

A HANDBOOK FOR PLANNING AND PLANTING HOME GROUNDS. By Warren H. Manning, landscape architect. Published by the Stout Manual Training-School, Menomonie, Wis.

DIRECTIONS FOR SURVEYING AND ARRANGING HOME AND SCHOOL GROUNDS. Published by the author, Warren H. Manning, Secretary of the American Park and Outdoor Art Association, Boston, Mass.

KEEPING COWS FOR PROFIT. A treatise on up-to-date dairying, with statistical information, practical hints and suggestions, and some advice as to home butter-making and factory patronage. Free. De Laval Separator Company, New York.

THE MODERN FARMER IN HIS BUSINESS RELATIONS. A study of some modern economic and social conditions from the standpoint of the farmer. By Edward F. Adams, 8vo., 664 pages. Price, post-paid, \$2. Published by the N. J. Stone Company, 21 First Street, San Francisco, Cal.

FARMERS' ACCOUNT-BOOK AND FARM RECORD. A simple, comprehensive style of book-keeping for the farmer, by which a complete record of all business transactions, farm-work, farm sales and purchases, stock increase, etc., can be carefully and systematically kept. Published by E. A. Boehne & Sons, Hansen, Neb.

CATALOGUES RECEIVED

B. H. Greider, Florin, Pa. Illustrated catalogue of pure-bred poultry.

H. House & Co., Hiram, Ohio. Catalogue of seeds, plants and bulbs.

J. A. Everitt, Indianapolis, Ind. Annual catalogue of "O. K." seeds.

Archias' Seed Store, Sedalia, Mo. Catalogue of Northern-grown "Sure" seeds.

Floral Glen Greenhouses, Des Moines, Iowa. A message for the lovers of flowers.

L. L. Olds, Clinton, Wis. Catalogue of seed-potatoes and field and garden seeds.

L. Templin & Sons, Calla, Ohio. Illustrated catalogue of seeds, plants and bulbs.

L. L. May & Co., St. Paul, Minn. Illustrated catalogue of garden, flower and field seeds.

F. Barteldes & Co., Lawrence, Kan. Descriptive catalogue of garden, flower and field seeds.

Livingston's Seed Store, Des Moines, Iowa. Illustrated catalogue of seeds, bulbs and garden tools.

The Conard & Jones Company, West Grove, Pa. "New Floral Guide." Roses, plants and bulbs for summer bloom.

Power Specialty Company, 126 Liberty Street, New York. Illustrated pamphlet describing the "Rife hydraulic engine."

Lewis Roesch, Fredonia, N. Y. Descriptive catalogue of grape-vines, fruit and ornamental trees, shrubs, vines and plants.

Saginaw Basket Company, Saginaw, Mich., manufacturers of all kinds of baskets and fruit-packages. Calendar hanger in colors.

The Cyphers Incubator Company, Wayland, N. Y. Illustrated circular and price-list of incubators, brooders and poultry appliances.

American Well Works, Aurora, Ill. Illustrated "Encyclopedia," describing well-sinking, prospecting, irrigating and hoisting machinery.

L. J. Farmer, Pulaski, N. Y. Catalogue of berry-fruit plants, fruit-growers' supplies, etc. Specialty, a valuable new strawberry, the "Rough Rider."

McCormick Harvesting Machine Company, Chicago, Ill. Calendar hanger in colors. Large half-tone view of binders at work in North Dakota.

The "Standard" Sewing Machine Company, Cleveland, Ohio. Handsomely illustrated catalogue of family sewing-machines, both lock and chain stitch.

D. M. Ferry & Co., Detroit, Mich. Seed annual for 1900. Special color-plates. Paul Rose muskmelon, Telephone peas, and "the three finest globe onions."

W. Atlee Burpee & Co., Philadelphia, Pa. "Burpee's Blue List for 1900." Wholesale prices for market-gardeners and florists. Special list of cash prizes for 1900.

The Deuing Company, Salem, Ohio. Illustrated catalogue of spray-pumps and nozzles. Free. Also "Spraying for Profit," a practical handbook on spraying. Price 25 cents.

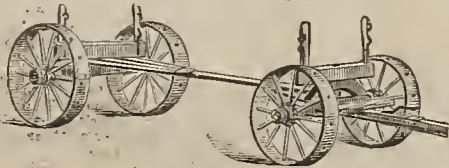
Wm. Henry Maule, Philadelphia, Pa. Illustrated seed-catalogue. Color-plates of carnations, five sterling novelties, dahlia collection, canna collection, and Briar Crest trial grounds.

L. W. Wakeley, General Passenger Agent Burlington Route, St. Louis, Mo. "To the New Northwest." A folder describing resources along the Burlington Route through Nebraska, Wyoming, Montana, Idaho, Oregon and Washington.

2.

FARM WAGON ONLY \$21.95

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon that is only 25 inches high, fitted with 24 and 30 inch wheels with 4-inch tire, and sold for only \$21.95.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

FARM SELECTIONS

ARTICHOKES

Artichokes should be planted about April, in land that has been deeply plowed and harrowed fine. Open furrows about five or six inches deep three and one half feet apart, and drop the sets eighteen inches apart in the furrows, and cover with the plow. Cut the artichoke sets into pieces, with one or two sprouting-points on each piece. We are only aware of one variety of tuberous artichoke. There is one grown for a vegetable, of which the head or flower-stalk is the part eaten, but the tuberous one is the variety used for hog feed. When the plants are up nicely harrow the land both ways, and again when they are nine or ten inches high. This is all the cultivation required. On land which made thirty bushels of corn to the acre they have made over four hundred bushels of tubers. Although Professor Massey has not a high opinion of artichokes as a feed for hogs or cows, yet those who have grown them and fed them speak highly of them. We have one subscriber who has increased his area every year for several years, and finds them of the greatest value both for his milk-cows and his hogs. He would not now be without the crop, and feeds large numbers of hogs with them and a little corn every year.—Southern Planter.

2.

BRISTLES

Charcoal and salt, in proportion of one eighth of the latter, are valuable correctors to a deranged digestive system.

Cholera is not only prompted by a filthy food and drink; but by bad sanitary conditions. The pens must be kept fresh and clean at all times.

The government formula given below will be found very effectual in checking this disease when an outbreak is feared, and also even after the first symptoms have appeared:

Wood charcoal, one pound; sulphur, one pound; sodium chloride, two pounds; sodium bicarbonate, two pounds; sodium hyposulphite, two pounds; sodium sulphate, one pound; antimony sulphide, one pound. To be thoroughly mixed and pulverized. This can be given in feed in doses of a teaspoonful to a tablespoonful, according to the size of the animal and severity of the attack.

Animals affected must be warmly housed and fed on milk, light slop or gruel. The quarters should be disinfected with slaked lime and crude carbolic acid, and all excrement collected and burned to prevent further outbreak.—Farm Journal.

2.

BA, BA, BLACK SHEEP

The largest flock of black Merinos in Australia is that raised by Mr. W. Allen, Braeside, Dalveen, Queensland. This flock was established in 1877 with black Merinos culled from some of the best flocks in Queensland. The sheep have since bred true to color, and at one time the flock numbered 2,000 head. At present it is reduced to 870 in all. The "Queensland Agricultural Journal" in a notice of this interesting flock mentions that the flesh of these sheep is darker in color than that of white sheep, sweeter, and has a distinctly gamey flavor. This flock is noticed in Bruni's "Sheep-breeding in Australia," where it is stated that in 1885 the whole of the fleece-wool was sold for one shilling six and one half pence a pound, which was about double the price realized for some of the white Merino wool grown in the district. When properly bleached before finishing the wool is said not to fade, and being uninjured by any dye it lasts for a long time. The black Merinos cut from one half pound to three quarters of a pound less than the average white Merino sheep. There are several other flocks of black Merinos in Australia.—Wool Markets and Sheep.

2.

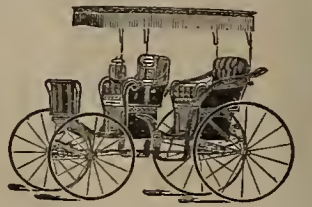
GUERNSEY MILK IN THE MARKET

The Guernsey is commanding attention and approval as a breed that is especially fitted for winter butter and cream, and when their positive character is generally recognized they will be largely used to produce a winter milk that has all the color and delicious flavor that is usually associated with the golden days, when the clover is in bloom and the pastures are knee-deep in grasses. There is no reason now for going through our long Northern winters deprived of dairy luxuries, and the men who provide them will reap the reward that awaits enterprise and skill. A dairyman must put high intelligence in his work to command success, and not drift with the masses and let chance be his only friend.—Winter Dairyman, in The Breeders' Gazette.

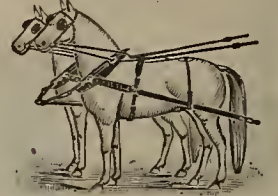
Cut the Cost of a Carriage



No. 3034 Buggy, made with surter seat. Price \$17.05 with leather quarter top.



No. 2042 Canopy Top Surrey. Price \$32.95.



No. 604 Team Harness. Price \$22.55.



No. 3034 Buggy. Price \$33.30 with leather quarter top.

by buying it of the makers. Pay only one, instead of two or three profits. No other factory can build finer, handsomer or more substantial vehicles than the surreys, buggies, phaetons, road wagons and carts which we ship direct to buyers—instead of selling through dealers. Our great facilities and long experience enable us to secure the highest quality of material and workmanship at the lowest cost.

We make harness as well as carriages and sell great quantities of robes, blankets and all horse accessories—all at lower prices than you'll be asked elsewhere. The purchaser may return anything with which he is not satisfied and get his money back.

Our complete catalogue—free on request—plainly pictures and describes our entire line. A careful reading will convince you that you can't buy so economically, safely or satisfactorily anywhere else.

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Has more good qualities than all others combined—cabled selvage and a cable every foot in height of fence. Requires fewer posts and No Top or Bottom Rail—PLEASING—SERVICABLE—PRACTICAL—ECONOMICAL—SATISFACTORY.

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We also make Hog, Field and Lawn Fencing.

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Worthington, Minn., June 12th, 1899. L. B. SILVER CO., Cleveland, Ohio. Gentlemen:—My O. I. C. brood sows (purchased from you) will weigh upward of 700 lbs., in breeding condition now; 11 and 12 pigs by their sides. I think my O. I. C.'s first-class. They take first premiums over all breeds wherever shown. Respectfully yours, WILSON AGER.

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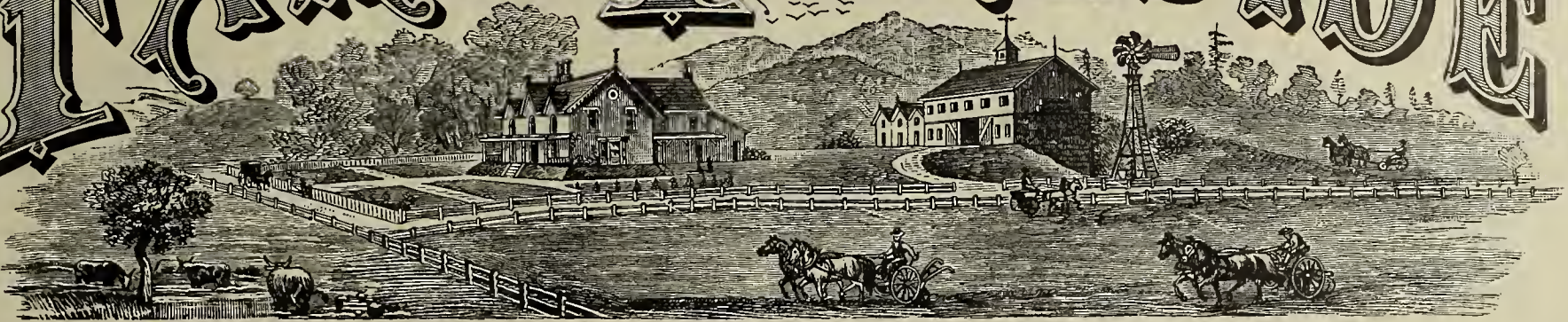
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FARM AND FIRESIDE



Vol. XXIII. No. 12

EASTERN EDITION

MARCH 15, 1900

Entered at the Post-office at Springfield, Ohio, as second-class mail matter

TERMS { 50 CENTS A YEAR
24 NUMBERS

ONE Peerless Picture FREE

To every one sending 35 Cents, the clubbing price, for One Year's Subscription to the Farm and Fireside.

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THREE Peerless Pictures given as a reward for sending TWO yearly subscriptions to the Farm and Fireside, new or renewals.

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VALUE Art-stores are now selling engravings of these famous paintings at from \$2.50 to \$10.00 each. Many competent judges, having made a careful comparison, pronounce our reproductions more attractive and desirable than these expensive engravings. There is no comparison in price, as we handle these pictures without any profit.

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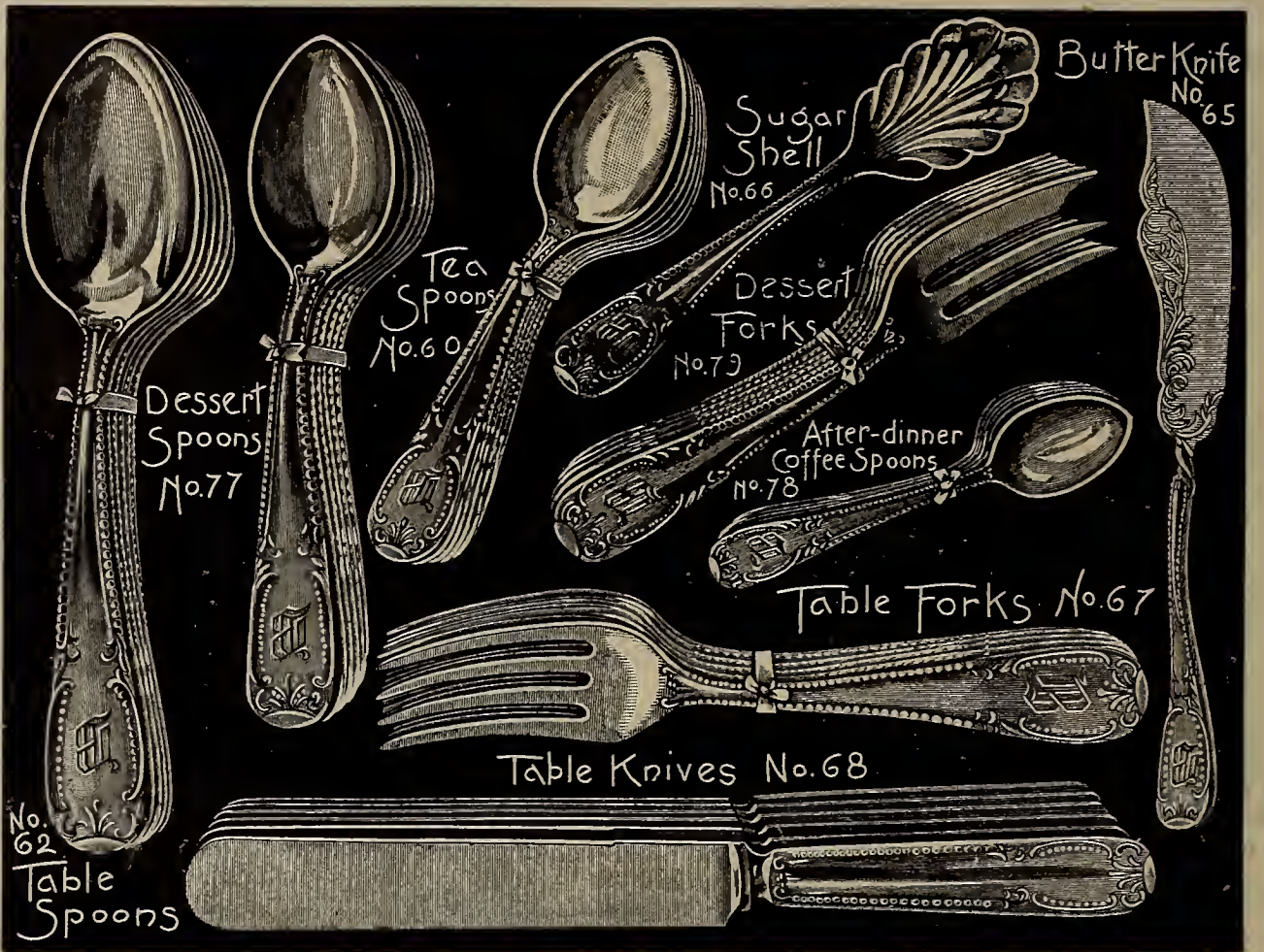
Pure Coin-silver Plating

The base of this ware, except the table-knives, is solid nickel-silver metal, which is the best white metal known for the base of silver-plated ware, because it is so hard and so white that it will never change color and will wear for a lifetime. The base of all this silverware is plated with the full STANDARD amount of pure coin-silver.

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Will Stand Any Test

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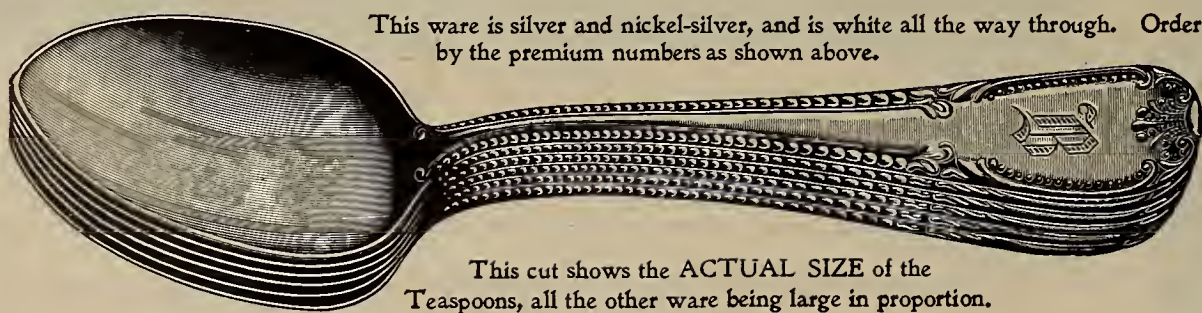


FROM MANUFACTURER TO USER

There is no middleman's profit added to the price of this ware, as we are satisfied to handle it without profit to get subscriptions and clubs, and pass it from the manufacturer to the user at manufacturer's cost plus the expense of postage and wrapping. In this way our subscribers get this ware at less than one half the usual price for a similar grade of goods. It is of first-class quality.

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We have handled this ware for years and have sent it into many thousands of homes, where it is now rendering general satisfaction. Hundreds of thousands of pieces of it have been sent out, covered by our guarantee, and complaints are practically unknown. We have thousands of testimonials as to its wearing qualities. A trial order is sure to be followed by others until you get the whole set.



This ware is silver and nickel-silver, and is white all the way through. Order by the premium numbers as shown above.

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GUARANTEE We absolutely guarantee every piece of this ware to be exactly as it is described and to give full and entire satisfaction or money cheerfully refunded.

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We will send the Farm and Fireside one year and the Silverware at these prices:

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- The Farm and Fireside 1 year and Pie-knife for65
- The Farm and Fireside 1 year and Gravy-ladle for65
- The Farm and Fireside 1 year and Child's Set (Knife, Fork and Spoon) for60
- The Farm and Fireside 1 year and Butter-knife and Sugar-shell (both) for .60

(When any one of the above offers are accepted the club-raiser may have either the regular cash commission or the name may be counted in a club)

SILVERWARE FREE

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- Set of 6 Teaspoons given free for a club of four subscriptions
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- One Berry-spoon given free for a club of four subscriptions
- One Pie-knife given free for a club of four subscriptions
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- One Child's Set (Knife, Fork and Spoon) given free for a club of four subscriptions
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(The following note gives instructions how to take subscriptions in clubs)

NOTE—Thirty-five cents is the clubbing price for yearly subscriptions to the Farm and Fireside without a premium to the subscriber. And members of clubs may accept any of our premium offers at the advertised prices and their names can be counted in clubs (unless otherwise stated in the advertisement). RENE WALS and new names, including a club-raiser's own subscription, can be counted in clubs. No reduction allowed in the clubbing prices.

Postage or expressage paid by us in each case

Address FARM AND FIRESIDE, Springfield, Ohio

THE FARM AND FIRESIDE

LIFE ON WESTERN SHEEP-RANGES

BY H. A. CRAFTS

THERE is a marked difference between the sheep business of the West and the sheep business of the East. In the East the herds as a general thing are small and are owned by farmers, who pasture them in well-fenced inclosures during the grazing season, and carefully house them during the winter. In the West the sheep-owner is seldom a farmer; he is simply a sheep-owner, and he herds his sheep upon the open range with but little shelter for them either summer or winter. His flock ranges in number from one thousand head to a hundred times that many, and his range extends sometimes for five hundred miles, overlapping from one state to another. In some cases he owns the range in fee simple; in others he grazes his sheep almost wholly upon the public domain. In some cases his deeded lands are in isolated tracts, but in the herding of his sheep from one tract to another there is very little feed left for after-comers, for in their migrations the sheep move slowly, as is unavoidable, and they nibble the grass and herbage as they go.

There are both individual and corporate owners, and some of the latter have such large herds that any attempt at herding within prescribed limits is not to be thought of. The sheep are divided into convenient bands, and each band is placed in charge of a foreman, a cook and as many herders as are necessary. Then each band starts out over the almost trackless plain with no other object in view than the finding of subsistence. They know no more permanent abiding-

place than does the Arab upon the desert. The right of neighboring herdsmen must be regarded to some degree, yet the general policy of the herder is to push his claim as far as the law will allow, if not a little farther. Between individual sheepmen there is seldom a clash; nor is there between individual cattlemen; but between the cattlemen and sheepmen there is an eternal war. The invasion of a cattle-range by a band of sheep is as destructive of the cattle interests as a prairie-fire would be. The sheep in grazing sweep everything in the shape of feed before them. They will even trim up the sage-brush and gnaw off the cacti down to the ground. The cattlemen resist such an invasion, often by armed force, and sheep are slaughtered and herders roughly handled, and the civil authorities are frequently called in to settle the difficulties.

The crew accompanying each band of sheep is supplied with camp-wagon, tents, provisions, etc., and moves camp as often as the range in the neighborhood has been grazed down. The foreman, besides having general charge of the outfit, prospects ahead for the next best grazing-grounds, and keeps the camp supplied with provisions. These

he obtains by driving to the nearest trading-point with the camp-wagon and loading up. The cook has charge of the camp-wagon, camp and the cooking. The location of the camp is sometimes changed daily, and at other times remains upon the same spot for several days, according to the scarcity or plentifulness of feed.

The sheep are herded very carefully over the range, that no considerable amount of feed may be left behind. The sheep are even worked up over any hills that may be near with forage growing upon them. The sheep-camp is always located with reference to water and some little shelter for the sheep at night, such as a bluff or a ridge of rocks, and to these places of shelter they are driven as soon as the dusk of evening begins to spread over the plains. When the weather is pleasant the sheep require no night-herding, being kept in place by the faithful shepherd-dogs that are kept constantly on duty. In the case of storms at night, accompanied by high winds, the herders frequently find it necessary to turn out to prevent the sheep from drifting out upon the plains and being lost or destroyed by the elements.

Lambing-time is a busy and an anx-

The business of the smaller sheep-owner is much more carefully conducted. The owner himself, and very likely his family, live upon what is known as the "home ranch." Outlying are the sheep-camps, provided with tight-board corrals and shanties for the lodging of the herders. Outside of the corrals, on the more exposed quarters, are also built fences to prevent the snow drifting too heavily over the corral fences during the prevalence of driving storms. The ranges are not extensive, but are sufficient for the herds that feed upon them. One sheep-owner with whom I am acquainted has a range seven miles long and three miles wide. Upon this he herds from 2,500 to 3,000 sheep. Nearly all of his time is occupied in supervising his herds. He employs two herders, and in lambing-time hires an extra hand or two. He cuts hay from some meadows on his range, and during the winter of 1899 he even bought corn to tide his sheep through. This he bought by the car-load lot, and hauled it across country from the railroad some ten miles away. But even with the help of this feed he was compelled to resort to various other expedients to get his herd through the winter without serious loss. At

in the corrals to subsist upon a scanty feed of hay and corn, a custom they were not at all bred to and one calculated to weaken the animals. Another herd-owner with not a very large herd, but with no hay or corn, took his sheep through this winter in fair condition and with but a slight loss by the assiduous use of snow-plows. After all the knolls had been eaten bare of the last vestige of soapweed, sage-brush and cacti, he rigged up his snow-plows and kept them going, removing sufficient snow to give the sheep a fair chance at the dry grass and weeds beneath. But the winter was the worst known on the plains for thirty years, some say forty.

Life on the Western sheep-ranges is not likely to drag much. Sheep are different from cattle, which are turned upon the range to shift for themselves, and are not disturbed in their ruminations excepting twice a year when the round-ups are made. But sheep are another proposition. At no time of the day or night are they outside of the corrals or the watchful care of herder and shepherd-dog. They must be prevented from straying, and protected from the dangers of storms and the incursions of wild beasts. Lambing-time is an especially busy and anxious one.

Both mother and young must be watched over and cared for, for many of the ewes are weak after the hardships of winter and the cold and rain of the spring storms. Some of the sheepmen rig up sleds with broad beds and side-boards, and with these hauled by a pair of ranch horses go out over the range daily and pick up the new-born lambs and their dams and take them in and put them in a corral by themselves, where they receive extra care and feed.

The life of a herder is supposed to be one of dullness and monotony, yet I hardly

think this to be true in the broadest sense. His band of sheep require almost constant watching, and the dogs must be made to do their duty. System must be employed in working the sheep over the range, in order to husband their strength and economize the feed. Then there are weak sheep or lambs that must be cared for, and a hundred other small duties that take up the time and attention of the herder. Morning and evening he must cook his meals, and at noon he partakes of his lunch, which he takes with him in a bucket when he starts out in the morning. For company he has the boss and his fellow-herders, whom he manages to visit by skilfully working his herd into a convenient position to converse with them. Then he can take a novel along and read during many a sunny summer hour, while his sheep graze or lie chewing their cuds on the green slopes. He is a quiet, unassuming individual, and does not attempt to vie with the cowboy in making a show; but he is a shrewd, thinking fellow, and the first thing we know he is proprietor of a big ranch well stocked with sheep. Then as he waxes prosperous he indulges more in the luxuries of life, but still in a modest way.



ious one in the sheep-camp. Weak mothers and weak lambs must be carefully attended to, but among these great herds, even with the greatest care, the losses are frequently large. Shearing-time is the only one in the entire year when the herds tend toward any definite point, and that point is the shearing-pens located on the line of some railroad. Slowly the herds from all directions are worked toward these points to be shorn of their fleeces. At the pens an army of professional shearers assemble, and strip the sheep of their overcoats with wonderful celerity.

Winter brings the real hardships of sheep-herding, especially if the winter be hard, as was the case in 1899. In the bitter cold and driving storms of that winter thousands of sheep died on the Western ranges. The carcasses were hastily skinned for the pelts, and the remains left to be devoured by wolves and coyotes. Little or no provisions are made for the shelter and feeding of these great herds. The feeding of hay, the owners say, weaken their powers for "rustling" their feed on the range, and the building of sheds is entirely impracticable under this nomadic method of herding. They figure upon about so much loss in a long run, and discount it.

times the snow lay quite deep upon his range, but it was not so bad so long as a crust did not form. Then it was difficult for the sheep to paw away the snow to reach the grass. In times like these the sheep were driven upon the rising ground, where the snow had been pretty well blown off, and there they fed upon the bunch-grass, sage-brush and cacti, and, strange to say, when they could find plenty of these coarse growths they did well and appeared to like browsing upon the hills better than feeding upon hay and corn in the yards.

When the snow became too deep for the sheep to make their way through it another plan was devised. This was scraping the snow away by means of a broad snow-plow, made from a couple of planks fastened together in the shape of a V, and drawn by a team of stout horses. In order to induce the sheep to follow the path of the snow-plow a quantity of hay was sprinkled along behind the snow-plow. Slowly the sheep advanced along the roadway made by the plow, picking up the wisps of hay; and then following their own instinct for grazing, began pawing away what snow was left to reach the grass. This was found to be much better for the sheep than to leave them

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Six Months - (12 Numbers) - 30 Cents

The above rates include the payment of postage by us. All subscriptions commence with the issue on press when order is received.

Subscribers receive this paper twice a month, which is twice as often as most other farm and family journals are issued.

Payment, when sent by mail, should be made in Express or Post-office 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.

Sliver, when sent through the mail, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelop and get lost.

Postage-stamps will be received in payment for subscriptions in sums less than one dollar, if for every 25 cents in stamps you add one-cent stamp extra, because we must sell postage-stamps at a loss.

The date on the "yellow label" shows the time to which each subscriber has paid. Thus: Apr1900 means that the subscription is paid up to April, 1900; May1900, to May, 1900, and so on.

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When renewing your subscription, do not fail to say it is a renewal. If all 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 the label, to your letter of renewal. Always name your post-office.

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.



THE Senate committee on manufacturers recently submitted a report on its investigations into the adulteration of foods. The report reads, in part, as follows: "The adulteration of prepared or manufactured foods is very extensively practised, and in many cases to the great discredit of our manufacturers. It is only fair to say, however, that a large proportion of the American manufacturers who are engaged in adulterating food products do so in order to meet competition, and their expression is, 'We would be glad to get out of the business of adulterating. We would like to quit putting this stuff in coffee, and would be willing to brand our syrups for what they are, but our competitors get a trade advantage which we cannot surrender.'

"It is the purpose of this committee to adopt this uniform rule: To prohibit the sale of deleterious and unhealthful food products, and as to those food products which are simply cheapened by adulterants, to compel the marking of the goods for what they are. Deleterious food products should be prohibited and the rest thoroughly regulated.

"There have been two general ways suggested as to the matter of regulation. First, to put the important food products under the internal revenue law, as we have in the case of butterine, filled cheese, and, at the last Congress, flour. The pure-flour bill has absolutely prohibited the sale of adulterated flour, which was found to be in many cases dangerous to public health, and has increased the sale of American flour probably twenty-five per cent in other

countries. If the rule established by this committee can be carried out as to our other food products, we will not only protect the consumer and the honest manufacturer who is willing to sell his goods for what they are, but we will also establish a reputation for our food products which will assist us to find a ready market for them in other countries.

"The other plan to regulate food products is contained in Senate bill 2426, which establishes a department under the Secretary of Agriculture, and provides for the establishment of a board which shall fix the standard for foods, drinks and for drugs based on the American pharmacopoeia."

Regarding the importation of adulterated food the report says: "If it is the policy to restrict our citizens to the use of pure food, we certainly should apply the same rule to foreigners who manufacture goods to be sold in this country. There is no doubt in the minds of the committee that large amounts of imported goods are sold in this country, the sale of which would be prohibited in the country from which they came."

IN HIS address at the twenty-fifth annual meeting of the Dominion Grange, recently held in London, Canada, Worthy Master Robinson said:

"About one thousand subordinate granges were organized in Canada, with thirty thousand members, and Middlesex, Elgin, Lambton and Kent, with some of the northern counties, became the stronghold of the order. At the annual meeting many questions of great importance to the farming community have been discussed and legislation asked. Being non-political, no efforts were made to enforce these demands upon the government of the day, but by the use of arguments, reason and common sense, with persistent memorials and deputations, the government saw the justice of the demands, and in some cases readily granted them and introduced the legislation required, so that many of the laws on the statute-book were first proposed in the grange. If the grange has done nothing more than this, the farmers of Canada would have been amply repaid for all the time and money expended. Still many of the present laws need amending, and new laws are required in the interest of the farmers, and for this reason, if no other, the farmers of Canada should join the grange.

"The occupation of the farmer is the noblest of all the professions. When the farmers prosper all other classes are benefited. No one is injured by their successes, but their failure brings a general calamity. Therefore, every one should lend a helping hand to make the grange a success.

"At the present crisis I feel that I must say a word about the great and glorious empire of which we are privileged to form a part. More than a century and a half ago Britain gave her best blood and treasure to take and to hold the greater half of this vast continent, with its fertile soil, immense forests, fisheries and minerals unsurpassed in the world. This she has freely given to the liberty-loving people who have come to enjoy it. Her fostering care and protection has been given without any remuneration. Equity, liberty, freedom and justice must be given to all of her subjects, of whatever race, creed or color. On this the British empire is founded, and this is why it should exist until the end of time. Her people have been denied their rights by the overbearing Boers in South Africa. War has been declared by them against Great Britain, and her provinces, Natal and Cape Colony, have been

invaded by a relentless foe. This has stirred the hearts of the people of the empire to the quick, as was never done before, and it is with pleasure we notice that nearly all classes of the Canadian people and the government have responded cheerfully, both with men and money, to put down tyranny and oppression. The patriotic feeling of the people will teach the nations that the empire which is willing to shed its blood and spend its money freely, that her subjects may enjoy individual liberty, cannot be assailed with impunity."

THE preliminary report on trusts and industrial combinations recently submitted to Congress by the industrial commission reads, in part, as follows:

"As a result of our investigation of industrial combinations thus far your commission are of the opinion that certain evils in connection with them should be checked by appropriate legislation. Experience proves that industrial combinations have become fixtures in our business life, and their power for evil should be destroyed and their means for good preserved. As a result of further development on the part of the combinations it may be possible later to propose additional measures for relief without running the risk of increasing the evils. At present we propose the following, which, if severally adopted by the states, or so far as possible by the Federal government, we are confident will be of great service and will not endanger business prosperity.

"To prevent the organizers of corporations or industrial combinations from deceiving investors and the public, either through suppression of material facts or by making misleading statements, your commission recommend:

"(a) That the promoters and organizers of corporations or industrial combinations which look to the public to purchase or deal in their stocks or securities should be required to furnish full details regarding the organization, the property or services for which stocks or securities are to be issued, amount and kind of same, and all other material information necessary for safe and intelligent investment.

"(b) That any prospectus or announcement of any kind soliciting subscriptions which fails to make full disclosures as aforesaid, or which is false, should be deemed fraudulent, and the promoters, with their associates, held legally responsible.

"(c) That the nature of the business of the corporation or industrial combination, all powers granted to directors and officers thereof, and all limitations upon them or upon the rights or powers of the members, should be required to be expressed in the certificates of incorporation, which instrument should be open to inspection by any investor. The affairs of a corporation or industrial combination should be carried on without detriment to the public, in the interest of its members and under their lawful control. To this end the directors or trustees should be required to report to the members thereof its financial condition in reasonable detail, verified by a competent auditor, at least once each year; to inform members regarding the method and conduct of business by granting them, under proper restrictions, access to records of directors' meetings, or otherwise; to provide for the use of members, before the annual meetings, lists of members, with their addresses and their several holdings, and to provide, in whatever other ways may be named in the certificate of incorporation, means whereby the members may prevent the misuse of their property by directors or trustees.

"The larger corporations—the so-called trusts—should be required to

publish annually a properly audited report, showing in reasonable detail their assets and liabilities with profit or loss; such report and audit under oath to be subject to government inspection. The purpose of such publicity is to encourage competition when profits become excessive, thus protecting consumers against too high prices and to guard the interests of employees by a knowledge of the financial condition of the business in which they are employed."

IN CLOSING an address on the Philippine question Senator Depew said:

"The fears daily expressed by senators of disastrous consequences to ourselves from the productions and industries of these islands have no justification in the long experience of other nations. Great Britain has found her best markets in her colonies and no invasion of her industries from them. The same is true of the crowded, highly organized and sensitive industrial interests of Holland. The people of the temperate zones govern all tropical countries outside the Americas. The northern races are the migrators, the colonizers, the rulers, and the organizers of the productive energies of the world.

"The markets for the products of our farms and factories accessible by the Atlantic ocean will soon be filled. But across the Pacific are limitless opportunities. Within a distance from Manila not much greater than Havana from New York live 900,000,000 of people, purchasing now annually from all nations, of the things which we produce, to the sum of a thousand of millions of dollars, of which we furnish five per cent. And yet with our Pacific coast and its enterprising people, the opening of the canal across the isthmus, and an American merchant marine, that five per cent should be fifty. With railroads opening up these countries, and civilization stimulating their people, the possible increase in their trade dazzles the imagination. To relieve home congestion, starvation and revolution England, Germany and France are increasing their armies, enlarging their fleets, and either waging war or on the eve of great conflicts while partitioning Africa, threatening China, seizing Asiatic principalities and madly building railroads across the continents of Asia and Africa.

"By victorious war and triumphant diplomacy we are in our own territory within easy reach, at Manila, of China, Siam, Korea, Annam, the East Indies and Japan. Without war or entangling alliances we will have equal rights with other nations to the parts of the Orient, with all that it means for the demonstrated superiority of our manufactures and the surplus harvests of our farms. We will insure with the whole power of the United States the freedom of religion and the equal and just administration of the law.

"The kindergarten of liberty under competent instructors rapidly develops its pupils for larger responsibilities for citizenship, for respect of law, for judicial duties and for a constantly increasing share in their local and general assemblies. One year of rule by the United States in Cuba is a convincing object-lesson. Brigands have become farmers, and revolutionists its conservative citizens.

"Order has taken the place of anarchy, and law of license. The Cubans are developing their industries and rapidly acquiring habits of self-government. So the uplifting of the people of the Philippines to the comprehension and practice of orderly industry, respect for individual rights, confidence, and then participation in government, will add enormously to their happiness and reciprocally to their strength, prosperity and power of our country."



ABOUT RURAL AFFAIRS

A Cyclopaedia of American Horticulture

The first of the four volumes which constitute

the Cyclopaedia of American Horticulture, issued and to be issued by the Macmillan Company, of New York, has come to my table. Heretofore we had very little reason to brag over our horticulture and its advanced state, while we did not possess a work embodying and representing our American horticulture in all its vastness and completeness, a real cyclopaedia of American horticulture that one can turn to for information in an emergency, instead of having to keep a whole library of separate works, largely of English, French and German make, to find information (more or less reliable for our American conditions) on the various subjects of our "horticultural activities." The appearance of this new work will mark a new epoch in our horticulture, I hope. Prof. L. H. Bailey, as editor, has been engaged for years in the conception and preparation of this work, with a view "to make a complete record of the status of North American horticulture as it exists at the close of the nineteenth century." In this he has been ably assisted by Wilhelm Miller, of Cornell, and several hundred expert cultivators and botanists, among them our most noted experiment-station workers and investigators. It has been a source of pride to me to be called upon for a number of contributions on the culture of vegetables to appear in a work of this high standard. All the important articles are signed, so that the authors have full credit, and are held responsible for all they say. Volume I. has over five hundred pages, large quarto, and many hundreds of original engravings and plates of highest artistic and practical merit. Whatever price the publishers have set on, it is surely not more than the work is really worth to any intelligent soil-tiller, and I can only hope that they will be rewarded for their painstaking care in getting out such a work by a sale large enough to reimburse them for their outlay, which must count up into many thousands of dollars.

What is New in Spraying?

At the last meeting of the Western New York Horticultural Society, in January, the subject of spraying, which for some years had been the leading one of discussion, was hardly mentioned. Every one present seemed to take it for granted that the progressive fruit-grower must spray. In a bulletin just issued by the Cornell station Prof. Bailey asks himself, What is new in spraying? and then answers it as follows: "Perhaps nothing which experimenters are ready to recommend; but we know some things better than we did last year. One of these things is the fact that the old kerosene and soap emulsion—the vilest of concoctions—seemed to be doomed. The kerosene and water emulsion is to take its place. The insecticidal properties of this mixture have long been known, but it has needed a practicable mechanical device to mix them." I think we are indebted to my good friend Prof. E. S. Goff, of the Wisconsin experiment station, for the invention of the kerosene-water mixture, and for the construction of the first kerosene-water spraying device. Now all leading manufacturers of spraying outfits offer such sprayers. The Field Force Pump Co. catalogues a "barrel oil-water sprayer." The Deming Co. has a bucket kerosene and water sprayer, a "bucket, knapsack and kerosene sprayer all in one," with

detachable oil-tank, and a barrel kerosene-sprayer. The Goulds Manufacturing Co. offers a "knapsack kerowater," as also a large, somewhat complicated two-barrel "kerowater." So our friends will see that there is no lack of machines with which to spray the kerosene and water mixture. It is true that the kerosene-soap emulsion is bad, in fact, nasty, and I shall be glad when we have a chance to dispense with it.

Small Hand-sprayers

Several of our readers have again inquired about the cheap hand-sprayer. For some years I managed to get along with that tin cup with atomizer attached to it, all for twenty-five cents. But I don't like to have to do so much blowing, although that may strengthen one's lungs. I have used it mostly to spray cattle with kerosene, or a mixture of that and oil of tar, carbolic acid, etc., to keep the flies off in summer. Now I have for that purpose, a "Vapor Gem Sprayer," made of copper by the Field Force Co. Similar machines are also made by the other manufacturers of spraying outfits, some of copper, some of cheaper metal, and sold at corresponding prices. It seems to me that such tool belongs to the equipment of every well-regulated farm and household. I spray kerosene with it on the hen-roosts for lice and mites, and on the fowls' legs when they show signs of scales, as well as on swine or any animal on the place when it seems to be lousy. And when I notice one of the horses coughing I spray my kerosene and oil of tar mixture into the air about the animal's head, with the stable kept tightly closed, thus forcing the animal to breathe the vapor. Furthermore, I usually apply with it the white hellebore solution on my gooseberry-bushes when only a few of them are to be sprayed. This little hand-sprayer comes handy a good many times.

Bees and Spraying

A law recently enacted by the New York state legislators forbids the spraying of fruit-trees while in bloom. Some of our fruit-growers, especially in my own (Niagara) county, have made some efforts to have this law repealed, under the claim that spraying is just as necessary at that time as at any other. In a little book, "Spraying for Profit," the following paragraph appears: "Never spray fruit-trees when in blossom. The spraying is apt to wash off the pollen, and when this occurs the fruit will not set. Also, if Paris green is applied to the blossoms it will cause the death of the bees of the neighborhood." This is undoubtedly correct. The question was discussed at the last meeting of the Western New York Horticultural Society, and there was only one sentiment—everybody seeming to be in favor of the law as it stands. Our station experts, such as Prof. Slingerland, Cornell's bug man, and Prof. Beach, the horticulturist and spraying expert of the Geneva station, are quite emphatic in their assertion that spraying during the blooming season is a damage rather than an advantage, and that bees and other insects are needed for the work of properly pollenizing fruit-blossoms, and should be protected rather than exposed to the danger of being poisoned with spray mixtures applied at an inopportune time. Those of the fruit-growers who wish to spray trees when in bloom claim that this treatment has given them full apple crops a year or two ago when their neighbors had no apples, and they have hastily come to the conclusion that spraying just at that time was the cause of their suc-

cess. The station experts, on the other hand, claim that this was only an unusual coincidence, and that the time of spraying had no connection whatever with the result. No comparative experiments have been made, no rows of trees having been left untreated or having been sprayed a few days before or after spraying, and so the matter is really left unsettled. I can see no earthly reason why we should select just the time when trees are in bloom for our spraying operations, and hope that the efforts to have the law repealed will be abandoned. At any rate, there is little prospect of any law repealing the other, being passed by our state legislature, and if any such should pass it is sure to be vetoed by the governor, who is ex officio a member of the board of control of the state station, and will not stultify himself by sanctioning a statute that is wholly contrary to the teachings of that station.

T. GREINER.

2

SALIENT FARM NOTES

Poultry-selling To be a successful poultry-raiser one must know how to sell as well as how to hatch and raise chickens. Some people in this locality, as well as in every other locality I have been in, hatch and raise several hundreds of chickens every year, and yet make nothing at it because they do not sell at the right time. I have known farmers to raise a nice little bunch of hogs up to the most profitable weight—say two hundred and thirty-five and two hundred and fifty pounds—and then hold and feed them several weeks longer at an actual loss because the market did not suit them. Not long ago I heard one of the most successful stock-feeders in this state declare emphatically that the time to sell stock of any sort is just as soon as it is ready for market. Respecting chickens, I say the time to sell is when the market is ready for them. That may be when they weigh one half pound, or when they weigh as much as six pounds.

One of the most successful poultrymen I ever knew made it a rule to sell his chickens as soon as they would bring twenty-five cents each. He lived not far from a city of about 25,000 inhabitants, and quite often he sold half-pound chicks for twenty-five cents each. His next lot had to weigh from one to one and one half pounds to bring that price, the next two pounds, but as soon as a buyer offered twenty-five cents each he got the birds. I had followed that plan before I met this man, and had found it to be the best, as he had, and I am satisfied that the person who adopts it, if he or she possesses good business judgment, will stick to it.

I receive so many inquiries anent this matter every year that I have decided to briefly outline my practice when I raised chickens for the open market. I never was in any great hurry to set any hens until winter was about over; then I was sure that the green food, grass and chickweed, so necessary to insure health and rapid growth, would be up when the chicks came out of their shells. From fifteen to twenty were given to each mother-hen and placed in dry, roomy coops that were set along the edge of a plat of blue-grass. They were fed lightly in the early morning, a little more at noon, with a full feed at night. If the weather was stormy they were given a full feed in the morning, to make them stay closer to the coop. The mother-hen was given a full feed twice a day. After the critical period—the first three weeks—was passed the little fellows had food before them all the time in covered troughs, so that they were full from morning till night. From the first day that they were placed in the coops until they were

sold they had an abundance of grit and pure water always before them.

It certainly is remarkable how rapidly they grew with such care. At five weeks of age many of them weighed one pound each, and a few even more than that, and I sold lots of them for twenty-five cents each when scarcely four weeks old. Buyers for the fancy trade in large cities will snap up hundreds of one-pound chicks at twenty-five cents each if they are fairly well feathered and plump. As summer comes on the wealthy people depart for summer resorts, and then the demand for small chicks almost ceases. When buyers would no longer pay twenty-five cents apiece for two-pound chicks, all that were hatched were turned into the orchard and fields, as soon as well able to follow the hen, to feed on bugs, worms, waste grain, seeds, etc., and grow into three and one half to five pound chicks. Instead of selling chicks at a big profit when young, thousands of poultry-raisers hold them until late autumn, or almost until snow flies, then sell five to eight pound birds as low as five cents a pound. I have seen it done hundreds of times. These fowls had "eaten their heads off" two or three times over.

Whenever I could get twenty-five cents for a chick he left my hands, whether he weighed one half pound or three pounds. Many seasons found my yards entirely cleared by September of all except my breeding stock. At that season the poultry-buyers were coming in every day with big loads of three to six pound fowls bought from farmers for five to ten cents a pound. A friend of mine living near a city in one of the Eastern states wrote me that aside from his breeding stock he never raised a chick to weigh three pounds. All were sold before they reached that weight. One August he had over thirty nice, plump little fellows that averaged about one half pound each, and he sold them to a high-toned restaurant. "What do you suppose they wanted them for?" he wrote. "Quail on toast!"

By selling the chicks while small one avoids all risk of loss by sudden storms, by rats, cats and hawks, as well as by disease, vermin, etc., while the yards are cleared for other lots that are coming on. If one keeps his chicks until they grow to a weight of five or six pounds he can raise but very few on a small lot; but if he disposes of them while small he can hatch and turn off several hundreds. I converted the wife of a farmer friend to my methods of selling by having her keep an exact account of all the chicks she hatched and raised to maturity. She found a discrepancy between the number safely hatched and the number sold and used on the table of over one third. What became of the "missing" she could not even guess. In almost every farm-yard there is a constant loss of chicks going on all the season. Storms, disease, thieves, accidents and animals of various kinds are decimating the flock the entire season.

Forest-tree Seedlings In reply to several inquiries allow me to say that seed of Catalpa Speciosa and white ash can be had from almost all leading seedsmen. In sowing these seeds I would prepare the soil the same as for garden-peas, make the furrows between two and three inches deep and twenty-four to thirty inches apart, and drill the seed thinly—about like peas. Keep the soil loose and mellow all the season, and if it is fairly rich the seedlings will make a growth of fifteen inches to four feet. Sow as early as the soil can be worked mellow. Let them stand until the following spring, then plant where they are to remain.

FRED GRUNDY.

OUR FARM

FARM THEORY AND PRACTICE

WORTHLESS WHEAT-FIELDS.—There is a big area of nearly worthless wheat to puzzle the farmer this spring. The Hessian fly and lack of snow protection have combined to make the growing wheat in many sections of Ohio, Indiana and other states present a sorry appearance. A large acreage seems now to be in too bad a plight to be left, and it is not easy to decide what disposition of the land will be best. The usual thing is to turn to oats, both because the seeding is cheap and easy and because clover and timothy can then be sown. Harrows usually can make a good seed-bed without the use of the breaking-plow, and the fields can thus be quickly gotten out of the way of the usual spring work.

* * *

DANGER FROM FLY.—The use of the disk, cutaway or spring-tooth harrow, in making a seed-bed for the oats, is all right if the field is not infested with the fly; but if the fly is present we must realize it will not be destroyed in this way, and the chance for a crop of oats would be slim. The fly is in the wheat-plants, ready to come out in the warm spring weather and deposit its eggs on the young oat-plants. The only practicable way is to plow the field, burying the wheat-plants. Either do this or else not seed the fly-infested wheat-field to oats. There is too much danger if the plants are left at the surface. Where there is no fly, the wheat-field that has been winter-killed can be disked with harrow and prepared for oats in better shape than when a breaking-plow is used.

* * *

WHERE OATS OFTEN FAIL.—South of Indianapolis and Columbus, in our Central states, there is too much heat for good oat crops. Occasionally a summer is cool enough, but often the yield of grain is not in proportion to the straw. It is the wheat-fields in this belt that puzzle the most when the wheat is a failure. Usually this land is intended for clover or grass, and should not be plowed for corn. If it is broken for corn, to be followed by wheat in the fall, a good crop of corn cannot be expected on account of previous cropping, and the chances of a sod later on are not the best. In many instances it has been shown that clover can be sown on the bare ground with success. Unless land is very weedy clover does not need a cover-crop, but thrives best alone.

* * *

The inclination always is to plant a crop that will bring in some money quickly, but in the case of land that is not ready for a certain crop the yield often does not bring any net profit, and if a good stand of clover can be gotten in the summer's growth a chance of future profit is assured. In many a case this spring it would be best to sow the clover on the poor wheat-field, sow a little timothy with it, and then clip what little wheat may grow, leaving it as a mulch for the clover. The clover will be hardy on the ground that is so nearly bare, the clipping will stop weed growth, and a better sod gotten in most cases than there would have been if the wheat had been good. Every farmer whose wheat has nearly failed must work out the problem for himself; but when in doubt try the plan of sowing the clover rather than doing more plowing and cropping.

* * *

PLOWING EARLY FOR CORN.—A growth of green stuff turned under for corn provides the best kind of plant-food, and this fact has led many to delay plowing sod-land for corn until near planting-time. They want all the

growth of grass possible for turning under. But there is another consideration just as important, and that is the supply of moisture. I am sure that the early plowed sod holds the most moisture during drought. If the sod is turned early in the spring and thoroughly harrowed it will stand drought better than land plowed later. In a wet summer I should prefer the sod-land that was plowed immediately before planting, but we know nothing about the character of the coming season, and the safest plan is to start the plow in sod-land just as soon in the spring as the weather permits.

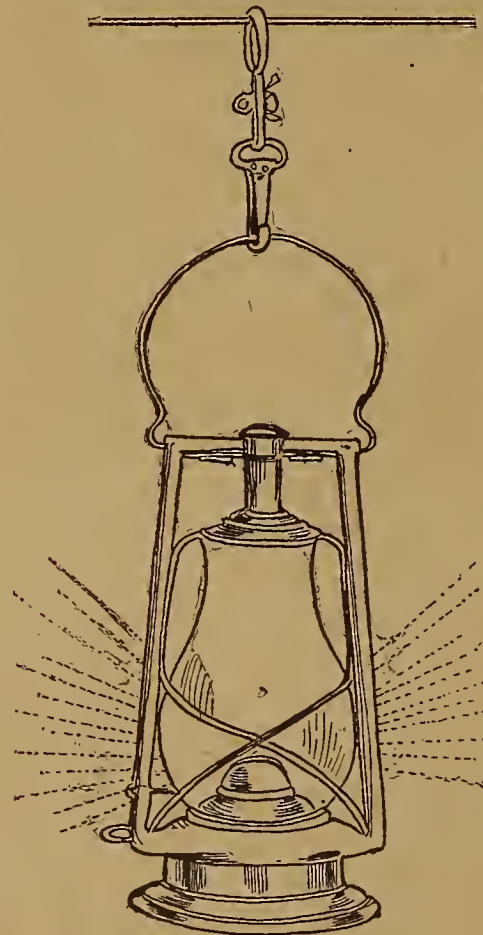
* * *

USING A JOINTER.—The question is often asked, "Should a jointer be used in plowing sod?" For potatoes I do not like it. Land should be plowed deep for this crop, but the heaviest part of the sod should not be buried in the bottom of the furrow. It is needed near the surface. A furrow set on edge, with some of the sod near the surface, does better. The organic matter is needed to keep the ground loose where the potatoes form. For corn I plow more shallow, five inches being deep enough for the best results in the corn crop, though not best for the land unless the next breaking is deeper. If I turn the sod shallow for corn, then the jointer is all right and is needed to prevent any growth of grass. Better harrowing can be done, giving a fine seed-bed. The jointer is all right when used aright; but do not bury the best of the sod too deeply.

DAVID.

THE LANTERN IN THE BARN

In a recent issue Mr. Knapp rightfully calls attention to the necessity for the practice of some system in lighting the barn winter evenings and mornings, and guarding against fire by having some safe arrangement for handling lanterns, rather than setting the lantern down here and there, sometimes on uneven surfaces, and always with



the danger of having it tipped or kicked over; or, worse yet, allowing the striking of a match occasionally to find some particular article in a hurry. The idea of hanging the bale of the lantern in the snap of a buckle is good, for then no matter how much the lantern is swayed it cannot fall. To avoid changing the location of the lantern from hook to hook, an excellent device is to run an overhead wire along the space desired to be lighted in one or two places in the barn or stable. To this wire can be attached a snap-buckle with a ring, so as to allow of its being slid along from one end to the other, and thus the lantern can be moved along at will to any point under the wire.

Another point about the lantern in the barn is to keep the chimney clean. A lantern never gives too much light, anyway, but a dirty, smoky chimney, besmeared with greasy finger-marks, will shed just about half as much light as a clean glass. GUY E. MITCHELL.

GOOD ROADS

At a recent meeting, held under the auspices of the Central New York Farmers' Club and the Oneida County Good Roads League, nothing was brought out more clearly than the change of sentiment among farmers brought about wherever a piece of good road is constructed. These model roads speak louder than logic and eloquence. However, they can only be models and suggestive of improvements to be wrought out under the old system.

The secretary of the Good Roads League, W. Pierrepoint White, reported that Oneida alone had highways enough to reach from New York to Chicago and back again; and that the most rapid application of the Higbee-Armstrong road improvement law would not make all of the roads model highways in less than one hundred years. However, the general consensus of the meeting approved the building of model roads under the law. It is evident that much good can be secured by having these ideal roads scattered about the state. But the real problem is what to do with the miles that cannot be improved under that system. The general drift of a discussion brought out these four points: 1. The common dirt road is almost invariably left to surface drainage. It should, therefore, be carefully underdrained—on the same principle as we underdrain our farms. 2. When the road-bed is made thoroughly dry and hard to a depth of five or six feet material should be put on in the driest of weather. 3. This material, if liable to shifting or with sharp edges, will make a cutting material, and gradually work its way down into the soil. To prevent this it should be lightly covered with sufficient soil to hold it in place until compacted. 4. The road-bed should be invariably wide enough for teams to meet. This width is also necessary to avoid the tendency of teams to drive in one track, and so rut the road. The water falling into these ruts makes a soft bed for the wheels, which keep on grinding until the whole material of slag or stone is destroyed. The total of work done and work to be let at once under the Higbee-Armstrong law covers a mileage of five hundred and thirty miles, at a cost of \$206,000. No more contracts can be let without further appropriation. The time is come when this law must be thoroughly discussed and understood by farmers.

The employment of convicts in road-making secures the entire indorsement of those towns which have tried it. It will be crowded as fast as possible. Reports from those towns which have adopted what is called the money system is almost entirely in approval. But the New York Central Farmers' Club, after a thorough discussion of such experiments, voted unanimously in favor of the appointment of county engineers. These engineers would of course work under the general direction of the state engineer, but would have control of the town commissioners and general direction of all road improvement within county limits. It is believed that without such an engineer model roads will be destroyed within five years after building. It is equally important to stop the waste of money through the ignorance of officials who have no educated skill in road-making. We are at present in danger of expecting more of the state official than he can possibly perform. The Higbee-Armstrong law requires him to hold meetings in every county annually. He cannot do this work personally, and it would be far better if under his supervision each county were well organized to carry on its own work.

The change of sentiment on road improvement is remarkable. When the Good Roads League for Central New York was founded, about five years ago, it called together only half a dozen energetic young men. Now their meetings are attended by crowds that pack the largest halls—for the most part farmers. The farmer realizes that prosperity is here, and that the twentieth century belongs to agriculture. The one chief hindrance is now the cost of hauling. The impulse for improvement is greatly aided by the pushing outward of our best city population to take up their residences in the country. They bring with them wealth and business tact.

E. P. POWELL.

2.

DO YOUR COWS PAY?

Quite a large number of us are keeping cows that do not pay any profit. The reason is that we depend almost entirely on guesswork. We believe our cows are doing very well and do not take the pains to investigate and make certain of it. We say "Boss" gives two and one half gallons of milk at a mess, but we never measured it or weighed it.

During the past ten years the writer has been making careful investigations in this matter, and he has found that about one third of the cows to be found on the farms of Ohio are not paying for their board. It takes the profits of one half of the remainder to balance the loss sustained on the first third. The only profit then realized to the owner must depend on the last third.

We cannot depend upon the results of a Babcock test alone, though this test is very reliable in indicating the per cent of butter-fat the milk contains. It must be remembered that the yield of milk has much to do with the profit, and cows vary more in yield than they do in the per cent of butter-fat.

Some cows yield great messes of milk for a few weeks after parturition, and then rapidly fall off. Others never give a good, profitable flow, while still others start out with a good flow and continue with only slight diminution to respond to good care and treatment with liberal yields of milk containing five to six per cent of fat.

It is difficult to ascertain the true value of a cow without taking into consideration the products of an entire year. To do this the most practical method is to weigh the milk of each individual cow separately and keep a careful record. Such an experiment will demonstrate that there are a good many cows that will not produce over three or four thousand pounds of milk. A yield of three thousand pounds with average test of five per cent means about one hundred and fifty pounds of butter, which, at an average price of twenty cents a pound, means an income of thirty dollars, or about enough to pay her board. Assuming that the calf and manure will pay for the time and care we have given, we are at a loss to see any profit. But suppose you dispose of this cow and replace her with one that yields six thousand pounds with the same average test, and the income is doubled, leaving the owner thirty dollars profit. If she yields eight or ten thousand pounds with similar tests, she is one of the most profitable animals on the farm.

Many farmers will say the knowledge is not worth the trouble of learning. Try it once, and see. It is little trouble to have in the stable a pair of scales. Ascertain the weight of each bucket. When a cow is milked, weigh her product and record it in a book or on a board conveniently placed. At the end of each month or quarter copy into a permanent record. If too much trouble to weigh each day, weigh at least once each week, noting any variations of yield during that time, and approximate results are secured. Start now and see if some surprising results are not secured.

JOHN L. SHAWVER.

NOTES FROM GARDEN AND FIELD

MORE CATALOGUES.—A strikingly attractive catalogue comes to me from D. M. Ferry & Co. I hardly know which seems more pleasing, the first cover page, showing a group of asters, or the last, showing perfect types of onions, the Globe sorts, yellow, red and white. These sorts I remember having given me unbounded satisfaction years ago. There are a number of very fine colored plates in this book. One shows the Early Jersey Wakefield and the Charleston or Large Wakefield cabbages in all their perfection. On another appears the Danish Ballhead or Hollander cabbage and the Rose-ribbed Paris celery. Then there is one showing the Telephone, one of the grandest of peas both for home use and for quick sales, as also the Paul Rose muskmelon, and still another with a group of the best radishes.

The catalogue sent out by Johnson & Stokes is most pleasing to my eyes on account of the photographic reproductions of the novelties which it offers. The use of the camera excludes in some measure the chance of exaggeration in pictures and descriptions. The firm offers two new lettuces, the Golden Gate and Meyer's All Right, neither of which I have had the chance to try. The new French Market carrot is claimed to be superior on account of its rich coloring and great yield. Two new tomatoes are sent out by the same house; namely, Spark's Earliana, as the earliest large, smooth tomato, and the Quick-sure, which is also said to be one of the earliest and best yielders. Other novelties of theirs are Donald's Elmira asparagus, claimed to have finer and larger stalks than any of the older sorts; a New Wonder Bush Lima, claimed to be ten days earlier than Burpee's; a New Smooth White Short-leaved kohlrabi, claimed to be superior to Vienna and many others.

D. Landreth & Sons claim to be the oldest seed-house in America, being founded in 1784, one hundred and sixteen years ago. They issue a rather plain, common-sense catalogue, and use only photographic reproductions for their pictures. Something new to me in this catalogue is the offer of "White Scullion" onion-seed. The firm explains that scullions are obtained by planting white-onion sets in the autumn, the partially developed growth in the spring affording those immature plants termed scullions, sometimes sold as leeks. Onion-seed to produce scullions can be sown in the autumn in sections not mountainous located south of the Potomac or Ohio rivers. It should be of a white variety. The plants so grown from seed are to be pulled up in early spring and bunched, roots, necks and tops. Landreth & Sons claim to have just the variety for this purpose.

Henry A. Dreer, whose catalogue resembles that of Peter Henderson & Co. in size, general make-up and completeness, also turns more and more to the camera for his pictures. He offers Dreer's New Wonder Bush Lima of the large bush type, and as ten to fifteen days earlier than the original type. This is probably the same as offered by Johnson & Stokes. The prefix "Dreer's" will result in confusion, as we connect in our minds the other (Dreer's) type of Limas with it. In tools Mr. Dreer offers the Iron Age implements, which have given me so much satisfaction. Flower-seeds and flowering plants are given the lion's share of space in this catalogue. Among small fruits I notice the New Perpetual or Everbearing sort, St. Joseph, which is claimed to be entirely distinct from the various im-

proved forms of the Alpine strawberry, and a large-fruited sort which Mr. Dreer found fruiting freely during the months of August and September in various parts of Europe.

Still another catalogue is Robert Buist's Garden Guide and Almanac. It gives an extended monthly calendar of garden operations, with brief directions concerning the culture of the various vegetables. Mr. Buist does not make much of a business of introducing novelties, but has a good selection of standard sorts. He offers the Early Morning Star pea as the earliest pea in the world, being ready for picking in forty-two days. Among the tomatoes I notice Buist's Majestic and Prize Belle.

Next comes Livingston's Seed Annual, from the Livingston Seed Co. This firm may well be proud of the record they have made in originating and introducing perfect forms of tomatoes. Very appropriately they have put a large colored picture of their new tomato for 1900, the Magnus, on the first cover page. They claim they have tested it for several years for staking up in the open field, as well as for forcing in greenhouses, and believe it to be unequalled for such purposes. They also catalogue the Columbus Market sweet-corn as a second early, heavy yielding sort, the Honor Bright and Enormous tomatoes, the Rough Rider strawberry, and other things.

From the Ford Seed Co. comes the twentieth annual catalogue of seeds, small-fruit plants and trees. This catalogue always reminds me of the Crandall currant, which was introduced by the firm some years ago, and of my experience with it. At first I had trouble to get the plants to fruit, and I thought that perhaps they needed certain other kinds near them to secure proper pollination. But for many years now the plants have set fruit in greatest profusion, and the only difficulty seemed to be to save the berries from birds or other marauders.

Modest and tasty is the catalogue which comes from Cole's Seed Store. It does not offer a great list of novelties, but has the Chinese lantern-plant, Spanish peanuts, splitz, Honor Bright and Enormous tomatoes, the soy-bean, or German (American) coffee-berry, and other things.

INQUIRIES ANSWERED

Goliath Kohlrabi.—G. S. C., Checotah, I. T., writes: "Kindly let me know where I can get the 'Goliath' seed. I do not see that name quoted in any of the seedsmen's catalogue."

REPLY:—Not catalogued by American seedsmen, so far as I know. It is listed by German seedsmen; as, for instance, Dippe Brothers and E. Roemer, of Quedlinburg, Germany.

Cabbage-plants Damping Off.—S. V. P., Mt. Jackson, Va. The "worm" or disease which kills your cabbage-plants in hothed is undoubtedly the "damping-off" fungus. It attacks the stem near the surface of the ground, and girdles it. It is a formidable enemy, and we lose many plants from its attacks every year. Avoid violent changes of temperature in the bed as much as possible. Keep the soil rather dry in dark weather, and rather damp in bright weather. Strew a little sulphur along in the drills when you sow the seed.

Striped Cucumber-bugs.—J. N., Galva, Ill., writes: "I would like to know how to make a speedy end to the 'striped bug' which seems to watch for my choicest esculents, especially melon-plants, while they are young. My remedy has been to pick them off and kill them, but I shall place my trust in you for a more convenient remedy to be used this coming season."

REPLY:—As I have told innumerable times, I apply tobacco-dust, or a mixture of this and bone-dust, freely on the hills around the young plants, almost covering them, and thus usually manage to save my vines. It is well, however, to plant new hills among the older ones from time to time, so that if one lot is destroyed another comes to take the place of the first.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN
INQUIRIES ANSWERED

Cherry Not Bearing.—J. C. G., Ballston, Oregon, writes: "I have a large cherry-tree in my yard that is full of bloom every spring. Sometimes cherries form, but fall off before they are one third grown. Other seasons they don't even form."

REPLY:—I am inclined to think the trouble due to lack of proper pollination of the flowers. If this is the case it can only be remedied by planting some other kind of cherry near it that will flower at the same time.

Grass in Orchards.—M. A. P., Dukedom, Teun. If you want to get the most out of a good orchard it should never be seeded down to grass, but be kept cultivated all the summer. If you try to raise a crop of apples and a crop of grass on the same land at the same time neither will be the best. However, once in three or four years it is a good plan to seed down orchards to clover for one season, and then break it up in order to add the organic matter of the tops and roots of the clover to the soil.

Currant-bushes Dropping Fruit.—T. J. W., Lawrence, Kan. The reasons why currant-bushes drop their fruit are not known. I am inclined to think, however, that it frequently results from the late spring frosts or other adverse conditions. At times, however, you will find that the berries that fall have been injured by a small worm. I think that if you have not studied the matter carefully you had better give your bushes the best of cultivation, and plenty of light and air, and then see if you can determine what the trouble is when they begin to drop. I know that some seasons some varieties are much more susceptible to this trouble than others under some conditions.

The Pea-tree.—J. C., South Dakota. The Persian pea-tree I am not acquainted with, but what is known as the common pea-tree is perfectly hardy in Minnesota and the Dakotas, and I think is probably what you mean. It is very easily grown from seed, and grows to the height of perhaps eight feet. It has very pretty compound leaves, is of good upright habit, and has bright yellow flowers early in the spring. The foliage is then very pretty, but in the latter part of summer it becomes quite rusted. I regard it, however, as a very valuable hardy shrub. A very interesting fact in connection with it is that it is used on some of the plantations in the steppe region of Russia to help fix the drifting sands.

Leaf-crumpler.—J. A. T., Brocton, Ill. The cocoons to which you refer as infesting your apple-trees are made by what is known as the "rascally leaf-crumpler." They winter over in these cocoons in the larva state, and in the spring commence feeding very early upon the new growth. The best remedy is to remove and burn these cocoons in the winter, and then spray the trees early in the spring, just as the buds open, with Paris green and water, at the rate of about one pound to one hundred and fifty gallons of water. For life habits of these insects see recent numbers of the FARM AND FIRESIDE.

Apple-trees Not Bearing.—A. R., Nelsonville, Ohio, writes: "I have two apple-trees that are about sixteen years old, and they have not borne yet except a few blossoms and from three to five apples. They are strong, healthy trees. They are in a clay soil."

REPLY:—In case I had apple-trees that behave in such a way as yours I should certainly girdle their trunks to bring them into bearing. To do this I would use a common cross-cut saw and cut through the bark entirely around the tree in the latter part of June. This, I think, would encourage the forming of fruit-buds, and can do no harm.

Plum-knot.—W. K. G., Attleboro, Mass. The plum-trees to which you refer are probably infested with the common plum-knot, which is very injurious to the varieties of plums that belong to the Domestic class. In some of the states there is a law which requires the trees infected with this disease to be cut down and burned, and gives a certain board power to enter upon the land and do so. If your trees are very badly infested this is probably what you had better do. But if there are only a few knots on the trees, then the infected branches should be cut off and burned. But you will have to continue this treatment each year when the knots appear. Where the knots are cut off it is a good plan to paint with thick Bordeaux mixture.

Grafting the Wild Grape.—G. M. S., Cornwall, Mo., writes: "I have a wild grape-vine that has yielded as much as one hundred pounds of grapes in one year. In the spring of 1898 I pruned it—maybe I pruned it too much—and the following winter it died from the top to within eight feet of the ground. Now I wish to graft with the Concord."

REPLY:—The wild grape-vine that died back so severely after you cut it off probably had not ripened up its wood well in the autumn, owing to the fact that you pruned it so severely in the spring that it grew vigorously. A lighter pruning would probably have produced no ill effect, and you will not have any

trouble from its killing back after it has overcome this injury. Last year, however, we had a very severe winter, and many vines died back that would not have been injured in an ordinary season. The best way to graft grapes is to use the cleft graft on them, making the cleft with a fine saw, as the grain of the wood is so crooked that it will not split straight. The graft should be put in below the surface of the ground, and waxed in in the same way as apple-grafts, and barked up with earth. I have had the best success when doing it early in the spring, before growth started, but some of my neighbors succeeded with it by keeping the scions dormant in an ice-house or some cool place until the vines have made a growth of several inches, when they are grafted.

Lumps on Peach-trees—Pruning Young Peach-trees—Scalding Water as an Insecticide.—I. J. M., New Jerusalem, Pa., writes: "What causes lumps on peach roots. I find them of different sizes; some as large as a fist, others as small as hulled hickory-nuts. The trees otherwise look healthy.—Should peach-trees be pruned when planted, and how much when three years old?—Is it good to scald the peach-trees to kill the borers?"

REPLY:—Lumps on the roots of plum, peach, apple, blackberry and many other plants may result from a variety of causes, but a common cause is a microscopic worm known as nematoid, and when the lumps are due to the presence of this worm they are apt to seriously injure the plants on which they grow. For this reason all trees that have lumps upon their roots should be regarded with suspicion, and it is best not to plant them. It is, however, a very difficult matter to tell just what the cause is in every case without a very careful examination, and trees with lumps on the roots frequently grow well.—When peach-trees are set out they should not be more than one year old. At this age they will consist of a straight shoot with many side branches. These side branches should all be cut off, and the trees when planted be nothing more than whip-stocks; and it is a mistake not to prune them thus severely when planted, as it results in heavy all new wood and better trees than if pruned.

—Scalding water can often be used to advantage as an insecticide. Comparatively few plants are injured at a temperature of 140, and some of the hardier ones will stand a temperature of 160 or 170 degrees. If the borers around the roots of peach-trees are near the surface the use of scalding water may be beneficial, and will probably not hurt the trees even if it is used boiling hot, since it would be considerably reduced in temperature before you could get it onto the tree. If your neighbors have used this successfully upon their trees there is no reason to think that you cannot do the same in the same way. However, you should not depend upon this alone, but should look over the trees in the fall and spring, and dig out any borers that may be present.

Best Varieties of Apples.—C. W. O., Sunrise City, Minn. The varieties of apples that are most likely to live with you are those that are published in the fruit list of the Minnesota Horticultural Society, and for your benefit and the benefit of those interested in knowing the lines which fruit-growing is following in severe climates it is given here. I think of these varieties you will find the Hiberna the hardiest large apple that can be grown, but I also think you can grow the Duchess and the Charlamoff and the Wealthy if you will take the pains to protect the trunk thoroughly from the sun. This protection should extend above the crotches, and is best given by the use of a box filled with dirt about the trees. This has been found very satisfactory in Minnesota and the Dakotas, and is probably well adapted to other very severe locations. Here is a list of fruits adopted by the Minnesota Horticultural Society, December 7, 1899, for the guidance of planters in Minnesota: APPLES.—Of the first degree of hardiness for planting in Minnesota, Duchess, Hiberna, Peterson's Charlamoff, Patteu's Greening. Of the second degree of hardiness: Wealthy [1], Longfield [1] [3], Tetofsky, Malinda [1] [2]. CRABS AND HYBRIDS.—Best for general cultivation; Virgilia, Martha, Whitney, Early Strawberry, Minnesota [2], Sweet Russet, Gideon's No. 6, Briar's Sweet. PLUMS.—Best for general cultivation: De Soto, Forest Garden, Weaver, Cheney, Wolf, Rollingstone, Wyant. Most promising varieties for trial: Rockford, Ocheeda, New Elm, Stoddard, Surprise, Mankato, Aitkin. GRAPES.—Moore's Early, Worden, Janesville. For severe situations: Agawam, Concord, Brighton, Delaware. RASPBERRIES.—Red varieties: Turner, Marlborough, Cuthbert, Brandywine, Loudon, Black and purple varieties: Ohio, Palmer, Nemaha, Gregg, Schaffer, Older, Souhegan, Columbian, Kansas. BLACKBERRIES.—Ancient Briton, Snyder, Badger. CURRANTS.—Red Dutch, White Grape, Victoria, Stewart, Long Bunch Holland, North Star. GOOSEBERRIES.—Houghton, Downing, Champion. Varieties for trial: Red Jacket, Triumph, Pearl, Columbus. STRAWBERRIES.—Pistillate: Crescent, Warfield, Haverland. Staminate: Bederwood, Captain Jack, Wilson, Enhance, Lovett, Splendid, Mary. NATIVE FRUITS.—Valuable for trial: Dwarf June-herry, Sand-cherry, Buffalo-herry. [1] Does best top worked. [2] Tardy bearer. [3] Early bearer.

TO MAKE A GOOD CHEAP HALTER

TAKE a piece of one-half-inch rope twelve feet long. Untwist eighteen inches of one end, and secure it from untwisting any further by tying a strong string around it at that point. At a point ten inches from this tie open the strands of the rope and pass the untwisted strands through, drawing up tight, thus forming a loop of rope five inches long. Now braid the three loose strands tightly to within three or four inches of the ends. The braided piece goes over the animal's nose.

Next measure off about three feet from the loop, open the strands at that point, and work in the loose ends of the braid well so as to give strength at that point. The three-foot piece goes over the top of the animal's



head. Now pass the end of the rope through the loop, and a strong halter of one piece of rope, costing possibly fifteen cents and twenty minutes' work, is complete. By using cattle tie-irons it would be an improvement.

C. E. SHELL.

CORRESPONDENCE

FROM OHIO.—Stock are doing well. Hogs are worth six cents a pound, dressed; beef, nine. Several silos are in use, and a great many will be built this season. A large quantity of hay is being haled and shipped, but this practice is not good for the fertility of our soil, and farmers are waking up to the fact that it is far better to feed what is raised on the farm and sell the same in the form of some finished product. G. W. A. Lisbon, Ohio.

FROM NORTH DAKOTA.—It is about four years since I settled in Ramsey county. For many miles around it is all prairie. The soil is the best in the state. We raise nearly all grain crops. Flax does well and brings good prices. There is much state land that can be rented. The country would be settled and improved better if this state land would be homesteaded. North Dakota would be all right if there were more "better halves." There are many bachelors in need of them. Merl, N. D. L. H.

FROM NEBRASKA.—This country is a prairie, a little rolling along the streams. It is a good stock country. A man without cattle and hogs cannot make very much here on account of the distance from markets and the high railroad rates; it don't pay to ship the corn. But it is profitable to turn our corn into beef and pork. There is a good deal of unimproved land that can be bought at \$5 an acre and upward, according to the soil and location; improved farms will cost from \$15 to \$40 an acre. I think this country will be well settled in a short time. I would advise renters that have to pay from \$3 to \$4 an acre in rent to come out here and buy a home while they are cheap. Farm-hands are scarce. The general wages are from \$20 to \$22 a month and board. Corn is worth 20 cents a bushel; hogs, \$4.40 a hundredweight; cows and cattle are selling very high. Antelope county is located in the northeastern part of the state. C. D. Brunswick, Neb.

PRESIDENT SPRINGER ON SHEEP

In his annual address at the meeting of the National Live Stock Association, held at Fort Worth, Texas, January 16th to 19th, President Springer touched on the sheep question as follows:

"In 1899 the sheep of the United States furnished about 270,000,000 pounds of wool from less than 37,000,000 sheep, against 50,000,000 sheep in 1884. The consumption of mutton and lambs has increased beyond the expectation of even the most enthusiastic sheep-breeder, until now nearly 500,000 tons are consumed. Twenty cents is predicted for the wool crop of 1900—and every woolen-mill in the whole land running full time and behind in orders, and paying higher wages than have been paid for over a decade. And yet with this great increased supply of wool, in 1899 we purchased of foreign countries over 100,000,000 pounds of wool, most of which should and will be grown on our great Western and Southern ranges. We must give the sheepman his just dues, and admit that his flocks have as much right on the public domain as our herds. It is a very narrow and short-sighted policy which would close the forest reserves of the Western states to the sheep which are growing the wool to clothe the people. Suppose the sheep do eat the grass and the small shrubs; they have been given this privilege for generations back, and it should be continued until the government compels both sheepmen and cattlemen to pay for using government grass. . . . During the past year, when the flocks were kept out of the Uinta forest reserve, and starvation stared the flock-masters in the face in Utah, the National Live Stock Association came to the rescue of the members of this organization, and presented the facts before the administration at Washington, which resulted in all the under officers being overruled, and an order was issued to let the sheep in. Our people were saved from great losses. It is well for us all to remember that each American citizen must give and take, for no one has a monopoly on sunshine, air, water or grass on the open range. The best stockman is the law-abiding stockman, who shall delight to respect the Golden Rule."

LARGE AND SMALL COWS

We are asked which is the most profitable, large or small cows? Brandl conducted three experiments with light and heavy dairy-cows, each lasting four weeks, the second commencing seventy days after the close of the first, and the third a year after the beginning of the first. Thirty of the heaviest milkers in the herd were separated into two lots of fifteen cows each, according to live weight. The cows were kept under similar conditions as to feed and care during the trial, none being bred after the beginning of the experiment. The average weight of the heavy cows was 1,205 pounds, of the light cows, 979 pounds. The leading conclusions from the experiments are:

1. The milk of the small cows is richer in fat than that of the large ones.
2. Large cows eat a greater amount of feed than small cows; per thousand pounds live weight they eat less.
3. Small cows produce less milk than large cows, absolutely and relatively.
4. When in thin flesh small cows may produce more a thousand pounds in live weight than large cows.
5. Large farrow cows are more persistent milkers; on the other hand, small cows show a greater tendency to fatten on the same feed, with a decrease in milk flow.
6. The loss in selling ten of the large cows amounted to two dollars a head on the average, after having been kept nearly a year, while the loss for ten small cows was four dollars and eighty cents.—The Practical Dairyman.

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- Improved High-Frame Baby No. 2, - 450 lbs., - 125.00
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HAMMONTON, NEW JERSEY

POULTRY-HOUSES

HUNDREDS of designs of poultry-houses have been illustrated and published, but unfortunately each individual has certain preferences which prevent perfect unanimity in constructing them on the most favorable plans. It is as easy to have all agree upon one common plan of a dwelling-house for humans as for fowls. The climate, soil, breed and space are all to be considered when making the designs. No matter what kind of a poultry-house may be preferred, the fact must not be overlooked that during a great portion of the winter, when the snow is on the ground, the fowls must be kept confined in the house. The greater the space, especially on the floor, therefore, the better they will be enabled to exercise and keep in proper condition; and as the yards are often of no consequence during a severe season, success may depend upon the investment of a few dollars more than the amount originally intended, as it often happens that loss occurs simply for want of room on the floor. If the area of the floor is limited to a small proportion to each hen, and the house cannot be conveniently enlarged, then the stock must be reduced in order to give those remaining more room. It will not do to feed the hens and then have them sit idly about doing nothing. They then become addicted to feather-pulling and other vices, while the food tends to fatten them on account of their inactivity. The house should have plenty of sunlight, so as to become warm and also light. The light is the most important of all, as fowls have the greatest aversion to gloomy surroundings. They will be perfectly satisfied with well-lighted, comfortable apartments, but prefer the bleak outside to a house that is but dimly lighted. During the day the house should be kept open as much as possible, provided the birds are not exposed to colds or chilling drafts, so as to purify and ventilate it, but during the night, in cold weather, the house should be warm and close, as plenty of cold air will get in without the use of ventilators. The object should be to have the number in the flock only large enough to utilize the space on the floor with advantage. If too crowded they will not lay, as is well known by many who are aware that sometimes their neighbors get more eggs from a small flock than they do from a large one, and the secret is that they have plenty of room for exercise. The floor should be large enough to permit of places for scratching, dusting, roosting and laying. Just how much space may be required depends upon the size of the flock. A house ten by ten feet is none too large for ten fowls, or ten square feet for each hen.

SMALL FLOCKS IN VILLAGES

Those who live in the suburbs of cities or villages derive quite a large profit from poultry as compared with the expense, and not only is poultry-raising profitable, but it is a pleasure to many. As the occupation may be more interesting when the desire is to keep them as ornaments on lawns, or for beauty of plumage, it will be more satisfactory to have pure breeds of some kinds. There is no prettier breed than the Brown or White Leghorn. They do not sit, and consequently the difficulty of breaking the fowls from the inclination of raising a brood is avoided. If a few chicks are desired, however, and

the fences are not over four feet high, such breeds as the Brahmas or Cochins will be found desirable. It is best to keep only ten hens in a flock, and one cockerel. If there are two cockerels the result will be several battles for the mastery, ending in the defeated cockerel being compelled always to keep at a respectable distance from the victor, and thereby making it somewhat disagreeable for the keeper, extra work being required to see that the inferior cockerel is fed and watered, as the stronger one will not allow him to partake of anything thrown down for the fowls. In raising chicks, little coops should be used, with small runs, which may be easily removed to other locations when desired. If this is not done the adult fowls will consume that which has been placed for the little ones. A plentiful supply of water, with cleanliness, will assist in keeping off disease and promote thrift and prosperity to the flock.

LICE-DESTROYERS

The cheapest and one of the best modes of exterminating lice is a plentiful supply of whitewash put on hot. This material is cheap, always handy, and it can be liberally applied everywhere in the hennery. An ounce of carbolic acid to a pailful of whitewash will make it more effectual for killing the pests. In using it do not spare the brush or whitewash, but dash it into every crack and spread it over every spot in the hen-house. The fowls, too, carry lice about them, and one must provide them with the means to liberate themselves. A dust-bath is an excellent thing and furnishes a good remedy. By incorporating a handful of sulphur with the earth the dust-bath is made most effectual. Insect-powder blown in or rubbed among their feathers, and the roosts saturated with kerosene, will reduce the vermin in number, if they are not destroyed. The "lice-killers" advertised are excellent, and are always ready and handy for use.

THE BRONZE TURKEY

A Standard Bronze turkey should be in color a rich, lustrous bronze, which glistens in the sunlight like burnished gold. On the back each feather has a narrow black band which extends across the end. The primary, or flight, feathers are black or dark brown, penciled with white or gray, the colors changing to a bronzy brown. The wings are black, with a brilliant bronze and greenish luster, wing centers bronze, the feathers terminating with a wide black band. The tail is black, and each feather is penciled with narrow bands of light brown, ending in a broad black band, with a wide edging of dull white or gray. The legs of the young are usually dark or black, changing with age to a dusky or pinkish purple.

ADVANTAGES OF INCUBATORS

An incubator will not do more than a hen, and it will not hatch eggs that would fail under hens. It cannot reason, and no kind of a regulator will supply the place of a human manager. The incubator is not superior to the hen, nor must too much be expected of it, for there are drawbacks and difficulties with the incubator as well as with the hens. What the incubator will do, and which cannot be done with hens, may be mentioned as follows: It can be op-

erated at any period when hens are not inclined to sit. Several hundred chicks can be hatched at one time. The work can be done in winter, when there is but little other labor required on the farm. It gets a large number of early chicks in market, which bring the highest prices. It may be operated in the dwelling-house. It can be operated with but little loss of time. It is distinctly a substitute for the hen at a season of the year when the hens are not disposed to be breedy, and thus enables one to hatch chicks by the easiest and most available method.

CORRESPONDENCE

PREVENTIVE FOR GAPES.—One of the best and cheapest remedies for gapes is to take one ounce each of asafetida and copperas, and make a solution in a bottle of water. Add a little to the drinking-water, and also mix in the trough. I have used this for twenty-five years, and have not had a single case of gapes. H. A. P.
Dukedom, Tenn.

EXCELLENT PROFIT FROM FIFTY HENS.—I had for a start fifty hens the first of 1899. Wyandottes and Plymouth Rocks, which laid 4,825 eggs. I used all I wanted for a family of ten. I sold eggs to the amount of \$22, young chicks \$12.43, hens \$7.75, besides all we wanted to eat, and I have sixty hens and pullets now. Mrs. O. Y.
Cambria, Va.

MITES.—I wish to state how I got rid of the little mites that infest hen nests and roosts. Last spring I whitewashed my hen-house thoroughly, using a little coal-oil in the lime. Then I went to the forest and gathered leaves for all the nests, mostly sassafras-leaves, and renewed them weekly through the summer. I set my hens in the nests, and was not bothered with mites, something I have not done before for years. S. L. D.
Goose Creek, W. Va.

OVER THREE DOLLARS A HEN.—I want to tell your readers what one of my friends has received for the product of 300 hens during the year ending January 1, 1900: Sold during January, 1899, 155 dozen eggs at 31 cents, \$48.05; February, 416 dozen eggs at 16 cents, \$66.56; March, 731 dozen eggs at 13 cents, \$95.03; April, 507 dozen eggs at 15 cents, \$76.05; May, 440 dozen eggs at 17 cents, \$74.80; June, 485 dozen eggs at 17 cents, \$82.45; July, 286 dozen eggs at 18 cents, \$51.48; August, 210 dozen eggs at 20 cents, \$42; September, 276 dozen eggs at 24 cents, \$66.24; October, 290 dozen eggs at 28 cents, \$81.20; November, 216 dozen eggs at 31 cents, \$66.96; December, 292 dozen eggs at 32 cents, \$93.44; total, \$844.26. Also, 30 dozens of broilers at \$3 a dozen, \$90, and 20 dozens of hens at \$5.25 a dozen, \$105, making a total of \$1,039.26. Who can beat this? There was no account kept of the total number of eggs used in the family, and no account kept of the number of chickens eaten by the family. The food was grown and no account of it was kept. Nicolaus, California. G. T. J.

INQUIRIES ANSWERED

Leghorns.—S. E., Ashland, Va., writes: "How many varieties of Leghorns are there in the Standard?"
REPLY:—Brown, White, Buff, Black, Dominique, Duckwick, Rose-comb Brown and Rose-comb White.

Lice in Nests.—J. O. F., Dixie, La., writes: "Lice cover the nests and eggs of sitting hens. Please give a remedy."
REPLY:—The advertised lice-killers are excellent. A remedy is clean nest material and dusting of the hens and nests with insect-powder every other day.

Crossing.—H. J. G., Helena, Mont., writes: "Will it be of any advantage to cross my Brahmas with Leghorns so as to secure earlier maturity?"
REPLY:—Probably the pure-bred Brahmas should be preferred, as the comb of the Leghorn is liable to become frozen in a very cold climate unless the birds are kept under very favorable conditions.

Limber-neck.—H. A. P., Dukedom, Tenn., writes: "Fowls in this section have a disease in which their legs get weak, the necks limber, and they die. It is termed 'limber-neck.'"
REPLY:—Investigation shows many cases to occur when the hens have access to decaying animal matter. Sweetened water has been found to be sometimes a remedy. Frequently the cause has also been traced to body-lice.

Preserving Eggs.—E. C., Hurtsboro, Ala., writes: "Give the best directions for preserving eggs, and state how long the eggs will keep fresh."
REPLY:—Eggs from hens not with males will keep three times as long as those that will hatch. The rules are: 1. Cool place. 2. Turn the eggs twice a week. 3. No males. The eggs may be kept on racks or in barrels or boxes, turning the boxes over to turn the eggs. No solutions are necessary. A cool place is important. Do not buy eggs to preserve. They should keep at least three months. If at a temperature of fifty degrees they will keep six months.

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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE 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 inclose 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.

Fractional Currency.—G. M. McM., Fort Ann, N. Y. During the war period the following denominations of fractional currency ("shin-plasters") were issued: Three, five, ten, fifteen, twenty-five and fifty cents.

Rose Cuttings.—R. S., Shanard, Ill. Rose cuttings will take root in moist sand kept at a temperature of sixty-five degrees, Fahrenheit, in about twenty days. Then they should be potted in good soil in small pots, and re-potted in larger pots from time to time.

Furniture-polish.—D. W. S., Centralia, Nev. Take one ounce of beeswax to one half pint of turpentine. Melt the beeswax, warm the turpentine carefully, mix and stir thoroughly. Apply the polish to the furniture with a woolen rag, and rub vigorously with another piece of woolen.

To Drive Away Striped Squash-bugs—Stains on Egg-shells.—W. F. S., Natron, Oregon, writes: "Mix thoroughly, flour, two parts, and calomel, one part. From a spice or pepper box dust this mixture over the squash and melon vines when the dew is on. Renew after a rain.—Ashes will remove stains from egg-shells if well rubbed on with a damp cloth.

Potato Seedlings.—M. B., Sylvania, Ohio, writes: "I saved a few 'potato-balls' last September. How can I raise potatoes from the seed?"

REPLY:—Select a spot of well-drained sandy loam soil partially shaded. Make a fine seed-bed, and mark off drill-rows ten inches apart. Sow the seed, and cover by sifting fine soil over it to the depth of one half inch. When the plants are large enough transplant, and then cultivate until the tubers ripen. The first year the tubers will be small. It will take about three years to determine the value of the seedlings.

Corned Beef.—J. M. B. Y., Waxahatche, Tex. For corned beef the following is recommended: Put six gallons of pure water in a large kettle, add to it six pounds of saltpeter, and set to boiling. When the saltpeter is dissolved and the water boiling immerse the beef (previously cut into pieces of convenient size for family use), holding it on a large flesh-fork, and let it remain while you count ten slowly. Take it out, cool it, and pack firmly in a cask. To the boiling saltpeter now add nine pounds of fine salt, four pounds of pure sugar and a little water to supply the loss by evaporation. Boil slowly, and skim off the impurities. When the pickle is cold pour it over the beef, which should be held down by a heavy weight. The scalding of the beef in the hot solution closes the pores and prevents the juice of the meat from going out into the pickle.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose 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. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE:—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Umbilical Hernia.—E. J. G., Carlyon, N. Y. The umbilical hernia of your filly is easily removed by a surgical operation, provided the latter is performed by a competent veterinarian.

A Sore Eye.—J. H. E., Dresden, Ohio. It is utterly impossible to base a diagnosis upon the simple statement that your horse had a sore eye for four days. There are too many possibilities.

Insufficient Milk from One Teat.—A. B., Palatine, Ill. Follow the advice given to J. M., Burt, Mich., in the present issue. Meanwhile see to it that the teat is regularly milked the same as the others.

Garget.—F. F., Centropolis, Mo. Very frequent, say every two or three hours, and very thorough milking constitute the only rational and effective remedy against such cases of garget as you describe.

Two Dry Teats.—J. M., Burt, Mich. If the two dry teats are not degenerated there is a fair prospect that the same will yield milk again when your cow calves, provided you do not leave it to the calf to draw the milk, but attend to the milking of the now dry teats yourself, and that at least four times a day until the flow is a normal one.

Mange.—S. S. D., Larned, Kan. Mange of horses is one of those diseases of which the law requires that it be reported to the state veterinarian, who will then take the measures necessary to cure and eradicate it.

Mare Knuckles Over.—L. S., Waverly. Exempt your young mare from any kind of work, feed her sufficient quantities of nutritious food, trim and pare her hoofs into a proper shape, and keep her on a level floor.

Colic.—N. V., New Alsace, Ind. Please consult answer to J. E. S., Ashley, Mo.; and, further, do not resort to medication unless you know what effect is wanted, and what effect the medicines will have. As to colic, far more horses are killed every year by medication than by the attacks of colic.

Probably a Quitter.—J. W. M., New Bloomfield, Mo. What you attempt to describe is more like a quitter (a fistula in the cartilage of the hoof) than anything else, and the best advice I can give, if you desire to have your jack cured, is to have the animal examined and treated by a competent veterinarian.

Always Pawing.—W. D. H., Bois d'Ark, Mo. It is difficult to break horses of bad habits. You may prevent your horse from pawing if you hobble the same, but this I can hardly advise you to do. If the horse paws the worst when tied and alone it may be that the pawing will cease if the horse has company and is kept in a loose box.

Bleeding from One Quarter of the Udder.—W. G. L., Fultonham, N. Y. The discharge of blood from one teat of your cow undoubtedly has its source in a ruptured blood-vessel, ruptured, no doubt, by external violence. Protect the cow against violence and injury inflicted either by animals (other cattle or dogs) or by men, and the bleeding in time will cease.

A Large and Hard Swelling on the Neck.—A. J. P., Hillsdale, Ill. The nature of the large and hard swelling on the neck of your sow cannot be ascertained from your meager statement. There are several possibilities. It may be an abscess, it may be a diverticle in the esophagus, it may be an enlargement of the thyroid glands, and it may be something else. Have your sow examined by a veterinarian.

A Skin Disease.—E. A. S., Slaterville, N. Y. The singular (?) skin disease of your heifer is probably nothing but so-called ringworm. Please consult answers in recent issues of the FARM AND FIRESIDE headed "ringworm." If there are really "dry and hard bunches of the size and thickness of a quart bowl" I cannot answer your question, and have to advise you to have your heifer examined by a veterinarian.

An Itching Cutaneous Eruption.—D. T. R., Norwalk, Ohio, and L. W., Rives, Tenn. As soon as the weather will permit wash your horse first with soap and warm water in a thorough manner, and then with a four or five per cent solution of creolin in water. Repeat the wash with the creolin solution once every five days as often as you may find it necessary, and at each wash clean the stall and remove all the bedding, no matter whether it is yet clean or not.

Epileptiform Fits.—D. C. T., Flat, Ohio. What you describe appear to be epileptiform fits. They have nothing whatever to do with rabies. They may, particularly in dogs, be produced by various causes. It has been recommended to give such a dog like yours three times a day a tablespoonful of a solution of one ounce of bromide of potassium in ten ounces of distilled water; but it is perhaps not necessary to tell you that as long as the cause is not known and not removed the result of a treatment like that just mentioned is not very reliable.

Corns.—R. J. P., Eaton, N. Y. Have the corn cut out, but if possible without drawing blood, fill the hole with absorbent cotton saturated with tincture of aloes, prepared by dissolving one part of aloes in four parts of alcohol, and then have a shoe put on, a bar-shoe, perhaps, which is either open at the inner or rather median quarter, or, at any rate, does not come in contact with the inner quarter where the corn has its seat. In cutting out the corn see to it that the bar is not cut away. Have the shoe reset in about four weeks and have the corn cut out again, the hole filled up with the saturated cotton, and the shoe put on in such a way that there will be no pressure or bearing upon the inner quarter. After another four weeks the same treatment may have to be repeated. Poultices and external applications will do no good.

Coagulating Milk.—A. L. P., Mongaup, N. Y. You say the milk of your cows coagulates when boiled, even if boiled immediately after it has been drawn from the udders of the cows. If such is the case it must be supposed that the infection is taking place either in the stable while the milking is going on, or else through the food the cows receive. The latter is probable if the cows are fed with sour milk, sour slop, for instance. If this is not the case, nothing will be left but to thoroughly clean and disinfect the stable and the milk-pails, etc., and to see to it that the udders of the cows are kept clean, and that the milking is performed with clean and dry hands. Milk of old milking cows or of cows which soon will be fresh again is also apt to coagulate when hotted. Milk of fresh-milking cows—that is, a few days after calving—also is not able to stand boiling.

A Sick Sheep.—A. S. P., Nicklow, W. Va. The disease of your sheep and the symptoms you describe are caused by a morbid pressure upon the brain, and possibly upon the medulla oblongata; but whether this pressure is produced by the presence of cystworms (Coenurus cerebralis), by exudates or by other causes cannot be ascertained from your statements. Your sheep will die, or very likely has died before this reaches you. A careful post-mortem examination will reveal the cause.

A Bad Old Sore.—J. M. L., Newburg, Iowa. Lost and destroyed skin cannot and will not be reproduced; besides this, the "sore," as you call it, is of six months' standing, and as you do not tell me what kind of caustic has been used to cause the destruction I have no means of knowing the present condition of the "sore." I cannot, therefore, advise you, except to have the case examined, and if there is yet any prospect of effecting a healing, also treated by a veterinarian. That the sore is in the bend of a joint makes the case still worse.

Does Not Yield Her Usual Amount of Milk.—J. P. J., Ann Arbor, Mich. The fault is not with the cow, but with you. The calf did not care for any more milk than it needed, and did not draw any more from the udder of the cow than it wanted, and as you did not care for the milk, the yield of the milk gradually decreased to the amount taken by the calf. By frequent (at least three times a day) and vigorous milking you may yet succeed in exciting the mammary glands to greater activity and thus in increasing the yield of milk. If your cow is already fat, more and better food will make her still fatter, but will not increase the yield of milk; on the contrary, will be apt to diminish it.

Mycotic Gastro-enteritis.—W. B. F., Galena, Md. The symptoms of the diseased horses as described by you are such as are observed in mycotic gastro-enteritis, or diseases caused by a consumption of spoiled and moldy food, no matter whether it is moldy straw or some other moldy food. It is true you have not enumerated all the symptoms presented in such a gastro-enteric affection, so, for instance, you do not mention any symptoms of high fever, but such a combination as you describe is, so far as I know, not observed in any other disease. Therefore I think your veterinarian was correct in his diagnosis. The remedy consists in avoiding the causes.

An Old Sore on a Dog's Ear.—H. H., Leesburg, Fla. The old sore may yet be brought to healing if it is first either refreshed by the surgical knife or thoroughly cauterized with a stick of lunar caustic, and if then a cap, perhaps of common muslin, is made for the dog in such a way that it has a pocket for each ear, and is so arranged that the ears when in their pockets can be tied and be kept on top of the dog's head in such a manner that the dog cannot scratch and flap the ears, and thus irritate the wound and prevent a healing. After the wound has been refreshed or been cauterized, an application twice a day of a little boric acid to the wound will probably be all that is required.

Lymphangitis.—H. T. C., Sycamore, Ala. The condition and the symptoms of your mare, as you describe them, correspond to those observed by French and Italian veterinarians in epizootic lymphangitis, or African or Neapolitan farcy, a disease resembling in many respects common farcy or external glanders, but not quite so malignant, and often, according to these veterinarians, yielding to treatment. In some cases, however, abscesses also make their appearance in internal organs, or the disease becomes complicated with pneumonia, pleuritis and anemia, and then the disease as a rule will have a fatal termination. According to Rivolta the disease is caused by a bacterium which he calls *Cryptococcus farcinomas*, and the infection takes place through external wounds and sores. The period of incubation, according to Italian veterinarians, is three months. The treatment, of which it is claimed that it may effect a recovery in from one to seven months, consists in extirpating or cauterizing the abscesses or ulcers with a red-hot iron as soon as they make their appearance. A similar disease also occurs among cattle.

Foaming Cream.—M. J. L., Mt. Pleasant, Pa. The foaming of the cream when churned, and the difficulty or impossibility of getting butter, has been ascribed to various and widely different causes; so, for instance, it is claimed that it may happen if the cow is too near becoming fresh again, if the cow is defective in quality, and if the cow has a diseased udder. However this may be, there can be no question but that the most frequent cause has to be sought in an infection of the milk taking place, not while the same is in the udder, but after it has been milked out, either already in the stable when the milk is milked into the pail, or afterward, while it is kept in a vessel in the cellar or milk-room. As it is seldom known in what particular place the milk becomes infected, it will, as a rule, be necessary to clean and to scald not only all the milk-vessels, but also to clean and to disinfect all the premises, the stable included, in which the milk is kept, or in which a possibility of an infection is not out of the question. Further, the udder of the cow must be kept clean, and the milker must wash and dry his hands before he proceeds to milk.

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THE GRANGE

Conducted by MRS. MARY E. LEE, New
Plymouth, Ohio

EDITORIAL NOTES

WE HOPE every reader will act on the suggestion of our national lecturer. The grange does not oppose combiutious of capital for legitimate enterprise, but it does oppose associations that seek to control the supply of a commodity. Every reader should preserve the articles of our national lecturer for future reference. They are worthy of careful thought and careful study.

"Government of the people, by the people, for the people," is usually interpreted by the last phrase, "for the people." It is easy to forget our own duty in matters of this kind, and shift responsibility and blame for all mistakes on the officials. If people are conscientious in the discharge of their duties as citizens, government in the interest of the people will naturally follow.

"The fault, dear Brutus, is not in our stars, But in ourselves, that we are underlings."

Those who wish to keep in touch with the leading educational thought of the age, to learn from the teachers of the teachers, should secure the thirty-eighth annual volume of "Proceedings of the National Educational Association." It contains all the papers and discussions of the general sessions, as well as the sixteen departments. The proceedings of the Columbus meeting of the department of superintendents; the special report of the various committees on college entrance requirements, normal schools and relations of public libraries to public schools. There are papers from such leading educators as Dr. W. T. Harris, Dr. Nicholas Murray Butler, David Starr Jordan, and more than a score of others whose names are familiar.

We would urge at least one member of the grange to secure a copy. There never has been as much dissatisfaction expressed by country people over the condition of our schools, nor so earnest a determination displayed to better them, than to-day. In order that our work in this direction may be directed along the highest line of advancement, and in unison with the best thought, we must go to the highest source of information. There will be some hard reading, some difficult problems to solve, but one will be better for the study and thought. The volume will be sent upon receipt of \$2, by Prof. Irwin Shepard, Secretary N. E. A., Wiuona, Minn.

EDUCATING THE SCHOOL BOARDS

An interesting article on the above topic appears in the February "Popular Educator." Acting upon the suggestion of Superintendent H. Brewster Willis a number of school men formed an association for the study of school problems. Following are excerpts:

"The objects of the association, as set forth in the constitution, were to become acquainted with, and hear addresses from, the leading educators of the state; to exchange opinions on all matters pertaining to school-work; to better qualify school-board men for the responsible duties of school officials and to work in unison for the betterment of the public schools of the county."

The association became very popular and the membership increased rapidly. Prominent educators were invited to address the association on school topics.

"Among the subjects discussed by the members of the association have been school architecture, plans, school furniture, the admission of light, heating, ventilation, cleaning school-buildings, janitor-work, janitors' salaries, vaccination of pupils, teachers' salaries,

transfer of pupils from one district to another, drinking-water supply, school taxes, annual appropriations, school law and other important school subjects.

"The work of this association in Middlesex county has attracted attention throughout the state, and an effort has been made by County Superintendent Willis to organize a similar association in every county of the state. At the present time more than one half of the counties of the state have so organized as a result of this movement.

"The broadening and educating influence of this county organization upon all the district associations has already been felt in Middlesex county, and has been publicly recognized by the state department of education and the state board of education.

"The work of county organization has met with such a hearty response from the school-board men of the state that on Tuesday, December 19, 1899, these various county school-board associations sent delegates to the state-house assembly-chamber for the purpose of organizing a state school-board association.

"At this meeting Hon. Foster M. Voorhees, governor of the state, State Superintendent C. J. Baxter, ex-Senator James L. Hayes, president state board of education, and other prominent educators addressed the meeting.

"The objects of this state organization are to magnify the importance of the office of school trustee, to better qualify the members of the boards of education of the state for their responsible official duties, to discuss questions relating to the management of the public schools throughout the state, to advocate needed legislation for schools, to hear addresses from prominent school men, and to promote the cause of public education generally.

"Sixteen of the twenty-one counties have already reported favorably to County Superintendent Willis, and not less than three thousand five hundred school-board men of this state were represented at the meeting on December 19, 1899. It would seem as if every part of the state is alive to this movement. It is welcomed by the school-board men, who have had so little help from county or state to fit them for the discharge of their important duties.

"The proficiency of our public schools depends upon the proficiency of our school boards. Like school boards like schools; and this effort to enlighten the school boards of our state and magnify the importance of the office of school trustee should be encouraged alike by county, state and nation."

This is a long step in the right direction. In the new light of educational progress it becomes essential that the school board shall be conversant with school matters. It should be competent to pass on the merits of a teacher, the value of school helps, the textbooks used, and, in general, to supervise the whole system of work. It is the court of final appeal in that which pertains to the most valuable part of a child's life. How essential, then, that it be in sympathy with the most comprehensive system of school-work: The school director, consciously or unconsciously, wields a mighty influence in the life of every child of his district. Each term of school spells out a syllable of the child's life. If that syllable is strong and true and resonant the whole will tend to become like the part. If the syllable is weak and vacillating and untrue it will weaken the whole in like proportion. I believe that rural school boards as a rule are conscientious in the discharge of their duty, but they are fearfully handicapped. They are anxious to secure the best teachers possible, and the best school helps, but their business life is so entirely apart from these matters, they are isolated from educational matters, their habit of thought leads them to agricultural

rather than educational journals, consequently they learn to depend on the teacher for guidance. The ones who should direct and supervise are themselves directed. They realize keenly the loss a poor teacher entails upon them, but because they have no definite idea as to how the teaching should be done are compelled to bear, in what patience they may, the complaints of the district, the contempt of the pupils, and the torturing thought that they are responsible for the condition of the schools. I have seen school boards submitting to these indignities anxiously seeking for better teachers, and when found, offering to pay from their own pockets an increase in salary over the appropriation for the school year. Such directors arouse our sympathy. Yet they are to be criticised for permitting themselves to be imposed upon. They have assumed grave responsibilities, and they should fit themselves to honorably and nobly discharge their duty. That there is no financial consideration attached to their office should not deter them from fitting themselves for nobly filling it. Rather it should inspire them to greater effort. The richest reward one can receive is that which comes from the consciousness that he has, without hope of money and without price, contributed to the sum total of human intelligence and enjoyment. Let the directors of our rural schools meet at the county-seat, or some convenient center, discuss school matters, inform themselves concerning school helps, proficiency of teachers, and the many, many matters that come before school boards. Let them call in some leader in educational thought—a superintendent, principal or a competent teacher—to address them on some phase of educational work. A physician would speak of the sanitary condition of the school, heating and ventilation. Often there are men and women keenly alive to the various educational matters who would be glad to co-operate with the school boards in their efforts to secure better schools. And they would do it not for a financial consideration, but because they see the necessity of giving our little ones better educational facilities. I believe the town is anxious to co-operate with the country. They look to us for strong, brave, well-balanced men and women who will enter into their life and make it better, nobler and purer. Let the various school boards of a county co-operate with one another and glorious will be the result.

THE GRANGE AND TRUSTS

The control of "trusts" by national and state legislation is the topic discussed by the subordinate granges of the country in February, and there has developed a remarkable degree of interest in this important matter. Bearing upon this topic we desire to call attention to the report of the special committee on trusts unanimously adopted at the recent session of the National Grange.

[The report appeared in this department in the December 15, 1899, issue.]

This report was prepared under the direction of a committee composed of members from fifteen states, and may properly be styled the grange platform upon the subject of trusts. We urge the members of the granges throughout the country to discuss this subject in a broad, statesmanlike manner, and with an earnest desire to aid in the movement for national and state legislation that will prevent the legitimate advantages of associated enterprises to be turned into monopolies for robbing the people and destroying a fundamental principle of our government. Letters should be written to congressmen and senators, and petitions and resolutions forwarded in such numbers that the voice of the people will be heard by all law-making bodies in the land.

N. J. BACHELDER,
Lecturer National Grange.

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THE "DON'T WORRY" CRUSADE

IT IS possible that all have not heard of it, and yet that such a movement has begun, and that a place within the ranks can be found for all recruits, is none the less true. Its purpose is to wrest, by force of will, our nerves, our tempers, our peace of mind, our daily happiness, from the grasp of the "worry fiend," who would destroy them all and lay waste our lives.

Theodore F. Seward has said in a most helpful book, entitled "Don't Worry; or Spiritual Emancipation," that "Americans are above all others slaves to the 'worry habit,'" and that "it may truly be called a national vice." The truth of this we have only to look around us to discover, and that we Americans realize it ourselves is also true. What else can account for the fact that it is almost impossible to take up a newspaper or periodical of any kind without meeting an allusion to the "worry" subject? It is called by all sorts of names—a "habit," a "vice," a "germ of all diseases," even a disease itself—and although it may in truth be any one of these, or all of them combined, if persistent worry is the order of the day throughout the entire life of an individual, that one, whoever he may be, will in the end not only embody in his own personality all the ills which have begun in worry, but will send them down as a heritage to posterity, to work over again their sad fulfillment in the distorted characters and tormented lives of people yet unborn. Terrible is the havoc wrought by intemperance the world over, yet it is not a greater enemy to the home than worry, for the latter often becomes in itself the cause of intemperance by driving to drink those whose homes are made unendurable by its presence.

Assuming worry to be a disease, it has such a variety of forms, each of these developing symptoms peculiar to the temperament of the patient, that it is often far from being an easy matter for even a skilled specialist to make a correct diagnosis.

Mr. Sage is a shrewd, systematic, successful man of affairs; self-contained in an emergency, not easily thrown out of line; a man to whom other men go for advice and assistance. A business matter arises in which important issues are at stake, and after deciding upon the course best to pursue in the circumstances, he is still uncertain as to whether it will succeed in bringing about the desired end. During the interval of suspense acute worry sets in, yet neither a spoken word nor an unwonted silence would indicate to a casual observer that the disease held him fast in its grip. Not until the crisis is past and the reaction follows does he realize himself how great has been the strain and how much vitality has gone to waste in silent worry.

Mrs. Fry is a patient of a different sort. With her worry has become chronic, and yet is developed with reference to but one subject, which is the well-being of her children from a sanitary—not necessarily a sane—point of view. The maternal worry began as soon as the first child entered upon existence, gradually extending its radius until, like an immense family umbrella, its black shadow covers the unfortunate little Frys wherever they go, protecting them alike from storm and sunshine, and most effectually defrauding them of all the joy and comfort which rightfully belongs to happy childhood. If the baby sneezes, Mrs. Fry worries—the worry as distinctly audible as the sneeze; it "has taken cold," she knows.

If Johnny has a sore finger she worries; "Lock-jaw will be the next thing," she is sure. If the mercury in the Fry thermometer fails to sustain itself at the dizzy height of eighty-five degrees, and is seen to loiter for a few comfortable moments in the seventies, Mrs. Fry worries, and sometimes scolds. "Something is wrong with the furnace," hence somebody is "to blame;" the children will all be down with "croup or pneumonia." When a case of measles or whooping-cough appears in school, Mrs. Fry, at the first note of warning, is upon the spot collecting her brood from the different departments and marching them home under her wing, whence not one escapes to even peep until the dreaded disease has "sampled" the town, leaving only the little Frys as a possible starting-point for its next onslaught. Yet these young people, swathed in flannel as they are at all seasons of the year, hung with chest-protectors as with placards, from the eldest to the youngest, and shielded from all possible disease, so far as maternal care can shield them, by amulets of camphor gum suspended from their necks in chamois bags, manage somehow to struggle up to manhood and womanhood, though in an atmosphere of continual worry. Their mother, it is true, has wasted none of it on their manners, their habits, their choice of companions, yet there has been enough of it to make life a burden to the entire family, and of Mrs. Fry an old woman at forty-five. One of the natural consequences of chronic worry is premature old age.

But that form of the disease of which the saddest results are recorded is seen in those patients who have inherited the tendency to it. In these cases the soil is ready from the beginning, and the fatal germ, which is everywhere abroad in the land, has but to fall upon it to insure safe lodgment and an early fruitage. For these it matters not where life finds them, nor by what circumstances they are surrounded. The home may be one of wealth or poverty; the life may be one of ease and luxury, or of unremitting toil and hardship. Happiness is never found in that home, and from that life all peace and joy and daily comfort are far removed. As time passes various complications develop, and where the disease at first may have been simply worry, it becomes so hopelessly entangled with fretfulness, jealousy, malice, evil-speaking, and a score of other diseases all having their source in worry, that the patient gradually loses power of self-control and the case becomes most difficult to cure. Not upon one subject more than another does this patient waste time and strength in worry; in fact, everything that touches life, whether near or remote, becomes food for the disease to work upon. Husbands, wives, children, home affairs—it does not stop with these, but extends outward to the neighbors, the community, the world at large, while even the "situation in the Philippines" and the war in South Africa have a tendency to aggravate the malady. But whatever may be the subject upon which worry spends itself, nothing is ever right and somebody always at fault, for this patient is a pessimist inevitably.

In order to join the "don't worry" crusade no one need leave his home or neglect his business. It is simply to enroll one's self in heart and mind with the vast army of those who are struggling to throw off the disease so fatal to health, to happiness, to life, and to liberate the spirit from its thralldom. There can be no greater help along the upward way than that afforded by the

sense of companionship. The comforting knowledge that others are traveling the same road with the same end in view, that others are struggling like ourselves and gaining ground little by little, is an incentive to continued effort through the days when we are striving to put worry far from us and to live upon a plane of thought and action which it cannot reach.

Whatever the faith-cure may have failed to accomplish in the healing of other maladies, it is a healer of worry—sure and all-sufficient. Whoever in the past it may have disappointed, it will never disappoint the patient whose malady is worry. Let us swell the army of "don't worry" crusaders, for no one of us is free from a taint of the disease.

To go out into God's sunshine in the morning, to inhale in long, deep breaths the sweet air, and note the growth of living things about us for which he provides, is to lay up a store of faith which will at least for that day banish care, distrust and worry from our hearts. We shall begin the next day upon a higher plane of living, but we will not abandon the faith-cure. Let it have complete sway over us, and after awhile we shall begin to see that the power and vitality hitherto wasted in worry are turned into their natural channels and are making themselves felt in nobler, richer life. We are then a long way on the road toward cure.

Finally belief comes to stay with us—that belief in the future which makes of each expected day a "confident tomorrow"—the belief which sets in motion those unseen forces which operate for us according to the faith that is in us. Then on some happy morning, when worry is a thing forever past, we look back over the way we have come, and remember that of these invisible forces constantly working for us he, our Father, is the great impelling force, and that it is he who forgiveth all our sins and healeth all our diseases.

LILLA A. WHITNEY.

AN INEXPENSIVE WAIST-FORM

In these days, when so many women are their own dressmakers, and waists are so daintily made and elaborately trimmed, it has become almost a necessity to have some sort of a form on



which to drape the waist and trimming if one wishes to get the best effects without continually trying the garment and drapery on one's self.

The illustration will show with what success I made a waist-form at almost no expense and with very little labor. Make a bag of unbleached muslin about three quarters of a yard wide and one yard long, and in the bottom place a piece of cardboard twelve inches long by nine inches wide, as a base for the figure to stand steadily upon. Having procured a little packing-excellior and about half a bushel of sawdust, which latter article can be gotten at your grocer's for the asking, you are ready to begin operations.

Pour about two thirds of the sawdust into the bag, and tie the top of the bag securely with a piece of strong twine. Then fasten a pair of corsets—

which must be shapely—around the bag. A perfectly new pair of corsets is best, and very good ones for the purpose can be bought nowadays for thirty-nine cents; and as they are always stationary and have no wear they will last for years.

After the corsets are clasped untie the twine, and pour into the opening as much more sawdust as the bag will possibly hold; then with your hand, or better a flat piece of wood, pound the figure into shape, taking measurements around your own hips, waist, bust, shoulders and neck, and pounding the figure until it corresponds as nearly as possible. It is a great help to button an old well-fitting waist over the corset, and fasten a stiff, high linen collar where the twine is, to form a neck.

In the upper part of the sleeves of the waist push enough excellior to merely hold them out a little, that other new sleeves may be fitted over them, to find correct positions. The form you see in the illustration cost, I think, ten cents, as I did not buy anything but the unbleached muslin, and while it does not exactly correspond with my figure, it has answered a thousand practical purposes and took but one and one half hours to make.

GERTRUDE OKIE GASKILL.

A DAFFODIL TEA

The invitations sent out by our Tuesday Club for the daffodil tea were as follows:

The Tuesday Club
requests the favor of the company of
Miss Euuice Claire
on Tuesday, April the third, at six o'clock
Daffodil Tea

These invitations, written neatly on rich white paper in the small square size, were sealed with yellow wax.

As there were twenty in our society, and each invited one friend, provision needed to be made to entertain forty guests, an undertaking which we gladly turned over to one of the girls who offered to do the catering for the reasonable sum of fifty cents a plate. She had taken a thorough course in cooking and we had no fears as to her competency.

The menu, printed on daffodil-tinted cards, was as follows:

| | |
|---------------------|-----------------|
| Bouillon. | Croutons. |
| Croquettes. | Tomato Sauce. |
| Lettuce Sandwiches. | Olives. |
| Chicken Salad. | Cheese Wafers. |
| | Salted Almonds. |
| Orange Sherbet. | Macaroons. |
| Golden Cake. | Lady-fingers. |
| | Russlan Tea. |
| | Orangeade. |

Our homes were ransacked for dishes until the long table was set with exquisite daintiness in crystal, silver and yellow china, or green china, or china deliciously decorated with flowers of spring. Wax candles in quaint silver candlesticks or candelabra shed a softened light through yellow shades, and the last touch of color was given by crystal bowls filled with yellow daffodils or blazing tulips.

Two young men who had kindly offered to serve for us wore daffodil boutonnieres, and the four young girls who assisted them came dressed in white, with ribbons of yellow and green and coquettish little caps in green and yellow silk, suggesting the blossoms themselves. Our caterer had trained these waiters very carefully, writing out the minutest details with the menu, so at the last, with competent help in the kitchen, she was enabled to sit down with the guests and enjoy all the fun, feeling sure that the cress would come in with the croquettes, and that lemons and raisins would flavor the tea.

At the head of each menu-card were printed appropriately the lines from Wordsworth:

Then my heart with pleasure fills,
And dances with the daffodils.

Which words literally were true, we had such a good time. Two cards tied with

daffodil ribbon were laid at each plate, one containing the name of the guest, and the other a quotation giving some poetical thought of daffodils or the opening season with sister flowers. A few of them were as follows:

When 'daffodils begin to peer,
Why, then comes in the sweet of the year.
—Winter's Tale.

Behold the young, the rosy sprig
Gives to the breeze her scented wing.
—Anacreon.

"Again the daffodil of shining days
Drinks warmest color from the glowing sun
And kindles into fragrance at his blaze."

"Now hlow the daffodils on sleuder stalks,
Small, keen, quick flames that leap up in
the mold
And run along the dripping garden walks."

When that I heare the foulcs slug,
And that the flowres ginnen for to spring,
Farewell my hooke.
—Geoffrey Chaucer.

Daffodils that come before the swallow dares
And take March winds with beauty.
—Shakespeare.

A poet could not but he gay
In such a jocund company.
—Wordsworth.

Sounds of vernal showers
In the twinkling grass,
Rain-awakened flowers,
All that ever was

Joyous and fresh and clear this music doth
surpass.
—Shelley's Skylark.

The heavens laugh with you at your festival,
My heart is at your jubilee.
—Wordsworth.

Flower songs, flower lore and flower
games filled up the evening, and the
guests departed with the feeling that
the coming of daffodils was an event in
the year.

"I never dreamed," said one plain-
spoken girl, "that so many sweet and
pleasant things came along with daf-
fys." FRANCES BENNETT CALLAWAY.

THE HOUSEHOLD GARDEN

Although the winds are still cold and
a bright fire comfortable, yet we know
spring is not far away, and the garden-
ing impulse stirs within us. If you can
have a hotbed in which to start early
lettuce, radishes, etc., and raise tomato,
egg and cabbage plants, so much the
better; but if not, be sure to have some
lettuce, spinach, peas and potatoes
planted just as soon as the ground is
dry enough to be worked. I know one
garden where a number of ridges run-
ning east and west are thrown up late
in the fall, by which means the owner
claims he can plant peas, etc., two
weeks earlier than he otherwise could.
I know he has the earliest vegetables
of the neighborhood. I have raised nice
tomato and lettuce plants in a box in
the kitchen window. Every one may
not know that lettuce is improved and
made to head by being transplanted.
For several years I have had the best
success by planting the seed for late
tomatoes where I wish the plants to
stand.

If you have never had an herb-bed in
the kitchen-garden, don't neglect it
longer. Nothing gives a more pleasing
variety to the table than the proper use
of the various kitchen herbs for flavor-
ing. Sage, summer-savory, thyme, sweet
marjoram, chervil, parsley and tar-
ragon may be raised with very little
care, and enough dried for winter use.
Peas, beans, sweet-corn, etc., should be
planted at intervals of a week or ten
days for four or five weeks, so as to
have a succession. If all vegetables are
planted in long rows, so they may be
worked with a horse, the garden labor
will be lessened.

The time when the first garden-peas
is planted is also the time to plant
sweet-peas, as they grow and bloom
much more satisfactorily if planted
very early. Have a trench dug two
feet deep and two feet wide running
north and south. Fill this trench half
full of well-rotted manure, then six
inches of mellow soil. Plant the peas
thickly in this, covering them not more

than half an inch deep. As soon as
they start to grow and appear above the
ground cover them with fine soil, then
when they are two or three inches high
fill in with more soil, and hoe it close-
ly about the stems, repeating this until
the trench is full. The roots will then
be deep in the soil, and the plants
able to withstand the heat, which would
otherwise burn them up.

Stir the ground often about the
plants, but do not water them until
they begin to bloom, unless there should
be a drought, in which case give a very
thorough soaking once a week. If they
are watered a little and often at this
time it will make the roots grow near
the surface. After they begin to bloom
water if necessary, cut the blossoms
every day, and you will have a wealth
of bloom from June to October. Woven
wire makes a good trellis for some
plants, but not for sweet-peas, as I
found out to my sorrow. It becomes too
hot in midsummer and burns the plants.
Little twigs to support the plants at
first, and later twine stretched horizon-
tally between posts, have been the most
satisfactory.

"Man does not live by bread alone,"
nor by garden vegetables; but all the
beautiful things of Nature which can
be brought about him will serve to
deepen and broaden life, making it
brighter and better. MAIDA McL.

GRANDMOTHER'S POCKET-CASE

Here it lies after a hundred years.
Its diamond-work and Roman keys and
Greek crosses done in silk cross-stitch
on canvas hold their colors almost as
bright as ever.

The outside piece is twelve inches in
length and seven in width, one end hav-
ing been cut pointed, to lap over as does
the flap of leather bags. Just below
the place for the fastening of the flap
a tablet of solid color is worked, and
the initials "L. M." are wrought in yel-
low silk to look like letters of gold.
The whole outside is in very exact pat-
terns, every angle perfect. A girl's
skill at that time had no other vent in
mechanical drawing except in planning
and executing the cross-stitch patterns.
While there are many colors, the
prevailing shade is a dark green. The
outside piece is lined with lemon-
colored soft thin silk, and all bound
about with a tiny green ribbon perfect-
ly matching the green in the cross-
stitch. The inside piece is the same
width as the outside, and ten inches
long. This is even more elaborately
worked than the other, but there is never
a mistake nor a mismatch. Besides
the beautiful border and crosses and
other patterns there are two burning-
bushes, one on each half of the inner
part. When Lydia worked the case she
had never seen a Christmas tree, nor did
she ever see one, yet the bush as she
worked it may have had its myths to
her. On one half of the inside the word
"Lydia" is worked, and on the other
half the word "Mighells," for that was
grandmother's name, and she lived in
Deerfield, Massachusetts. It was before
the spelling of the name was changed to
"Miles."

The two pieces of the case are
fastened together by a full puffing of
silk at the ends, so quite a capacious
pocket is made, with two compart-
ments. The pieces are stitched togeth-
er in the middle, and open like a book.

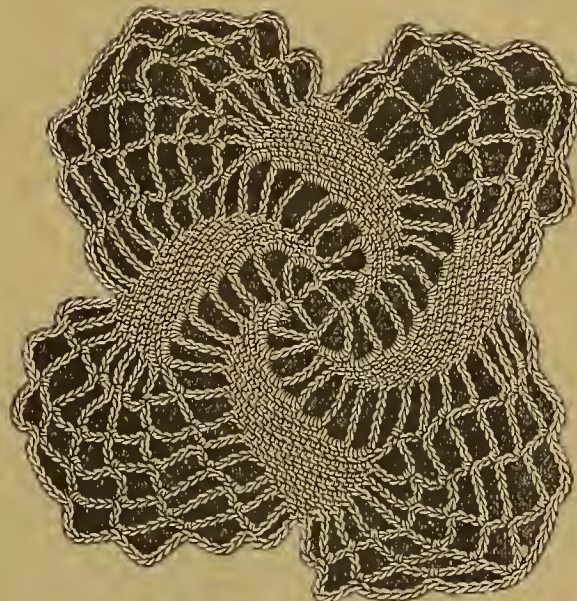
Grandmother used to tell how she
managed to obtain the floss and the silk
for lining and binding her work. The
ship brought some families to her fath-
er's neighborhood who had some lux-
uries, but knew little about getting
along in the strange colony. Mrs. Mi-
ghells was always lending out some one
of her large family to help in the spin-
ning or in times of sickness. Lydia was
the youngest, and her mother never
thought of sending her; but one day
none of the rest could be spared, and
Lydia said she knew she could help, and
so she went.

When the emergency was past at Mrs.
Hackley's, and Lydia was sent home
again, she took the message to her
mother that Mrs. Hackley said "she
was a handy little girl," and she carried
also quite a treasure of silk floss and
ribbon and the yellow-silk pieces. These
were for herself.

"Now, Lydia," said her mother, "you
are old enough to carry a bag or ret-
icule, but there has been nothing with
which to work the canvas; I will get a
piece ready for you right away, and you
must work it carefully, for the material
you have is proper nice."

It was a long time before the pocket-
case was finished, for there were bob-
bins to wind for the linen weaving, and
wool to card, apples to pare for drying,
and work for every pair of hands. Then
sometimes they had all to go from their
home and stay in a stone house with
others for fear of Indians, and some-
times the wolves would howl so that
Lydia could not count her stitches out
of fright, or the pine-knot would not
give light enough.

Lydia was happy when she finished
the bag, and when not in use she kept



CROCHETED POWDER-HORNS

(See description on page 19 of March 1st issue)

it wrapped in a nice piece of linen. This
linen they at her home had raised the
flax, broken it, picked it, spun and
bleached it, and woven it into cloth.

Grandmother was a little girl when
she did the pretty cross-stitching. Now,
after its hundred years, carefully folded
in one of the pockets lies a small bit of
parchment seven inches in length and
three in width, which reads:

By these presents be it known
that John Campbell, of Livonia,
was admitted on examination
PHYSICIAN and SUR-
GEON of the Ontario Medical
Society, on the 26th day of May, A.D., eight-
teen hundred and eight, and as such is
entitled to the Honors and Privileges of the
same.

In testimony whereof I have heren-to set
my hand and affixed the seal of the Society,
at Canandaigua, the 30th day of May, in the
year of our Lord, eighteen hundred and eight,
and in the thirty-second year of the Amer-
ican Independence.

MOSES ATWATER, President.

How came the diploma in grandmoth-
er's bag? She was a young woman
when the first chapter of her life, the
Massachusetts part, closed, and her
mother and the sons and daughters
were braving life in Western New York.
Her father was killed by a falling tree
soon after buying a farm in this far
West. He was buried in the wilderness,
and no man knoweth his grave.

John Campbell was older than Lydia
by a few years, and he came from Penn-
sylvania with money to invest in the
then new country. John Campbell be-
came Lydia's husband four years be-
fore he graduated at the one medical
school or society in this part of the
new world. Later Dr. John Campbell
was surgeon in the war of 1812.

Grandmother always kept the diplo-
ma in her work-bag, for she no longer
carried it. There is another queer lit-
tle bundle in the pocket-case wrapped
in linen, as if it were in swaddling-
clothes, and that is a lancet grand-
father used in the army hospitals.

These are all the records left of
Lydia's love story. There are no letters,
and no diaries, yet what could tell a
plainer tale? Within her choicest piece
of work she placed the diploma which
was dear to the heart of her husband,
and so the pride of her own life, then
the little lancet, a mark of service, was
in "ye olden times" one of the great
things in the medical world.

It seems as if the words "promise
and achievement" were in bold charac-
ters inscribed. Neatness, daintiness,
carefulness, studiousness and service,
together with the tender devotion of
loving hearts, are some of the things
that peep out from the covers of
Lydia's pocket-case and are recognized
by her grandchildren now at nearly
the close of a hundred years.

MARY JOSLYN SMITH.

SHIRT-WAISTS

Women are not yet tired enough of
the comfortable shirt-waists to be will-
ing to give them up for something else.
This year they will be so much more
simple in their construction that
every one should be able to
make them at home from their
own well-fitted dress-waist pat-
tern. The back is to be made
plain, with very little fullness
at the middle of the waist, and
if of sheer material, can be
strengthened by lengthwise
tucking. A group of seven or
nine directly in the back will be
worn. The fronts will extend
to the shoulder-seams with-
out yokes, and can either be full
or plain, as desired. White ma-
terials will be the favorite, and
many different kinds of fancy
woven white goods have been
brought on. Piques in wide
stripes, with hemstitching be-
tween, are especially pretty.

This season will continue to
be a blue-goods season, though
an effort has been made to in-
troduce pink and lavenders. The pink
goods are made with a view to laun-
dering well and look unfading.

Many ladies will discard the mannish
linen collars and substitute something
in neckwear more feminine; fancy col-
lars in mulls, silks, velvets and ribbons
will be worn.

Revere fronts with a dicky of lace
insertion and neck-band of lace and rib-
bon will be worn with the white shirt-
waists for summer.

The new belt of ribbon finds favor
with all, and conceals well the attach-
ment of skirt and waist. The best way
to insure keeping the skirt from sag-
ging from the waist is to have the skirt-
belt made rather tight. There is no
better indicator of a slouchy dresser
than the constant seceding of waist
and skirt. If women will wear detach-
able clothes they should be careful in
dressing to see that they are well con-
fined. B. K.

ENVIRONMENT

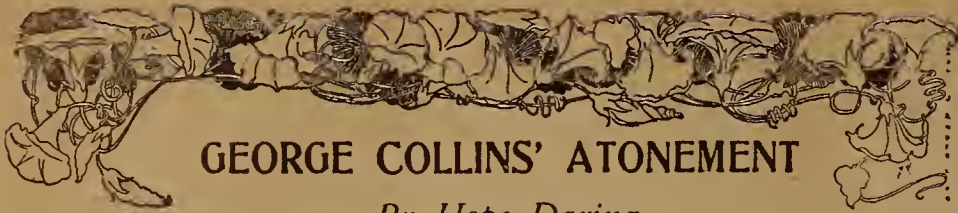
A lily grew in a garden fair
From the dust of the city street;
It had no dream that the universe
Held aught less pure and sweet
Than its virgin self; so chaste was it,
So perfect its retreat.

When night came down the lily looked
In the face of the stars and smiled;
Then went to sleep—to the sleep of death—
As the soul of a little child
Goes back to the clasp of the Father-soul,
Untouched and undefiled.

A lily bloom on the highway close
To the tread of the sweeping throng;
It bore the gaze of a hundred eyes
Where burned the flame of wrong;
And one came by who tore its heart
With a ruthless hand and strong.

It caught no glimpse of a garden fair,
It knew no other name
For a world that used and bruised it so
Than a world of sin and shame;
And hopeless, crushed, its spirit passed
As the evening shadows came.

And who can say but the sheltered one
A sullied flower had been
Had its home been out on the highway close
To the path of shame and sin?
And the other forever angel-white
Had it blossomed safe within?
—Elizabeth Gallup Perkins, in Boston Transcript.



GEORGE COLLINS' ATONEMENT

By Hope Daring

CHAPTER II.

FOR LIFE OR DEATH

GEORGE looked around him. The grated door admitted a dim light from a single kerosene lamp burning in the corridor. This enabled him to see the bare walls, a narrow cot and wooden chair. Three hours before he had stood in front of a dancing coal fire in a beautifully furnished room and listened to the sweet voice of Lillian Hart as she sang of the "long and lasting sleep." What else was it of which she had sung? "Who will there be to weep?" Was she weeping for him now? But for the interruption of Stanley she would doubtless now have been his promised wife.

Did he really love her? Stay; what right had he to think of love and happiness when the body of the man whose life he had unwittingly taken had not yet grown cold? A groan broke from his lips. He covered his face with his hands, then suddenly held them up to the light, horror depicted upon his face. "Blood! blood!" he murmured. "My hands are red with the blood of a fellow-man!"

The future he had planned for himself rose up before him. He was to have made the world happier. He had commenced by taking life, by wringing some heart already sorrow-laden, for no matter how worthless the dead, there had been some one to love him.

What of the soul that had gone unbidden into the presence of its Maker? Would that rise up against him in judgment? Ah, surely God was just; he knew!

The night wore away, but no sleep came to George Collins. For hours he stood staring into the dimly lighted corridor, or sat, his face covered with his hands, vainly trying to adjust his views of life to his new and strange surroundings.

Morning dawned gray and overcast. Through the high window opposite his cell door George caught a glimpse of the leaden clouds. As the hours wore by and no one came to him, save Larkins with a trayful of food, the heart of the young man grew still more heavy.

Where were Stanley Hart and his father? Was he about to see Stanley's view of life proven true? Were friendship and honor myths?

The noon hour brought the younger Hart. He was accompanied by Judge Harmon. George was much surprised to learn that both his visitors thought it unwise for him to try to leave the jail until the election was over.

"I know how you feel about it," the judge said. "It will be easy for you to procure bail, but there is too much excitement now for your examination to be a fair one. I think, Collins, you have strength of character enough to endure ten days of this life."

George could not but see the force of this reasoning. Still he turned to Stanley, an appealing look upon his handsome face.

"Of course you'll have to put up with it," Hart said, carelessly. "You see, I'm used to having clients here, so I don't mind it, and you'd better make up your mind not to."

A strange look crossed George's face. "I see. I am your client to-day. Yesterday I was your friend."

Stanley's florid face flushed. "Oh, stow that, Collins! You know I'll do everything I can for you, but I'm afraid your escapade will cost the governor the election, and that's a bad thing for us."

George turned from him without a word. "Can you tell me anything of this man Kennedy's family?" he asked of Judge Harmon.

"There is a wife and two children, I hear. They live a few miles out, and are wretchedly poor."

George opened his purse and took out a small roll of bills. "Will you see that these reach the wife? Express to her my great sorrow, and assure her that I will see that her wants are provided for."

"Don't be too lavish of your cash," Stanley hastened to say. "Promises are all right; they may influence public opinion in your favor. You'll need all your money before this thing is settled."

For a moment the two young men gazed straight into each other's eyes. Each saw that he had never known the real nature of his friend.

Collins again addressed the judge. "Will you be so kind as to see that the funeral expenses of Kennedy are paid?"

Judge Harmon promised to take entire charge of the matter. After a little further conversation the two men arose to go, promising to come again on the morrow. When the sound of their steps died away in the distance George drew a long breath.

"Weighed in the balance and found wanting," he said aloud. "I thought I could trust Stanley. I—well, I will not give up my belief in fidelity and love."

Straightway he recalled Lillian's fair face, a tender smile on her scarlet lips, the light of happiness in her eyes. She, at least, was true. Of course, she could not come to him. Had he but told her of his love the night before she would now have been free to speak. Ah, he would trust her, and wait!

Ten days elapsed before George again felt the free air of heaven on his face. In this time the form of William Keaneady was consigned to earth, the election came and went, and Jerome Hart was defeated.

Meanwhile the sunny nature of George Collins had begun to take on a darker hue. There had been one ray of brightness—a handful of white chrysanthemum-blossoms with Lillian's card attached.

There had been other lessons hard to learn. The Harts had offered to furnish George's bail providing he would secure them on the farm. He avoided giving a direct answer to Stanley's carefully put proposition. Already he felt bitter toward the Harts. He would outgeneral them.

The day before the one fixed for the exam-

George procured a team, and after receiving careful directions from Judge Harmon, drove out to the Kennedy home. Much of the excitement regarding the tragedy had already died out. Curiosity, but not ill-will, prompted the stares which the young man encountered.

It was a beautiful afternoon, one of those rare Indian-summer days that sometimes come in early November. George's way lay through a farming region. The trees and bushes growing along the road were bare, their leaves lying in drifts along the fence. The air was laden with spicy fragrance, and a misty haze rested upon the surrounding landscape.

Sudden tears dimmed the strong man's eyes. Yes, life was sweet. Lillian—ah, her greeting would compensate him for all he had borne!

In a short time he reached his destination. The house was a dilapidated structure of logs, standing in the center of a neglected yard. A rail fence separated it from the road. George tied his horses to this, climbed over it, and walked up the path to the door.

His rap was answered by a woman of apparently thirty-five. She was slight and dark, her hair was disheveled, and her dress ragged and dirty.

"Good-afternoon," she said. "Will you walk in?"

"Mrs. Kennedy, I am George Collins."

She started. The gaze she fixed upon him was one of apprehension, but all she said was, "Come in."

The house was divided by a rude board par-

It will never cease to hurt me to think that I took the life of this child's father," laying his hand upon the dark head of the little girl.

"Don't say that," she cried out. "The girl is Bill's child, the very image of him. I—oh, I think you had better go!"

George hurried away. While relieved to find that Mrs. Kennedy bore him no resentment, yet he could not but be depressed by a glimpse of her narrow, grief-laden life.

Arriving in Lamont, he left his team at the barn where he procured it and sat out for the residence of the Harts. The short, autumnal day was drawing to a close; lights began to gleam out from windows, and the rising wind moaned like some living creature in distress.

The bell was answered by a new girl, who did not recognize him. When George asked for Miss Hart she led him to the library and went in search of Lillian.

He drew a long breath as he entered the familiar room. The gleaming gas-lights, the sparkle of the open fire, the scent of the carnations on the mantel—all these seemed sweet to him after his sojourn among the wretched surroundings of the jail.

A few moments now and she would be here. George hardly realized all he was staking on Lillian's fidelity to the pledge her eyes had given him. It was not alone man's love for woman that was at stake; it was faith in humanity.

A door into the back parlor was ajar. George had heard the murmur of voices, but he had been too engrossed in thought to heed it. Suddenly Lillian spoke, and he unconsciously bowed his head to listen.

"I expect he will be here this evening, May, and I'm going to play the role of a tender sympathizer. He's so handsome it will be fun to comfort him. He would have proposed the other night if Stanley hadn't blundered in. Of course, when I get tired I can get out of it by claiming that my stern parents object. Oh, George Collins is such an innocent that it's been lots of sport leading him on, and I expect this last scene will be the best of all."

CHAPTER III.

ADRIFT

George Collins reeled backward. In one moment he had learned that the girl on whose truth and sincerity he had staked his all was false. Through all their acquaintance she had been amusing herself with him, leading him on to a proposal of marriage simply to prove her power.

He knew little of the opposite sex. His memories of his mother were sacred. Growing up without near female relatives, he had come to regard all women as pure and true.

For one moment he thought of silently leaving the house. Then he threw back his head proudly, a bitter smile curling his lips. He would meet Lillian Hart on her own ground. In a few moments her step sounded at the door. George advanced to meet her.

"Ah, Miss Hart, I could not bring myself to leave Lamont without thanking you for the delightful time you have given me."

Lillian stared at him in astonishment. This was not the greeting she had expected.

His quick eye noted her dainty evening dress of cream-white wool trimmed with blue ribbons. In the lace at her throat an opal gleamed, and rings sparkled on her hands. Yes, she was beautiful, but false—as was all the world.

She reached out one dimpled hand and caught his arm, lifting her child-like eyes to his. "You poor fellow! How pale and thin you are!"

He laughed, a derisive, ringing laugh which caused Lillian to hastily withdraw her hand.

"Is not the comedy played out, Miss Hart? I may not be an apt pupil, but still I have learned a valuable lesson while in Lamont. I have learned that friendship, truth and honor are myths. Perhaps it would be as well to tell you that I unintentionally overheard the remarks you made in the adjoining room concerning me. I am heartily glad to have afforded you amusement."

A wave of hot blood flooded her face. Yet so well was her role of playing a part mastered that she instantly recovered herself and cried out, pleadingly:

"You misunderstand me, Mr. Collins. Ah, you can never know all I have suffered on your account!"

Again he laughed, and this time something in the sound made the girl shudder.

"You play your part well. In a certain way, Lillian Hart, I loved you, or rather I loved the woman I thought you to be. Know now that I despise you. I would rather stand here, facing the penalty of the law for manslaughter, than to have your sins upon my soul. I brought a poor wretch to his death, acting from the motive of self-defense. You deliberately slew a strong man's belief in woman's truth that you might thereby exercise your skill in deceit and falsehood."

She had grown very pale as he hurried on, flinging the hot words of passion at her. For one moment she saw her conduct from his point of view. Sinking into a chair, she covered her face with her hands and began to cry. George bowed and left the house.

On the steps he met Lillian's father. The elder man paused hesitatingly, but George took the initiative.

"Good-by, Mr. Hart. I beg your pardon for having intruded my unwelcome presence into your home. The offense shall not be repeated,



"THE HOUSE WAS A DILAPIDATED STRUCTURE OF LOGS"

ination Mr. Larr, the lawyer who had been George's guardian, arrived at Lamont. He had come in response to a telegram.

George was hound over for trial at the January term of court. Bail was furnished by Mr. Larr, and matters were arranged so that George was free to leave Lamont. The Harts were plainly displeased at the presence of Mr. Larr. Yet the olden relations could not be entirely ignored, so Stanley said, carelessly:

"You and Mr. Larr will come up to dinner, will you not?"

George grew pale. He expected to leave Lamont as soon as possible, but had not expected so plain an intimation that his visit at the Hart home was at an end. He met Stanley's gaze with steady eyes while replying:

"Thank you. Mr. Larr is obliged to return to Loyd on the noon train. I shall drive out to see Mrs. Kennedy, and will avail myself of your kind permission to call before leaving town."

Stanley howed with cold politeness. It would not be pleasant to have George at the house now. Still it was best not to have an open rupture, as there would be a fee of considerable size for acting as counsel in the coming trial.

So the young lawyer made his way to his luxuriously appointed home for lunch, leaving the man whom he had called his friend alone and in deepest sadness. It was not so strange, after all. George had ceased to be either a pleasant or a profitable companion, and it was a part of Stanley Hart's creed to avoid people who could afford him neither pleasure nor profit.

tion into two rooms, the inner one containing a bed, while the outer one was evidently the living-room of the family. A flight of rough stairs led to a loft above. There was a bright fire in the cracked stove, but the floor was bare and the furniture meager and poor.

"Sit down," and she drew forward a chair. George accepted her invitation, his gaze resting on a little girl of four who was playing on the floor. Although her clothing was poor and soiled, her winning face and merry blue eyes were attractive. A baby a year old was sleeping in a cradle.

There was an awkward pause. George began to wish the woman had met him with tears and reproaches. Anything would have been better than this apathy.

"I cannot tell you how I regret what has—" he commenced; but she beld up one hand.

"Don't let's talk about it. Bill is dead. I and the children will be better off without him, I suppose, but I loved him even if he was ugly to me when he was drunk. Talking about it won't do any good."

"No, I don't blame you," she went on after a little. "I s'pose you only done what anybody would, I—oh, Bill!"

Her unnatural calm gave way, and she sobbed violently. After a time she grew calm enough to talk over her business affairs with George. The poor home was her own, having come to her from her parents. George gave her a sum of money sufficient for her needs until the time of the trial, and promised her that herself and childrcu should not suffer from want.

At last he rose to go. He held out his hand. "Only God knows my sorrow, Mrs. Kennedy.

I assure you." And before the lawyer could recover from his astonishment enough to speak George was out of the yard.

He took the evening train for Loyd, arriving there at two in the morning. It was raining, but he set out to walk to the farm-house.

When Tim Blake, the man hired by George, rose that morning he advanced to the front door and opened it. A cry broke from his lips when his employer got up from the top step, where he had been sitting, and advanced toward him.

"Land sakes, Mr. George! Where did you come from?"

"From Lamont, where I've had the honor of spending ten days in jail on a charge of murder. Did you know that, Tim?"

The honest fellow held out one brawny hand. "Indeed and I knowed it, Mr. George. If I'd had them, whoever was to blame, in my clutches I'd have choked the life out of 'em for daring to say such a thing. I tell you, this here hull neighborhood has been right down judg'ant. I say, Mr. George, what's the matter?"

Mrs. Blake, a plump little woman, with a heart overflowing with kindness, now appeared on the scene. Her chestnut hair was still uncombed, and she deftly fastened the last button of her calico dress as she entered the room.

"Matter indeed, Tim Blake! Any one could see with half an eye that Mr. George is wet and cold. You get off his shoes this minute, while I lay out some dry clothes and put on the coffee-pot. I haven't even time to tell you, Mr. George, how glad I am to have you safe at home again."

George was too worn out to do aught but give himself unquestioningly into her kindly hands. In half an hour he found himself, dry and glowing from a vigorous rubbing administered by Tim, clothed in fresh clothing and tucked away in his own bed. After swallowing a cup of hot coffee he at once fell asleep.

He awoke in a short time, shivering with cold. Mrs. Blake applied hot bricks and blankets. When a raging fever followed the chill, and George began to rave deliriously of blood and falsehood, she promptly dispatched her husband for Mr. Larr and Dr. Hammond, the family physician of the Collinses.

The doctor shook his head. "He's in for a run of fever. There's only his excellent constitution and your nursing, Mrs. Blake, in his favor."

For three weeks the fever ran its course. All of George Collins' college days and the glad, care-free life which had preceded them seemed gone from his fever-crazed mind. It was only of the events of his stay at Lamont that he raved.

He came slowly back to consciousness of his surroundings. The olden buoyant light was gone from his eyes; it was an embittered man who rose from that bed of suffering. He was grateful for the kindly ministrations of the Blakes, as well as for the many assurances of interest which he received from the old friends of his parents, but his joy in life was gone.

As soon as he was able to talk of business he instructed Mr. Larr to write the Harts, formally withdrawing his case from their hands and asking them to send a bill for the services they had rendered.

Mr. Larr advised a more moderate course, but George was firm, so the letter was written and forwarded. It was answered promptly by Stanley.

This epistle was a bitter, angry one. He accused George of taking advantage of their old friendship to not only bring about the defeat of his father, but also to injure their professional standing in the town, and to insult his sister. A bill for a most exorbitant amount was inclosed.

No better proof of the change wrought in the nature of George Collins could be given than a description of the way he received this letter. He knew that while Kennedy's tragical death might have influenced the election, this would not have been so had not the Harts themselves been in the habit of using unscrupulous means to bring about the ends they desired. He regretted this, for he was conscious of a wish to inflict some injury upon them. As for Lillian, he smiled derisively over the reference to her.

Sitting propped up in bed, he answered the letter with his own hand. He wrote briefly, but bitterly, stating he did not consider the bill large, "as I suppose it includes my board for the three weeks I was an inmate of your home," he concluded, and inclosed a check for the amount.

He folded the letter. Then he hesitated. Should he send it, coarse and vindictive as Stanley's own? George Collins' good angel was pleading with him. He looked out through the long muslin curtains of the western window to where the setting sun was peering from out the dull gray clouds and dyeing their edges blood-red. It was as if this act would forever close the door upon the noble, useful manhood to which he had so confidently looked forward.

He compressed his lips. "I must take the world as I find it," he said, unconsciously speaking aloud. "There is no way to fight a man like Stanley Hart save with his own weapons."

In a few days Mr. Larr began to talk to George concerning his defense for the coming trial. The young man manifested an indifference which surprised his old friend.

"If I thought the penalty would be solitary

confinement for life I believe I would as soon they would find me guilty," he said, despondently. "Perhaps that sentence would ease my conscience a little. I can never forget that the blood of Kennedy is really upon my hands."

"Nonsense," Mr. Larr said, brusquely. "I do hope, George, you are not going to let this ruin your life. I had a letter from Judge Harmon this morning. He says the Harts are moving heaven and earth to bring about your conviction. Doing it slyly, as they know it would bring upon them the contempt of the better class of people."

"Ah, that's what they are doing, is it?" And George sat bolt upright, a dangerous gleam in his eyes.

"Yes. What are you going to do about it?" "Defeat them. Will you go down to Lamont next week and employ the best talent in the state to help you?"

"Of course I will, my boy. I am sure no jury could be found to convict you."

From that time George evinced a feverish eagerness regarding the matter. It was not that his liberty might be at stake, it was that he was pitted against the Harts.

The trial was to take place the second week in January. George was still weak from his illness when he reached Lamont. To his surprise he found little interest manifested in the affair. Bill Kennedy's friends were not influential, and the general public had almost forgotten his existence. Stanley Hart had made the grave mistake of accepting a position on the counsel of the prosecution. This worked in George's favor, many being indignant that the Harts should thus prove their falsehood to the man whose friend they had claimed to be.

The trial was a long one, as there were many witnesses to be examined. The question was not how William Kennedy came to his death, but as to whether George Collins should be punished for the blow struck in self-defense. It was not until the end of the second week that the day came when the jury received their charge and went out to decide upon a verdict. This was at ten o'clock, and the court adjourned in a short time.

When George re-entered the court-room he found that it was crowded. He glanced around as he took his place. The next instant every nerve in his body was tingling, and he retained his outward composure only by a strong effort of will. Directly before him sat Lillian Hart.

After a moment he again looked at her, this time meeting her eyes with an unconcerned gaze as if they were strangers. Lillian was looking her best, her eyes shining and a soft flush staining her cheek. She wore a suit of cadet-blue flannel trimmed with the fur of the silver fox. A fur cap was on her head, and a cluster of English violets on the lapel of her jacket.

Who was that sitting near her? Bending forward slightly, he saw that it was Mrs. Kennedy. She had not been present before.

"The woman whose life I ruined," he thought. "It is well that they sit side by side."

He saw that Mrs. Kennedy's face was less thin and pinched by want. Her cheap mourning gave her a faint dignity, and the look she gave him was not an unfriendly one.

"I don't believe she cherishes the least ill-will toward me," George went on to himself. "Queer, too. She loved that brute; loved him, I suppose, because he had once pretended to love her, and was the father of her children. It seems a woman can be true, although I am sure such cases are rare."

Time passed on, and still the jury delayed their coming. Without the snow was falling, the steady descent of the flakes darkening the windows.

What were they deciding? Whether he was to leave the room a free man, or whether he was to spend many months in a prison cell? Free! Would he ever be free from the sense of guilt which oppressed him? He drew one hand across his eyes as if to shut out the sight of blood.

Then there crossed his mind a memory of the moonlight night but a short time ago, when he had strolled on the college campus with Stanley Hart, and talked hopefully of a future of usefulness and distinction. Could he be the same person? A pang of intense pain pierced his heart. A mist seemed to fold about him, and through it he saw only the rose-tinted face of Lillian Hart and the careworn and faded one of Hester Kennedy.

He was roused by a slight commotion. Turning around he saw the jury filing into the room.

In unbroken silence they took their places. George was very quiet, his well-schooled face giving no hint of the storm within. He heard the question and answer as to the readiness of the verdict, and saw the foreman rise to announce his fate.

"Do you find the prisoner at the bar guilty or not guilty?"

[TO BE CONTINUED]

BOER NAMES

Kopje—A hillock, or piece of rising ground—is neither kop-jay nor kop-jee, but kopy. Berg is mountain, the plural being formed by the addition of "en" after the "g." A drift is a ford, and a dorp a town or village. Thus we have Krugersdorp, Leydsdorp.—Selected.

THE OLD BOOKS

They are gray with the gray of ages,
Borrowed, and begged, and sold;
Thumb-marked of saints and sages
In the scholarly days of old.
Rose-leaves pressed for a lover
Rest in their pages dim,
Though silent centuries cover
All that is left of him.

And I feel, in the library's shadows,
With this ghostly company,
The breath of forgotten meadows,
And the centuries over me!
And when twilight bells are calling—
When the day with its strifes is o'er—
There are ghostly footsteps falling
Faint on the library floor.

Singers, and saints, and sages—
In the fame of a name we trust,
But time will cover our pages,
As even our tombs, with dust.
For here, in the library's shadows,
Where the famed and fameless be,
I roam in forgotten meadows,
With the centuries over me!
—The Atlanta Constitution.

GROWTH OF AMERICAN CITIES

There were only seven cities in the United States that by the Federal census of 1890 had more than 400,000 inhabitants—New York, Chicago, Philadelphia, Brooklyn, St. Louis, Boston and Baltimore, in the order named. Since the census of 1890 Brooklyn has been absorbed into Greater New York, the boundaries of Chicago have been enlarged, and the growth in population of other American cities has not been so uniform as to make it probable that each will retain the position it held in the census of ten years ago.

New York, which is now a city of 3,600,000, will, of course, remain at the head, and so far at the head that any serious thought of actual rivalry from any other city may be dismissed. Chicago has now a "claimed population" of 1,800,000, or 700,000 more than it had in the last Federal census, and one half as large as the present population of New York.

Philadelphia, which long enjoyed distinction as the greatest city of the country territorially, has forfeited that position since the last United States census, New York having an area of more than 300 square miles. Chicago of 188, and Philadelphia of only 130. The position of fourth city on the list among American municipalities, formerly occupied by Brooklyn, cannot be fixed in advance of the official census in June. Two cities expect it, Baltimore and St. Louis. By the census of 1890 the population of St. Louis was 450,000, and of Baltimore 434,000. St. Louis is now claiming 623,000, and Baltimore 626,000.

Whatever may be the claims of rival cities as to fourth and fifth places in the census of 1900, Boston is secure of sixth place, with a population of 550,000, the other important cities being San Francisco, with a claimed population of 350,000; Cincinnati, 400,000; Cleveland, 400,000; Buffalo, 400,000; Pittsburg, 325,000; New Orleans, 300,000; Detroit, 250,000; Washington, 250,000; Milwaukee, 250,000; Newark, 250,000; Louisville, 225,000; St. Paul, 200,000; Denver, 160,000; Minneapolis, 200,000; Indianapolis, 200,000—or nearly that.—Collier's Weekly.

NATIONAL EMBLEMS

"The national emblems of the different countries were chosen on account of some tradition or legend dear to the hearts of the people, notably so in the case of England, Ireland, Scotland and Wales," says a writer in the "Ladies Home Journal."

"The rose, the emblem of England, was adopted in the fifteenth century. After the completion of the 'Wars of the Roses,' and the union of the houses of Lancaster and York by the marriage of Henry VII. and Elizabeth of York, it is stated, a rose-tree growing in the grounds of a certain monastery in Wiltshire, England, which had previously produced roses both red and white, began to bear roses whose petals were variegated red and white, which variety has since been called the 'York and Lancaster' rose.

"Of several legends regarding the love of the Scotch people for the thistle the following is the most interesting: The Danes are said to have been creeping silently one night toward the Scotch camp, notwithstanding the fact that an attack at midnight upon an enemy was considered as a most dishonorable act, when one of the soldiers set his bare feet upon a thistle. Forgetting himself, he uttered a loud cry, which roused the Scotch sleepers, who immediately fell upon their enemies, routing them completely.

"The small, three-leaved clover, or shamrock, was, it is alleged, made use of by Saint Patrick, Ireland's patron saint, to illustrate the mystery of the Trinity, and thus became the symbol of the Irish people.

"There is an ecclesiastical tradition concerning the choice of the leek by the Welsh, to the effect that when the Britons were under the command of King Cadwalader, Saint David commanded that each soldier should have a leek in his bonnet. As they defeated the Saxons upon that day they have adopted the habit of wearing the leek on the recurrence of the anniversary of the conflict.

"As the Greeks were fabled to have originated in Ionia, it seems appropriate that the violet (Greek lion), which was thought by

them to be a talisman against evil, should be selected as their distinctive flower. Modern Greece has no emblematic flower. The olive figured largely in the celebrations of the ancient Greeks, while to-day victors in the Olympian games are crowned with laurel.

"Italy has adopted no floral emblem, although the love of the people for Queen Margaret has made the flower of that name a general favorite with the Italians.

"Neither Germany nor Prussia claim any flower as an emblem. The oak-tree is the favorite tree of Germany, as it is thought to symbolize the strong, rugged German character. William I. was particularly fond of the blue corn-flower, which has made it popular with the German people.

"It has been said that the edelweiss is the distinctive flower of Switzerland, but as it is found in other localities it can hardly lay claim to that title. The Alpine rose, although not found at so high an altitude, is, on the contrary, distinctively Swiss.

"The fleur-de-lis, or iris, is the heraldic device of the Bourbons and of France, and can be traced as far back as the twelfth century. The pomegranate appears on the national escutcheon of Spain. The lotus of the Nile, which appears in Egyptian hieroglyphics, is the emblem of that country. The maple-leaf is the emblem of Canada."—Tribune.

THE RAILWAY MAIL SERVICE

The expansion of mail service by rail is illustrated by the facts that in the year 1834 there were 75 miles of railroad in the United States on which mails were carried, and now there are 174,777. Of mail of all classes distributed by railway postal-clerks there were in 1898 12,225,706,220 pieces of second-class mail (newspapers). There were in 1898, not including free in country, 336,126,338 pounds. Each of the pieces is, of course, handled several times; nevertheless the vast number represents actual work.

But the functions of the railway mail service are not confined to the control of its own employees, for all post-offices receive their instructions from the officers of this service in regard to the making up and dispatch of mail, and as to the time it should be sent and by what routes.

The railway mail service is the medium of practically all business with the railway companies except financial.

This vast business comes first, of course, under the control of the postmaster-general, the Hon. Charles Emory Smith, who, in his career as an active journalist and manager, has had occasion to know somewhat of the railway mail service, and none the less so now that he is the head of the whole postal affairs of the nation.

Next to the postmaster-general in the line of the railway mail service comes the Hon. W. Shellenberger, who has charge of all transportation, whether by dog-sled or reindeer in Alaska, in saddle-bags on mules among mining-camps, or by stage-coach, or by steamboats or fast express-trains. Mr. Shellenberger came to his post with a large experience gained in Congress and otherwise, which has doubtless contributed in no small degree to his successful work.

The management of the railroad and steamboat service devolves upon the general superintendent of the railway mail service, Captain James E. White, a wounded veteran of the army, and a veteran of the railway mail service, through which he has worked his way from the ranks. There is every indication that the future has in store for this great service a career no less prosperous than the past.—Frank Leslie's Popular Monthly.

FORENOON AND AFTERNOON

It is a fact of common observation, at different times of the year, that the forenoon and afternoon, as to daylight, are of unequal length. Along in later autumn the shortness of the afternoons is very noticeable, and the shortness of forenoons along in later winter. Whatever makes common facts more intelligible adds to the general intelligence and to the general good. It is to this end that the following brief statements are made.

Nothing is more evident than that the sun requires just as much time to go from the eastern horizon to the midday meridian as to go from that meridian to the western horizon. But, strange to say, there are but four days during the whole year in which the sun reaches the midday meridian at just twelve o'clock. The true noon-point varies from about fifteen minutes before to about sixteen minutes after twelve o'clock. These extreme points in one set of variations fall in the first week of November and in the second week of February, not to designate exact days for years in general. The calendars show that in the latitude of Saratoga (essentially Boston latitude), on November 3, 1898, the sun rose at 6:30 and set at 5:00 o'clock, thereby making the forenoon a half hour longer than the afternoon. On that day the sun reached the meridian at 11:45. On February 13, 1899, the sun rose at just 7:00 o'clock and set at 5:30, thereby making the afternoon a half hour longer than the forenoon, and on this day the sun reached the midday meridian at 12:15. These are facts plainly open to general view, and therefore need no verifying.—Popular Science Monthly.

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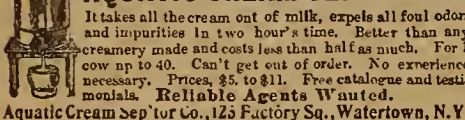
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NATURE'S MIRACLE

He who loves not a noble tree
No fellowship may claim from me.
Deep in the earth its great roots spread,
But heaven's own blue surrounds its head.
It holds the joy of summer morn,
The strength of winter's wildest born.
God's birds find shelter in its arms,
Secure from everything that harms.
It bows when south winds wander past,
But breasts unharmed the fiercest blast.
'Tis Nature's miracle to me,
Her fairest work—a noble tree.
—Ninette M. Lowater, in New York Sun.

SWEDISH CUSTOMS

"The Latin race," says a celebrated author, "is feminine, even in its men—and the Anglo-Saxon race is masculine, even in its women." In fact, the men of the Latin race are as nervous, impressionable, changeable and bright as women. Their manners, also, are as insinuating as woman's, and they can talk brightly even when they have nothing to talk about. But, as a strange contrast to these peculiarities, the Latin is a materialist, and the Anglo-Saxon an idealist. The Latin considers life as a passage of material pleasures; the Anglo-Saxon considers it as a school, with duty for schoolmaster. There are exceptions to these rules, we know, but these are the rules which distinguish the characteristics of both races.

The Swedes, though not of pure Anglo-Saxon race, may be included within its limit, and some of their customs deserve mention. For instance, when there is a wedding the bridegroom carries a whip in his hand, as a sign of his authority in the domestic circle. If there is even a whisper of scandal against the bride she cannot wear the virginal wreath of orange-blossoms. The way a peasant bride is adorned in Sweden is curious. All her friends lend her jewels, etc., which they hang on her head, neck, arms, hands, bodice, shoes, etc. Then a silver ring is placed in one shoe, and this becomes the property of the boy who is allowed the honor of taking off the bride's shoes at night before the guests separate, and then a perfect fight takes place between the married guests and those who are not married, who surround the bride to prevent the bridegroom taking the bride, which, of course, he eventually does, and then runs away with her like the "conquering hero that he is." A Swedish wedding usually lasts several days, and among the many ceremonies is the planting of a fir-tree in memory of the day. A Swedish peasant rarely marries a girl not of his own place.

The Swedish peasant is simple, affectionate, courteous, hospitable and cheerful. The women's dress consists usually of a yellow woolen skirt, and an overgown of white cloth fastened at the neck, and a red apron covers the front of the skirt. A white cloth fichu is draped on the head. The gala dress is richer in colors, and a red embroidered belt is worn around the waist. Married and single women dress alike. A Swedish peasant's house consists of two rooms and a kitchen and a baking-oven, and the whole made of trunks of trees. The roof is made of branches of trees covered with mud. There are no bells or knockers to the door; every one goes in freely, without asking permission. The first room that is entered is the sitting-room and dining-room, and sometimes it is also used as a bedroom. The furniture consists of a large wooden table, chairs and several little sofas, which, joined together, serve as beds when needed. A large clock is always to be found in the room, and a chest of drawers. The floor is covered with branches of fir-trees. There is also a large fireplace, and when the fire is alight no candles are used. Next to this room is a second room, used only for sleeping and for hanging up the family's wearing-apparel. Nearly every peasant's house has a little garden in which to grow cabbage, carrots, apples, etc. Trees, however, are rare in Sweden, especially in the north. Open fields are considered more beautiful than forests. Swedish peasants live on brown bread, cheese, butter and salt beef and mutton. They do not like fresh meat or vegetables or potatoes. Their drink is light, home-made beer. They sometimes drink coffee, but only fashionable people drink tea. As in Ireland, the family pig often shares the bedroom with his master. Doors and windows are rarely open, even in summer-time, and the people rarely undress on going to bed. They wash only once a week, on Saturday night. Like all ignorant people of every country, the Swedish poor are very superstitious, especially in illness. For instance, corns are cured by some one telling the sufferer that some one is dead. The friend says, "So-and-so is dead." "And my corns are dead!" says the sufferer. This must be repeated three times. If any one complains of any pain, and some one says, "It's a lie!" the pain disappears at once. Spitting is supposed to keep away evil spirits, witchcraft and ghosts. The first time an unmarried man stands godfather to a baby it must be a girl, and the first time a girl stands godmother to a child it must be a boy, otherwise she will never marry. The water which serves for the baptism is carefully kept, to be used in several illnesses. Nowhere is the love for children so great as in Sweden and Norway, especially in Norway.—New York Tribune.

LOW RATE HOME SEEKERS' EXCURSIONS

The Missouri Pacific Railway and Iron Mountain Route are now running a series of excursions to the West and Southwest, tickets on sale March 6th and 20th, April 3d and 17th, at very low rates. Maps, folders, time-cards and illustrated pamphlets on the various states mailed free on application to H. C. Townsend, G. P. and T. Agent, St. Louis.

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POVERTY AND WEALTH

BY ELLA WHEELER WILCOX

The stork flew over a town one day,
And hark of each wing an infant lay;
Oue to a rich man's home he brought,
And one he left at a laborer's cot.
The rich man said, "My son shall be
A lordly ruler o'er land and sea."
The laborer sighed, "'Tis the good God's will
That I have another mouth to fill."
The rich man's son grew strong and fair,
And proud with the pride of a millionaire;
His motto in life was, "Live while you may,"
And crowded years in a single day;
He bought position and name and place,
And he bought him a wife with a handsome face.
He journeyed over the whole wide world,
But discontent in his heart lay curled
Like a serpent hidden in leaves and moss,
And life seemed hollow, and gold was dress.
He scoffed at woman, and doubted God,
And died like a beast, and went back to the sod.

The son of the laborer tilled the soil,
And thanked God daily for health and toll.
He wedded for love in his youthful prime,
And two lives chorded in tune and time.
His wants were simple, and simple his creed,
To trust God fully; it served his need,
And lightened his labor, and helped him to die
With a smile on his lips and a hope in his eye.
When all is over and all is done,
Now which of these men was the richer one?
—Selected.

the day, and all the armies of Israel, massing their forces in a determined effort to overthrow the whole accursed saloon system, the impending conflict of the ages would soon be fought to a finish.

Oh for the incoming of the high tides of moral power into all the channels of human life! Policy and expediency have been reduced to a science and characterize and control the social, civil and commercial activities of the age. Questions of right are adjourned for present advantage, and the "Golden Rule" is displaced by the rule of gold, and the Goddess of Liberty and the Goddess of Justice are both hoodwinked and bow their heads in shame. Even in the councils ecclesiastical standards of action are not lifted far enough above the dust of these days. Oh for the majesty of motive that moved the Man of Galilee!—The Religious Telescope.

WORDS TO WIVES

Sara is given as an example of a submissive wife because she "obeyed Abraham, calling him lord" (I. Pet. iii. 6). It is said such a relationship existed between Lydia Maria Child and her husband. For twenty-two years they lived alone, without a servant, in their humble, pleasant home in Wayland, Mass. Once, when he said to her, "I wish, for your sake, dear, I was rich as Croesus," she responded, "You are Croesus, for you are king of Lydia."

Wives, it will help you to reverence your husbands if you will—

1. Remember that he chose you from all the women on the earth. He might have had some other for the asking.
2. "Study to be quiet" (I. Thes. iv. 11) when things go wrong, when he comes home cross, when he differs from you.
3. Give him his place as "the head" (Eph. v. 23).
4. Defer to his judgment "in everything" (Eph. v. 24). Yield to his wishes invariably. Never do anything you know he does not approve, and keep it from him.
5. "Be ready always to give an answer . . . with meekness and fear" (I. Pet. iii. 15) to every question he asks you, but never argue with him, especially on the subject of religion and politics.
6. Be contented to have only the one adorning for your person and your home, which to God is of infinite value, "a meek and quiet spirit" (I. Pet. iii. 3, 4).
7. Respect his relatives. Love his mother. She loved him before you did.
8. Do not try to teach him the right way, but trust God to show it to him.
9. "Be anxious for nothing" (Phil. iv. 6, R. V.). Never rebuke him if he reads the paper all breakfast-time, forgets to have family prayers, leaves all his things around for you to pick up, and comes late to supper.

Prayer will change all this, or change you so that you will "rejoice" and not count the trials "strange" (I. Pet. iv. 12, 13). A husband said to his wife at the supper-table, "I am going to the Republican club to-night. Mrs. C will go with you to prayer-meeting. Is that satisfactory?" She smiled, and quoted, "Seek ye first the kingdom of God" (Matt. vi. 33). "I am sorry, but I must go to the club," he said. A friend tried to dissuade him, but he was determined. The wife did not scold, argue, persuade, nor reprove. She went into the sitting-room and sat down and prayed, "O Lord, if you want my husband to go to the club I am willing. If you do not, make him go to the prayer-meeting." He started for the club and she for the church. Later he came to church, sat beside her, and whispered, "There were not very many present at the club, and I came away before they began." He was the first to testify to the pleasure he found in a prayer-meeting.—Word and Work.

THE SOUL'S CAPACITY

The soul in its highest sense is a vast capacity for God. It is like a curious chamber added onto being, a chamber with elastic and contractile walls which can be expanded, with God as its guest, illimitably, but which without God shrinks and shrivels until every vestige of the divine is gone, and God's impression is left without God's spirit. Nature has her revenge upon neglect as well as upon extravagance. Misuse with her is as mortal a sin as abuse.—Henry Drummond.

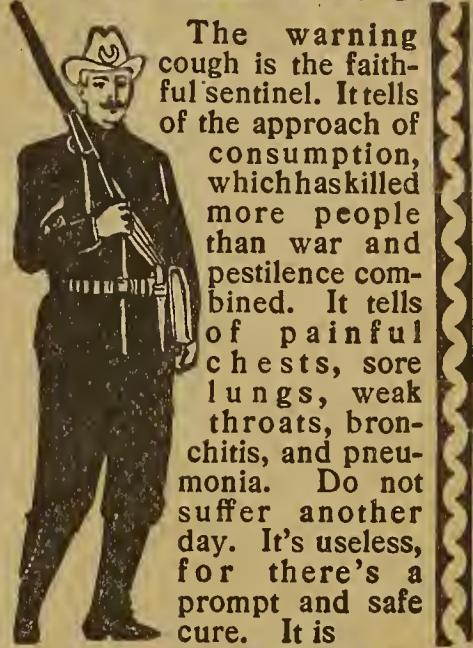
THE POWER OF GREAT MOTIVES

WE SHOULD not only seek to serve our day and generation from pure motives, but cultivate exalted motives and live by them. There is much of life about us, even the life professedly moral and Christian, which holds not to heroic motives. Day by day they move amid the manifold activities and associations of life, all unconscious of the lofty inspiration high purpose imparts. They go duty-driven through their day like slaves to their appointed tasks. How much is there of this even in the church of God! No wonder the wail of weariness ever and again is heard, until the multitude who have official responsibility without official grace murmur against the God of Israel and go onward toward Canaan, while in heart they lag or look the other way. So it is that our zeal cools, effort is far below actual capacity of achievement, and the cause loses immeasurably; and all who go with such low spirit and motives to the service of our high calling of God in Christ are so literally and lamentably unprofitable servants.

Much of the most popular literature to-day suggests the surrender of those higher and heroic motives that made much of the past of the American people glorious with great deeds and patriotic devotion. So much of the ethical and religious teaching in periodicals and from the pulpit does not appeal sufficiently to the highest motives—such motives as our Master made so much of in all his public ministry. The effect of all this can be easily discerned by the precedents of history. Deterioration, moral and even intellectual, follows with the fatal effects on character, personal and corporate, temporal and eternal. The immortal leaders of the Reformation and the American Revolution were actuated by motives high as heaven and broad as the universe. This made their day and doings great and glorious, even though clouds and darkness were round about them, and the tumults of social, political and religious revolutions shook the earth, still they stood in the might of high motives.

If only all leaders of thought and public enterprise of church and state would consent to be governed only and always by the highest motives we should soon see wonders. With old-time impressiveness of power and purpose, our state and national legislatures and judiciaries would rise in victorious resistance to wrongs that cry to the very heavens for instant redress, and the president of the United States would, with one bold exercise of his unquestioned prerogative, put merited odium on the contemptible sophistries of the attorney-general and send the whole canteen system to hell—the only place in the universe where it has a right to go; when inspired by the spectacle, many laggard leaders of the church of God would penitently push to the front in advocacy of the dominant moral and financial issue of

ON GUARD



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SMILES

THE SEEDS THAT NEVER GROW

I nearly hate the thought of spring,
With its delightful sun,
For well I know the mail will bring
A pack from Washington;
A little package, duly franked,
No postage-stamps to show,
And it contains those little seeds—
The kind that never grow.

Our good and zealous congressman,
Remindful of our vote,
Upon his memorandum's page
Puts down a little note,
And when the proper time arrives
For us to wield the hoe,
He sendeth us the little seeds—
The ones that never grow.

There're squashes with enticing names,
And cabbages, I wot,
So large that you would think that one
Would shade a garden spot;
So with the pack from Washington
You amble forth to sow,
With many a drop of sweat, the seeds
That never care to grow.

How often have I plied the rake;
How oft I've lounged about,
With eyes alert to catch the first
Signs of the coming sprout;
In vain, in vain, my hopes have fled,
My heart has filled with woe,
Above the seeds from Washington—
The seeds that never grow.

But yet each year my hopes revive,
As spring reclothes the tree,
And to my homestead surely comes
The package marked "M. C.,"
And, foolish-like, again I wield
The sprinkler and the hoe,
And, like a nunny, plant the seeds
That never care to grow.

As long as comes the package small
From far-off Washington
I s'pose they'll see me working in
The shadow and the sun;
For fools work on while wise men die,
And this is why, I know,
I'll plant those pretty little seeds
That never, never grow.

—T. C. Harbaugh, in Cincinnati Times-Star.

POETRY AND PASTRY

Because you love a poem do not try
Composing one; your sphere do not mistake;
For many have an appetite for ple
Who cannot bake! —Selected.

SHE WAS PLEASED

THE young man has only recently taken up photography, and is an ardent enthusiast. He persuaded the girl to whom he is engaged to pose for him. She was seated in a hammock, and he stood directly before her when he took the picture. In a day or two he proudly exhibited the result of the sitting. She gave one glance at it, and then handed it back. "Don't you like it?" he inquired. "I don't assume to criticize," was the reply. "I thought it was pretty good for the first attempt," he insisted. "Perhaps it is. I am glad you are satisfied with it." "Of course, it might be better." "Do you think it looks like me?" "Yes." "Then, Herbert, I am content." "But you don't seem very cheerful over it." "Perhaps I don't show it, but that photograph has made me very happy." "I'll have a frame made for it and give it to you." "No, I don't want to keep it. But it fills me with joy, nevertheless. They say that when beauty fades affection vanishes; but when I realize that you can see me depleted with hands and feet like those, without breaking our engagement, I am convinced that there can't be any doubt about your loving me when I am old."—Tit-Bits.

SHE HAD HIM THERE

"We're playing railroad train," she said, as she pulled her father's paper away, "and I'm the conductor. Ticket, please!" He took a card from his pocket and handed it to her. She looked at it intently for a minute, and then handed it back. "That was issued yesterday," she said, "and isn't good to-day. You'll have to pay cash or get off the train." He gave her a dime. He knew he had been worked, but what else could he do?—Chicago Evening Post.

A GOOD PREACHER STORY

A little girl was permitted one bright Sunday to go with her mama to hear papa preach. Now it chanced that on this special occasion papa's sermon was of the "warning" order. After a moment of breathless surprise and horror, the little listener's soul was wrought upon with a great pity for the poor mortals upon whom so much wrath was descending. She rose excitedly to her feet, and, her wide, reproachful eyes just peeping over the back of the seat, called out, in sweet, child tones, "What for you scolding all the people so, papa?"—Current Literature.

A RULE THAT WORKS BOTH WAYS

"I have frequently observed," said the vegetarian, "that when a man lives on beef he becomes something like an ox; if he eats mutton he looks sheepish, and if he eats pork the chances are he will grow swinish." "Perhaps you are right," said the turtle-fed alderman. "I have also observed that when a man lives on nothing but vegetables he is apt to be pretty small potatoes."—Chicago News.

TOO LITERAL

Dorothy had been told that at her grandfather's everything went like clock-work. The night of her arrival she curiously watched her grandfather as he drew up a bucketful of water with a crank and chain. "Goodness!" she exclaimed, in surprise, "I didn't s'pose the well had to be wound up 'fore 'twould go!"—Judge.

PAID IN ADVANCE

He was a bad boy, and his mother knew it; for as soon as he came down-stairs in the morning she gave him a good box on the ear. "What's that for?" shouted the boy. "Aw've done nowt wrong yet, have aw?" "Noa," said the mother; "but tha soon will be doin'."—Spare Moments.

SHE GOT THE PLACE

Lady (engaging a nurse-girl)—"I hope, Marie, that you do not get fretful and impatient over trifles." Marie—"Well, ma'am, I can't promise. But you know you wouldn't keep me long if I didn't mind the little things."—Philadelphia Bulletin.

A DEFINITION

Little Mike (who has an inquiring mind)—"Foder, phwot is an autograph?" McLuhberry (promptly)—"Autograph, is ut? Sure, that's phwot they write on yure tombstone whin yez are run over by wan av thim harseless carriages!"—Puck.

A SCHEME THAT FAILED

Clara—"Papa, mama prays to the Almighty every night for a diamond ring. Won't you buy her one?" Her father—"No, child, I wouldn't like to interfere with such an elegant test of the efficacy of prayer."—Jewelers' Weekly.

OUT FOR THE DUST

"You're dead slow," remarked the gown, contemptuously. "You're always behind." "Not by a jugful," retorted the train, warmly; "I'm out for the dust all the time."—Philadelphia Record.

EXTRAVAGANCE

Dorothy (passing several steers with brass knobs on their horns)—"I should think cattle'd be more economical than to wear gold thimbles every day."—Judge.

THE LATE MR. BROWN



—Time.

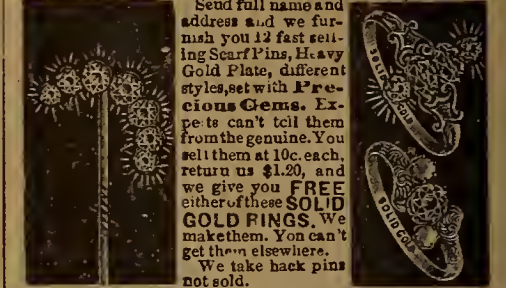
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Send us your address and we will show you how to make \$3 a day absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send us your address and we will explain the business fully; remember we guarantee a clear profit of \$3 for every day's work, absolutely sure, write at once. **ROYAL MANUFACTURING CO., Box 64, DETROIT, MICH.**

THE YANKEE FIRE-KINDLER Length 15 inches. Weight 1/2 pound. Builds 100 fires with 3c worth of oil. No kindling. Pile the fuel over the blazing kindler and the fire is made. Saves hours of time and gallons of oil. Warranted 3 years. Greatest seller for agents ever invented. Customers everywhere. An average country yields agent \$100 profit. Act quick if interested. Sample prepaid with terms 15 cents. **Yankee Kindler Co., Block 15 Oney, Illinois.**

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 PARKERS BEST BLUE \$4.95
 SERGE CHEVIOT famous for its perfect weave and rich dark blue color. Its fine all wool, medium weight, and will positively not fade. Guaranteed equal to others \$10.00 suits.
EXPERT TAILORS will make the sack style, to fit perfect, line it with fine supor gloss farmer satin, pad and stiffen it so it will always retain its perfect shape and sew with pure silk and linen thread.
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 to produce as good a wheel as the Arlington & Oakwood. Strictly high-grade, quality, material and construction unsurpassed. A marvel of beauty and strength, thoroughly tested and fully guaranteed. Shipped anywhere at lowest wholesale prices. Money refunded if not as represented.
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 \$35 "Arlington" \$16.50
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 We belong to no trust or combine—employ no agents. You pay but one small profit—and our enormous cash sales enable us to give the best value ever offered. Illustrated Catalogue Free.
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Stick to It and Win.
 We do not advise you to change your business to succeed. Increase your knowledge rather than become "a rolling stone," and rise quickly to a high salaried position. We have sent thousands of young men and women to prosperity through
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 in Electrical, Mechanical, Steam, Mining and Civil Engineering; Metallurgy, Art, Architecture, Practical Newspaper Work, English Branches, Stenography, Machine Design and Mechanical Drawing. Low price; easy terms. Mention subjects interested in when writing to
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 Liberal inducements to live agents.

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 to try our Sewing Machines. We ship direct from factory to consumer. Save agents' profits. 30 days free trial. 117,500 sold. Warranted 20 Years. All attachments free.
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 \$11.75 Buys a Bicycle Complete. Unwarranted. Model. Fully guaranteed.
 \$16.50 Buys a Full Racing Bicycle from \$10 up. 2nd Hand Wheels from \$5.00 up. We want agents everywhere. 64 page catalogue of bicycle parts and repairs free. Write for catalogue and see how you can get a Bicycle free by helping us advertise. Advs. Dept. B48, VICTOR MANFG. CO. 161-167 Plymouth Pl., Chicago, Ill.

100-Piece Dinner Set FREE. NO WORK. Send 4c. in stamps for particulars. **RAYMOND, HALL & CO.,** Des Moines, Iowa.

DOES AWAY WITH GLASSES. SIGHT. CURES FOR DESCRIPTION. NOURISHES, STRENGTHENS, FOOD CO. CINCINNATI, O.

HOUSEHOLD
 [CONTINUED FROM PAGE 13]
 FROM A SISTER READER

DEAR SISTER READERS OF THE FARM AND FIRESIDE:—I see an occasional letter from one of you, so I will try to be admitted into the circle, and if I am successful I will write again. Thanks to Christie Irving and others for their hints on new trifles, both decorative and useful. Pardon my ignorance, but I would like to ask Christie Irving what Shetland floss is; if it is the same as ice-wool, and if not, if ice-wool could be used as a substitute.

Lizzie Clarke Hardy's article on the "Necessity of Luxury" meets my approval exactly. I think one should feed their mind and the finer senses as well as feed their body. One day recently I was looking over some china cups and saucers, odd dishes and little things for the table that had been given to me, and treasured for years, when this thought struck me: "You and the gude mon both appreciate nice things on the table; you do not see them when put away, there is no one to wash and break them but yourself, so why not use them on the table every day, even if it does take a trifle more time to care for them?" So I put them in the cupboard, and use them now. Where the table is only set for two, odd, irregular-shaped and small bits of china are nice to serve scraps of preserves, pickles, etc., in. If somebody gave you some doilies for Christmas, put them on the table, and don't save them for the time that never comes.

I had a roll of small pictures that were pretty, but hardly worth the trouble and cost of framing. Some of these I took and tacked to my bedroom doors in different ways with brass-headed furniture-tacks. They look nice, and I have the use of them this way when I probably never would had I waited for frames.

In nearly every home are to be found pretty little dishes, bric-a-brac, trifles of all kinds, that were given by friends as remembrances, and each holiday adds to the number. These are generally stored away somewhere, to await the new house or a nicer place to put them in, or waiting until they shall become old-fashioned and ugly before any one thinks of using them. The only times they are brought out is for the brief inspection of friends or when house-cleaning time comes. Now I have heard different ones reiterate my experience on purchasing some article which had been coveted for years thus: "Now if I had bought or been given that same article years ago I would have delighted in its possession, but now I do not care much for it." Or sometimes in a grim humor I reason like this: "I don't know but that I might not live only a few weeks to enjoy life at all, so I am going to use what I have now."
 DAISY COOK.

DANDELION CORDIAL
 One gallon of dandelion-blossoms picked when the sun shines. Pour over them one gallon of boiling water. Let this stand in a cool place for three days, then put it into a porcelain-lined kettle, or one of agateware, and add the rinds of three oranges and one lemon cut fine. Boil the mixture fifteen minutes, then strain through a flannel bag and add three pounds of sugar and the pulp of the oranges and lemon. When lukewarm add two tablespoonfuls of yeast, and allow the mixture to stand one week in a warm place. Then strain again, and let stand three weeks, when the wine will be ready for bottling. This combines the flavor of the best wine with the well-known medicinal properties of the dandelion.
 L. W.

A MARRIAGE MESSAGE

A SAD TALE OF TWO DEVOTED HEARTS

"Come at once." That was the message which sped along the wire from Georgia to Portland, Maine. There was no need to say more. The bright-faced girl who read the brief summons lost all her brightness in a moment. She knew the import of the message. It meant the loss of all hope for the man who had gone South to fight for his life, the man she loved above all others.

In the newspapers a few days later were two brief paragraphs. One announced a wedding, the other announced the decease of the bridegroom a few hours after the ceremony.



Who does not sympathize with the widowed heart so cruelly bereaved? Who does not understand the bitter questions that rise to the lips—Why must such suffering be? Why is medical science so helpless against this foe of human happiness, consumption?

THE GREATEST MEDICAL PROBLEM

The greatest problem occupying the attention of medical science to-day is this: How can we neutralize the action of this lung-destroying bacillus? The greatest minds in Europe as well as in this country are all wrestling with this same problem. Societies are organized which include crowned heads in their membership, with the object of united effort against this dread disease—the scourge of modern civilization. But so far the most that has been done is to provide sanatoria in suitable climates, where those with weak lungs might have the joint aid of science and nature in the struggle against disease.

And yet side by side with the statistics in the newspapers which tell the fatal force of this disease there may be read a plain story of weak lungs made strong, of hemorrhages stopped, of deep-seated coughs cured, of sufferers given up by friends and physicians who have come back to active life and all its enjoyments.

IS IT TRUE?

Are these statements true? Can they be verified? They are true. They have been verified time and again.

"My husband had been coughing for years, and people frankly told me that he would go into consumption," writes Mrs. John Shireman, of No. 265 25th Place, Chicago, Ill. "He had such terrible coughing spells we not only grew much alarmed, but looked for the bursting of a blood-vessel or a hemorrhage at almost any time. After three-days' coughing he was too weak to cross the room. The doctor did him no good. I stated the case to a druggist, who handed me a bottle of Dr. Pierce's Golden Medical Discovery. My husband's recovery was remarkable. In three days after he began using Dr. Pierce's Golden Medical Discovery he was up and around, and in two more days he went to work. Two bottles cured him."

People who sit down and think out the theory on which rests the claims for Dr. Pierce's Golden Medical Discovery find it easy to believe in the cures, because they find it easy to understand the process by which the cure is effected.

IT'S NATURE'S WAY
 of cure, the one and only way of cure known. The theory is this: Life is

supported by food. Strength is sustained by food. When a person goes without food he loses strength and finally loses life. The marked symptoms of consumption are emaciation and weakness. Now this emaciation and weakness can only indicate one thing—starvation. The food eaten is not assimilated. The stomach and its allied organs of digestion and nutrition are failing to do the work required of them, failing to convert the food into nutrition. If you can put the stomach right, if you can cure the diseased conditions of the nutritive and digestive system, you can stop the emaciation and build up the body into strength in the only way in which any body can be built up, which is by food converted into nourishment. Every physician knows this. All treatment of wasting diseases makes the effort to nourish the body. But the failure in the treatment is this: Recognizing the need of nourishing the body, nothing is done to set in order the diseased stomach, but an attempt is made to slip past the stomach a form of nourishment such as cod-liver oil or its emulsions. And the attempt usually fails of results. Dr. Pierce's Golden Medical Discovery cures diseases of the stomach and other organs of digestion and nutrition. It enables the perfect digestion and assimilation of the food eaten. And by this food, and by it alone, can nature build up the emaciated body into strength.

"Last spring I wrote to you in regard to my health, which at that time was very poor," writes Mrs. Mettie M. Barnes, of Garfield, Pawnee county, Kansas. "My trouble was bronchial affection. Symptoms—spitting of blood almost every morning for five years, shortness of breath, raw and sore throat, loss of strength, at times almost loss of voice, irregular periods—in fact, I thought I was surely going into consumption. We lived in Ohio when I consulted you. You advised me to give Dr. Pierce's Golden Medical Discovery a trial, which I did, and with happy results. I got two bottles just before we started for Kansas. I did not feel as if I would ever get there, but we arrived, and I used the two bottles of 'Golden Medical Discovery' and health returned as I used the medicine. I have only raised blood three times since I began using it. My periods are regular, strength returned, and I am almost a new person. I have all faith in Dr. Pierce's medicine. I know of a lady that was cured of consumption by this same 'Golden Medical Discovery,' and she always sings its praise."

Sick persons are invited to consult Dr. Pierce by letter, free. All correspondence strictly private and confidential. Address Dr. R. V. Pierce, Buffalo, N. Y.

If an unscrupulous dealer should attempt to sell you a substitute for "Golden Medical Discovery," claiming it to be "just as good," remember that there is no motive for substitution except the larger profit made by the dealer on less meritorious medicines. Accept nothing in place of "Discovery," for there is nothing else so sure to help and heal weak lungs.

A SOUND INVESTMENT

To invest 21 cents in the form of one-cent stamps to the best advantage, send the stamps to pay mailing expense only on Dr. Pierce's Common Sense Medical Adviser. This great work on hygiene and disease contains 1,008 large pages and over 700 illustrations. It is sent free on receipt of stamps to pay expense of mailing only. Send 21 one-cent stamps for the book in paper covers, or 31 stamps for the cloth-bound volume. Address Dr. R. V. Pierce, Buffalo, N. Y.

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and its possibilities under the Silage system—being the theme of
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We offer you the best mill on the market at such a low figure that it will pay you to write us. Our mills have been on the market 50 years. They are the best constructed, least complicated and fastest grinding mills yet produced. Mills sent on approval. Prices cover freight. Send for Illustrated circular. Address: **LEONARD D. HARRISON, 12 Third St., New Haven, Conn.**

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IF YOUR CHICKEN NETTING don't suit, try Page Poultry Fence. It's heavier. **PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.**

OUR CAT catalogue fully describing ROOF'S Cobblers' Outfits, Blacksmiths' and Carpenters' Tools, Hardware, "Common Sense" Harness Goods, and thousands of other Farm and Household Conveniences at unheard of prices, MAILED FREE. **THE J. A. ROOT CO., 141st St., Plymouth, Ohio.**

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FENCE! STRONGEST MADE. Built-tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free. **COLLED SPRING FENCE CO., Box 18, Winchester, Indiana, U. S. A.**

THE CROWN Bone Cutter for cutting green bones. For the poultryman. Best in the world. Lowest in price. Send for circular and testimonials. **Wilson Bros., EASTON, PA.**

ONE YEAR FOR 10 CENTS We send our large 16-page, 64-col. monthly paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents. If you also send names and addresses of six lady friends. **WOMAN'S FARM JOURNAL, 4306 Easton Ave., Saint Louis, Mo.**

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PATENT secured or money all returned. Exam. Free. **COLLAMER & CO., 1040 F. St., Wash., D. C.**

FARM SELECTIONS
THE GENERAL-PURPOSE COW

WE ARE asked by a young farmer who proposes to enlarge his herd and furnish milk to a creamery if we would recommend him to keep general-purpose cows, and if so, of what breed. This subject is so old that it is moss-backed and gray-headed. There is absolutely nothing new to say upon it, except that our correspondent can get representatives of a milking strain of a beef breed, like the shorthorn, for instance, or if he simply desires to play that he is dairying, he should select a dairy breed. It depends altogether upon what he wants to do. If he desires to make the greatest possible profit from his dairy, we repeat what we have said many times in writing upon this subject, he should select dairy-cows, the Jersey, Holstein, Guernsey or some other dairy breed. If he desires to produce beef, and to count his milk as a side product, take a beef breed. If we were just beginning in the dairy business we would take grade dairy-cows. One trouble with dairying is that there is such a large proportion of cows that are utterly unadapted to the business. They are unsatisfactory to the dairyman, and the creamery does not get the quantity of milk that it ought to have from the number of cows upon which it depends for support. In our judgment the dairy-cow, under favorable circumstances, is much more profitable than the beef animal.

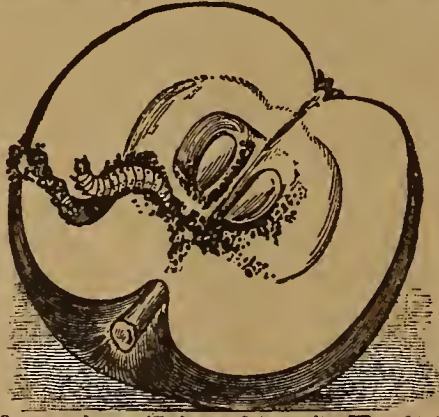
If we were a young farmer we would start out in beef production or in dairying, and not in both, for they do not go very well together. The equipment for the one is different from that of the other, and either ought to receive one's whole attention. Dairying is a nice business, and if conducted as it ought to be it is an elevating business. If a good creamery is near it is not a laborious calling. Indeed, it can hardly be said to be laborious at all, but it is confining. It may reasonably be expected, too, that it will grow more profitable, for we cannot conceive it to be possible that the oleomargarine fraud will be allowed to continue. When the millions of pounds of that nauseating stuff are thrown out of the market butter must take its place, and there will be a great shortage, a much greater shortage of butter than there is of beef cattle at present. Beef, it is true, is high in price, but so is butter.—The Practical Dairyman.

SHEARING-MACHINES

From present indications more sheep will be shorn in this country by machinery during the coming season than ever before. When the machine-shear was first introduced to the wool-growers many of them were skeptical as to their practical utility, but recent developments have laid aside all fears as to the practicability of shearing sheep by machinery.—Wool Markets and Sheep.

SPRAYING FRUIT-TREES

The question of spraying fruit-trees to prevent the depredations of insect pests and fungus diseases is no longer an experiment but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

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If you need a vehicle—carriage or buggy, surrey or phaeton, or want handsome, thoroughly well made harness, buy direct from the makers. Our plan of selling insures you both saving and satisfaction. Your money back if you are not satisfied with your purchase. Backed by a large plant and many years' experience, we are in a position to economize at every point in the making of carriages and harness, and to reduce the cost of production to the lowest notch. The buyer gets the benefit of this, besides

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SPECIAL OFFER TO CLUB PROMOTERS.

WRITE FOR PRICES, SAMPLES AND PAMPHLET.

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SELECTIONS

THE OLEO TAX

WE HAVE received several long letters from farmers who say that it is wrong to put a tax on oleo. A Kentucky farmer writes that he considers oleo a great help to the Southern farmer. Why? Because it is composed chiefly of suet, lard and cotton-oil, all of which the Southern farmer produces. The use of oleo, he claims, makes a great market for these products. These men are doubtless honest in their belief, but reflection ought to show them how it is that oleo has little, if anything, to do with the price offered for their products. The purchases of live stock and cotton-seed are practically monopolized. Oleo is a by-product, and the whole scheme of its manufacture and sale an attempt to palm off a cheap colored fat at butter prices. The amount of suet and lard used in this way is but a drop in the bucket compared with the year's output from American farms. It has probably never made a cent's worth of difference in the price offered the farmer for a hog, a steer or a bushel of cotton-seed. The manufacturer simply pockets the difference in price between grease and oleo. Aside from all this is the swindle and fraud of the business. There is a principle involved which may sooner or later affect the sale of dozens of farm products. Farmers must remember that when money is made out of the sale of a manufactured or mixed food, the mixer rather than the farmer secures the lion's share. It has been demonstrated that the present laws are not strong enough to compel the oleo-makers to be honest. Those who object to the bills now before Congress should tell us what plan of regulation would be more effective or more just.—Rural New-Yorker.

- ARMSTRONG & McKEVY Pittsburgh.
BEYMER-BAUMAN Pittsburgh.
DAVIS-CHAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ANCHOR Cincinnati.
ECKSTEIN Cincinnati.
ATLANTIC
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JOHN T. LEWIS & BROS CO Philadelphia.
MORLEY Cleveland.
SALEM Salem, Mass.
CORNELL Buffalo.
KENTUCKY Louisville.

START right. In painting, the first or priming coat is important. It is the foundation. It is a mistake, to think anything is good enough for it. If a mixture of Zinc, Barytes, etc., is used the paint will surely crack and peel.

The only safe paint for priming is Pure White Lead. It combines with the oil, forming a tough, elastic coat that penetrates and will adhere to the surface. The brands in the margin are genuine.

FREE For colors use National Lead Company's Pure White Lead Tinting Colors. Any shade desired is readily obtained. Pamphlet giving full information and showing samples of Colors, also pamphlet entitled "Uncle Sam's Experience With Paints" forwarded upon application.

National Lead Co., 100 William Street, New York.

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GERMAN KALI WORKS, 93 Nassau St., New York.

Advertisement for 'BUILT FOR SERVICE' featuring an image of a horse-drawn wagon and text describing various agricultural vehicles and their prices.

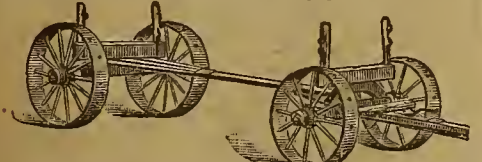
RECENT PUBLICATIONS

CATALOGUES RECEIVED

- Ford Seed Co., Ravenna, Ohio. Plain catalogue of good seeds.
Lorenz Supply Co., Dayton, Ohio. Illustrated seed and plant book.
L. E. Archias Seed Co., Carthage, Mo. Rural guide and catalogue of "seeds that grow."
J. T. Lovett, Red Bank, N. J. Illustrated catalogue of the Monmouth nursery and seed-house.
Leroy Romines, Martinsville, Ill. Catalogue of farm seeds. Choice varieties of corn a specialty.
Harry N. Hammond, Fifield, Mich. Illustrated catalogue of tested seeds. Seed-potatoes a specialty.
The Great Northern Seed Co., Rockford, Ill. Flower and vegetable catalogue, offering \$2,900 in cash premiums.
Meadow Brook Farm, Dallas, Pa. As the Camera Saw It—catalogue of one of America's largest poultry-farms.
Northrup, King & Co., Minneapolis, Minn. Handsome catalogue of good seeds at fair prices. Booklet, Seed Truth, being information as to how to buy seeds intelligently.
Johnson & Stokes, Philadelphia, Pa. Garden and farm annual. Handsomely illustrated with photographic reproductions.
James Vick's Sons, Rochester, N. Y. Vick's Garden and Floral Guide. Artistic cover and handsome half-tone illustrations.
Phoenix Nursery Co., Bloomington, Ill. Catalogue of fruit and ornamental trees, shrubs, roses, vines, hedge-plants, forest-tree seedlings.
W. Atlee Burpee & Co., Philadelphia, Pa. "Unique list for 1900." The plain truth about best two hundred varieties of seeds selected from thousands at Fordhook farm trial-grounds. Also Burpee's "Vest-Pocket" Guide to Culture of Flowers.

FARM WAGON ONLY \$21.95

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon that is only 25 inches high, fitted with 24 and 30 inch wheels with 4-inch tire, and sold for only \$21.95.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

Advertisement for 'IT DOES DOUBLE DUTY.' featuring an image of a 'PLANET JR.' No. 4 Combined Hill and Drill Seeder, and text describing its features and benefits for farmers.

Advertisement for 'VEHICLES AND HARNESS At Less Than Wholesale Prices.' featuring an image of a carriage wheel and text describing the quality and variety of goods available.

Advertisement for 'MISSOURI PACIFIC RAILWAY and IRON MOUNTAIN ROUTE' featuring text about low rate excursions to the West and Southwest, with ticket information for March and April.

Advertisement for 'WHAT YOU CAN BUY FOR 25 CENTS' featuring a list of various plants and flowers available for purchase at a low price.

Advertisement for 'FREE! SEND TO LADIES, BOYS AND GIRLS.' featuring an image of a watch and text describing a promotion for jewelry and watches.

Advertisement for 'FREE' tooth powder, featuring an image of a tooth powder tin and text describing the product's benefits.

Advertisement for 'ECZEMA' treatment, featuring text describing a cure for skin conditions.

Advertisement for 'RUPTURE' treatment, featuring text describing a cure for hernia.

Advertisement for 'CORNS' treatment, featuring text describing a cure for foot ailments.

Advertisement for 'CARDS' featuring text about a collection of cards for sale.

Advertisement for 'PATENTS' featuring text about legal services.

Advertisement for 'PLAYS' featuring text about theatrical works.

Advertisement for 'Coe's Eczema Cure' featuring text about a specific skin treatment.

Advertisement for 'CASH' featuring text about financial services.

Advertisement for 'BED WETTING CURED' featuring text about a cure for bedwetting.

Advertisement for 'DEW OF EDEN' featuring text about a perfume or cosmetic product.

Advertisement for 'GRASS SEEDS' featuring text about various types of grass seed for hay, pasture, and lawns.

Advertisement for 'HOT SPRINGS, ARK' featuring text about a resort and travel services via the Iron Mountain Route.



SELECTIONS

LEAD-PENCILS HAVE A HISTORY

THE lead-pencil, the most common of all writing implements, is somewhat over two hundred years old. The term "lead-pencil," however, is a misnomer, as, in a mineralogical sense, there is not a particle of lead in its composition. The lead-pencil originated with the discovery of the graphite-mines in England, in 1664, during the reign of Queen Elizabeth. As graphite so greatly resembled galena, the German name for which was bleiglanz, it was given the name of blei, or lead. In the early days of lead-pencil making the graphite was sawed into thin sheets and cut into strips smaller and smaller until they were of a size to be covered with light wooden slips, and thus serve as pencils. The first pencils created much excitement. The graphite-mines of England were considered of inestimable value, and were protected by law. But there was great waste, first in digging, for many of the pieces were too small for cutting, and again in the manner of cutting the graphite, which was so crude that half the material was lost. So a binding substance had to be invented. Glue, gum, isinglass and other substances were tried, but the graphite was only rendered hard and brittle and of uneven hardness. Its marks were faint and indistinct, and in those days if the point broke it was quite an undertaking to sharpen it again. First the wood had to be cut away and the graphite heated over a light to soften it, after which it was drawn to a point with the fingers. In 1799, Conte, a Frenchman, came on the idea of using pulverized graphite and binding-clay. This discovery resulted in pencils of varying hardness, according to the amount of binding-clay added, and each pencil was of exactly the same hardness throughout its length. Soon after this discovery improvements followed in mixing, rolling and sharpening the graphite composition, which was cut into lengths, placed in a warm oven to harden, and finally incased in wood, as seen to-day.—St. Louis Globe-Democrat.

WIDOWS AND WIDOWERS

Women live longer than men. Also, as a rule they marry men older than themselves. Consequently, there are nearly three times as many widows in the country as widowers, the figure being 2,154,615 against 815,437. Divorced men marry again much oftener than divorced women, as is shown by the fact that there are 49,101 divorced men in the United States against 71,895 divorced women, those who have married again not being reckoned. A statistician who has gone somewhat extensively into this subject finds that one in every nine widows between the ages of twenty and thirty-five remarries. Widows from twenty to twenty-four remarry much more often than spinsters of any age. In fact, widows are the champion marrying women. For every 1,000 bachelors who would fairly fall to their lot, as compared with spinsters, 1,025 are married by widows. The chances of a widower's remarrying are always greater than those of a bachelor's marrying. The men who marry most are widowers from twenty-five to thirty-four years of age. Widowers, indeed, are pre-eminently marrying men. The spinsterhood of the maidens who fail to secure husbands is due in no small degree to the seductions of women in that condition which was made the subject of warning by the Elder Weller to Sam.

ODORS AS ANTISEPTICS

Interesting experiments with the odors of flowers have from time to time been made, and it has been found that many species of microbes are easily destroyed by various odors. The odor of cloves has been known to destroy microbes in thirty-five minutes; cinnamon will kill some species in twelve minutes, thyme in thirty-five. In forty-five minutes common wild verbena is found effective, while the odor of some geranium flowers has destroyed various forms of microbes in fifty minutes. The essence of cinnamon is said to destroy the typhoid-fever microbe in twelve minutes, and it is recorded as the most effective of all odors as an antiseptic. It is now believed that flowers and herbs which have been found in Egyptian mummies were placed on the bodies more for the antiseptic properties than as mere ornaments or objects of sentiment.—Gem.

SILVER TEA SET & JEWELRY



FREE

This beautiful and valuable Silverware is heavily silver plated, full size for family table use, and hand engraved in most artistic designs. (Same as illustrations.) It is manufactured by the International Silver Company, the largest Silverware concern in the world, and guaranteed to be exactly as represented. It is something any lady will be delighted to own, being entirely different from the cheap and worthless trash usually given as premiums. It will last a life time. The Jewelry is gold plated, set with genuine Electric Diamonds especially brilliant and sparkling, and warranted to retain their lustre, only experts being able to distinguish them from Old Mine Stones costing One hundred dollars, or more. You can get all of this fine Silverware and Jewelry FREE by selling our GREAT COLD REMEDY AND HEADACHE CURE. Cures Cold in One Day! Relieves Headache at Once! We will give these valuable Premiums absolutely free to anyone taking advantage of the great offer we send to every person selling One Dozen boxes of our Tablets. If you agree to sell only twelve boxes at 25 cents a box, write to-day and we will send the Tablets by mail postpaid. When sold send us the money and we will send you all of the following articles, 1 Ring, 1 Pair Earrings, 1 Scarf Pin, all set with genuine Electric Diamonds, 1 Clover Scarf Pin, set with 3 im. Rubies, 1 Plain Gold Ring, 1 Violet Brooch, hand enameled in violet colors, set with Electric Diamond Center, in the latest Solid Gold style, 1 Butter Knife, 1 Sugar Shell, Set of Six Tea Spoons, guaranteed quadruple Silver Plate, together with our offer of the magnificent Silver Tea Set, consisting of Teapot, Sugar Bowl and Gold Lined Cream Pitcher, same day money is received. The Silver Tea Set is a dream of beauty, combining the ornamental and useful in the highest degree. Remember you run no risk whatever as we trust you with the Tablets and take back all unsold goods, allowing you a premium for the boxes sold. You cannot afford to miss this grand opportunity. Write to-day. Address, NATIONAL MEDICINE CO., Dept. 33 V, 1010 Chapel St., New Haven, Conn.

\$500.00 IN GOLD FREE.

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| E | O | W | A |
| X | R | A | C |
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HERE is a chance to use your Brains and Win \$500.00 in Gold. We want you to try and arrange these 20 jumbled letters printed in the block square to the left which properly arranged will spell the names of 3 large cities in the World, two of these cities being in the United States, the other one being a Mexican City. In making the 3 names the letters can only be used as many times as they appear and no letter can be used which does not appear. After you have found the 3 correct names you will have used every letter in the 20 exactly as many times as it appears. If you cannot find the 3 correct names but only find 2, you will receive a special prize for your trouble worth \$1. If you answer this puzzle at once you will not be disappointed. Some one is going to win the money and it may be you. Anyway it does not cost you any money to try. All we ask is that should you be a successful contestant that you will secure for us one yearly subscriber to our Handsome Illustrated Monthly Magazine. This we can truthfully say is the very hardest puzzle ever advertised, so get out your Geography and look for these 3 cities. The correct names are only known to the President of this Company. The envelope containing the three names has been sealed and deposited with a leading Bank in Boston, and will only be opened the day after the contest closes, April 25th. This we believe is the only honest way of conducting a contest, as everyone has an equal chance. In case more than one person succeeds in finding the three correct names we will divide the money equally. In addition to the \$500.00 in gold we will give you an opportunity to Win

\$5.00 A WEEK FOR LIFE FREE OR \$250.00 A YEAR FOR LIFE FREE WITHOUT ANY LABOR OR EXPENSE.

We are going to give to some one who has entered this contest and who complies with the conditions as stated above an opportunity to win and secure from us without any labor or expense on their part \$5 every week during their natural life. We mean just what we say. There is no deception and no trickery about this offer. If you are the lucky one, and we hope you are, for some one will get it, we will send the winner every week during their natural life \$5, or else \$250 every year in advance for life, whichever way they prefer. Do not throw this contest aside, and say O pshaw! I have answered puzzles before and never got anything, or else only secured a few cents for my trouble, for if you do this you will regret it as long as you live. Someone is going to win the money, and it may be you. No one can tell, anyway it does not cost you one cent as we do not want any money from you. Are the prizes worth trying for? We think they are, for \$5 a week paid to you for life will keep one from the Poorhouse, and to those who have a small income, it will supply them with many a necessity which one has to do without in these hard times. Of course we are strangers to you, and you have no assurance except our word that we are financially able to carry out the promises we make. If you have the least doubt, we would be pleased to have you look us up. We are a responsible company, with a paid up capital of one hundred thousand dollars, composed of honorable and well known business men of Boston. We want to secure a large list of subscribers to our Magazine, and will leave no stone unturned to accomplish by honest methods only, our object. Every one entering this contest will receive honest treatment, and you will have the same chance whether you live in California or Massachusetts. Distance makes no difference. After you have carefully arranged the twenty jumbled letters into the three cities which you think are right, send your answer to us at once, enclosing a two-cent stamp for reply and you will immediately receive an answer telling you whether you are a successful contestant, and we will also send you full particulars how you can win \$5 a week for life. Don't delay as this is positively the last time this advertisement will appear in this paper.

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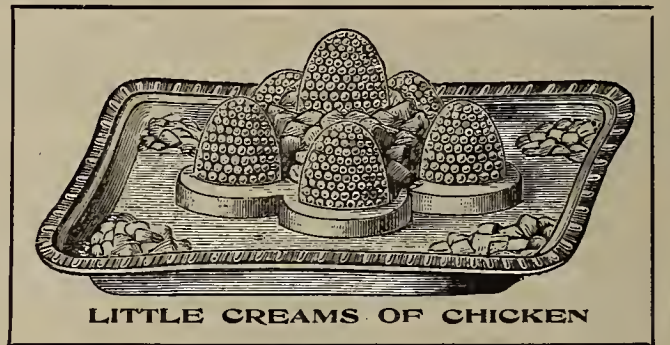


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